

Exhibit 21

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Attachment A: Materials Considered

I. Assignment and Summary of Conclusions

1. I am the same Laurentius Marais who submitted a rebuttal expert report in this matter on November 12, 2021,¹ which listed my qualifications, billing rate, and materials I had reviewed. In my Rebuttal Report I responded to certain opinions offered by Plaintiff's expert, Dr. [REDACTED].² In particular, I concluded that:

“[I]t would be wrong to interpret Dr. [REDACTED] event study as establishing that XRP price movements are essentially a function of Ripple's actions. Instead, the [REDACTED] event study cannot prove a causal relationship between Ripple's actions and XRP price movements. And, even if it could do so, the [REDACTED] event study documents at best that any dependence of XRP price movements on Ripple-related news accounts for no more than a modest, far from preponderant portion of XRP's Unusual price movements since 2014.”³

2. Dr. [REDACTED] has submitted a Supplemental Report dated February 28, 2022.⁴ Counsel for the Defendants have asked me to review and respond, where appropriate to the [REDACTED] Supplemental Report.

3. Based on my review of the [REDACTED] Supplemental Report, I have formed the following opinions:

- Nothing in Dr. [REDACTED]'s Supplemental Report provides any reason for me to change any opinion in my Rebuttal Report. The opinions I stated in my Rebuttal Report remain unchanged.

¹ Expert Report of M. Laurentius Marais, PhD, November 12, 2021 (“Marais Rebuttal Report”).

² Amended Expert Report of [REDACTED], Ph.D., October 6, 2021 (“[REDACTED] Opening Report”).

³ Marais Rebuttal Report, ¶ 30.

⁴ Supplemental Expert Report of [REDACTED], Ph.D., February 28, 2022 (“[REDACTED] Supplemental Report”).

- In order to respond to his supplemental assignment from Plaintiff,⁵ Dr. [REDACTED] departs from his own initial conceptual framework for statistical inference. Instead, he performs analyses and produces results that amount essentially to the tautology that Unusual trading days are indeed Unusual.⁶
- Dr. [REDACTED]'s event study methodology is not designed appropriately to provide a reliable basis for the novel calculations presented in his Supplemental Report; as a consequence, the results of these novel calculations are flawed and uninformative.

4. I explain the bases for these opinions below. Attachment A lists the materials I considered in reaching the opinions stated in this report.

II. Dr. [REDACTED]'s Supplemental Report Contains No Effective Response to My Rebuttal Report, and It Provides No New Insight into XRP Pricing in Relation to Ripple News Events

5. Concerning my Rebuttal Report, Dr. [REDACTED] states that I did not conduct “any independent empirical analysis of XRP price data.”⁷ In stating this claim, Dr. [REDACTED] simply ignored the bulk of my Rebuttal Report, which sets forth an extensive empirical analysis of the relative economic significance of Unusual trading days that *do* and *do not* coincide with the Ripple news events identified by Dr. [REDACTED]. Dr. [REDACTED]'s incorrect claim is particularly odd given the *evident* parallel between the novel stated assignment for his Supplemental Report and the empirical analysis in my Rebuttal Report. Specifically, Dr. [REDACTED] states that his assignment was “to provide additional quantification of the economic significance of the impact that

⁵ [REDACTED] Supplemental Report, ¶ 4: “... I have been asked by the SEC to provide additional quantification of the economic significance of the impact that certain news related to Ripple had on XRP prices.”

⁶ “Unusual” trading days are defined in ¶ 13 of my Rebuttal Report.

⁷ [REDACTED] Supplemental Report, ¶ 3.

certain news related to Ripple had on XRP prices.”⁸ In fact, I summarize my own extensive analysis of this “economic significance” in § IV of my Rebuttal Report under the heading “The Overwhelming Preponderance of the Cumulative [Financial or Economic] XRP [Investment] Returns Associated with the ‘Unusual’ Trading Days Dr. [REDACTED] Identifies Is Not Associated with the Ripple News Event Days He Identifies.”⁹ Dr. [REDACTED] simply disregarded my prior analysis.

6. Unlike Dr. [REDACTED]’s novel calculations, the analyses I presented in my Rebuttal Report evaluated the comprehensive economic significance of Unusual XRP returns *generally* in relation to Ripple news events. Out of the profusion of econometric models, estimation approaches, and sets of Ripple news days in the [REDACTED] Opening Report,¹⁰ Dr. [REDACTED] chose to highlight in his Supplemental Report the exemplar case of a modified subset¹¹ of his “Select” news days, using his Constant Mean Return model (Model 1) to partition XRP returns into “expected” and “abnormal” components, and assessing statistical significance using his parametric approach at a 5% one-sided level.¹² In fact, in my Rebuttal Report, I presented the results of an analysis of the relative economic importance of Ripple news days on cumulative hypothetical XRP investment returns for precisely this exemplar case (excerpted from the first row and rightmost columns of Table 3 of my Rebuttal Report):

⁸ [REDACTED] Supplemental Report, ¶ 4.

⁹ Marais Rebuttal Report, p.13.

¹⁰ In total, Dr. [REDACTED] analyzed 400 different “configurations” in his Opening Report. Marais Rebuttal Report, ¶ 23.

¹¹ Although one of the five “Select” news days Dr. [REDACTED] removed for his analyses in his Supplemental Report, one, December 21, 2017, is classified by Dr. [REDACTED] (model 1, one-sided parametric test) as Unusual, the overall results described in this report continue to hold.

¹² [REDACTED] Supplemental Report, ¶¶ 8-9, 12, and fn. 17.

██████████ "Select" Categories (i.e., All News Dates)		
"Unusual" Trading Days ...		
Coincident with Ripple News	No Coincident Ripple News	"Regular" Trading Days
\$586.66	\$2,939,472	\$0.33

The corresponding section of Table 2 of my Rebuttal Report shows the numbers of trading days underlying the calculated results shown in Table 3 (and excerpted above):

██████████ "Select" Categories (i.e., All News Dates) (Max N=105)		
"Unusual" Trading Days ...		
Coincident with Ripple News	No Coincident Ripple News	"Regular" Trading Days
24	211	81

7. The results for all other cases in Dr. ██████████'s profusion of combinations of sets of Ripple news events, econometric specifications of event study models, and approaches to the assessment of statistical significance are shown in the remainder of Tables 2 and 3 as well as the tables shown in Appendices D and E to my Rebuttal Report. Based on this ensemble of results, I reached the opinion that "any dependence of XRP price movements on Ripple-related news accounts for no more

than a modest, far from preponderant portion of XRP's Unusual price movements since 2014.”¹³

8. Rather than address my analyses and opinions head-on, or materially add to what my own prior analysis teaches about XRP returns and Ripple event days as identified by Dr. [REDACTED], the [REDACTED] Supplemental Report presents a suite of calculations that are either irrelevant or consistent with what can be learned from my own Rebuttal Report. I describe Dr. [REDACTED]'s new calculations in greater detail in the following section, but here I address the two high-level summary opinions that he bases on the empirical analyses described in his Supplemental Report: (i) but for Ripple news, XRP prices “would have rarely exceeded \$0.02;” and (ii) XRP investment returns on Ripple news days are greater than those on other days.¹⁴

9. In his high-level opinion (i), Dr. [REDACTED] unaccountably focuses on a statistic with no obvious relevance to any question I understand to be at issue: the relative frequency of trading days with an XRP closing price above \$0.02. He appears to think this question and its answer should be of interest to a reader of his Supplemental Report, but provides no further explanation of why, for example, he focuses on a threshold price level of \$0.02 as opposed to, say, \$0.002, or any other, equally unprincipled and arbitrary threshold. As I show below, when adjusted for abnormal returns on *non*-Ripple news days in the manner of Dr. [REDACTED]'s Supplemental Report, the price of XRP would never have exceeded \$0.007 (the comparable upper bound for Dr. [REDACTED]'s analysis of prices is, in fact, \$0.328).¹⁵ While none of these specific absolute price levels or relative frequencies has any particular relevance to any question I understand to be at issue, all are consistent with my opinion from my Rebuttal Report that investment returns around Unusual trading days *without* [REDACTED]-identified Ripple news overwhelmingly outweigh

¹³ Marais Rebuttal Report, ¶ 30.

¹⁴ [REDACTED] Supplemental Report, ¶ 10.

¹⁵ [REDACTED] Supplemental Report, Figure 5 (top row, maximum value).

investment returns around Unusual trading days *with* [REDACTED]-identified Ripple news events. This can be seen by comparing the \$586.66 and \$2,939,472 figures from the Table 3 excerpt above (supra ¶ 6) under the subtitles “Coincident with Ripple News” and “No Coincident Ripple News,” respectively.¹⁶

10. In his high-level opinion (ii), Dr. [REDACTED] focuses on investment returns from a hypothetical investment strategy based on purchasing and holding XRP during the [REDACTED]-identified Select Ripple news days. Understanding that Dr. [REDACTED]’s Opening Report documents a degree of association of Ripple news with Unusual trading days, and comparing the \$586.66 and \$0.33 figures from the Table 3 excerpt above (supra ¶ 6) under the subtitles “Coincident with Ripple News” and “‘Regular’ Trading Days,” respectively, suggest that this hypothetical strategy should yield (somewhat) superior investment returns. This suggestion is what Dr. [REDACTED] confirms and states as his high-level opinion (ii). [REDACTED] high-level opinion (ii) does not address the vastly greater hypothetical investment return reflected in the \$2,939,472 figure from the same Table 3 excerpt above under the subtitle “No Coincident Ripple News.”

III. In His Supplemental Report, Dr. [REDACTED] Departs from his Original Statistical Methods and “Proves” a Tautology: that Unusual Returns are Indeed Unusual.

11. In his Opening Report, Dr. [REDACTED] attempted to “correlate” the incidence of “Unusual” trading days (days with high positive abnormal XRP returns) with the “Ripple news” trading days he identified.¹⁷ He concludes that his analyses show that Unusual trading days coincide with Ripple news days more often than could be explained by random chance alone. Moreover, Dr. [REDACTED] attached causal

¹⁶ My Rebuttal Report provides a detailed explanation and discussion of analogs of these figures for [REDACTED] Model 5. See Marais Rebuttal Report, § II.B.

¹⁷ Dr. [REDACTED] calls these “Unusual” days “statistically significant.” However, as I explained in my Rebuttal Report, it is not appropriate to refer to Dr. [REDACTED]’s Unusual returns as “statistically significant” because statistical significance has a very precise meaning in statistical science. Dr. [REDACTED]’s approach does not match that meaning precisely. See Marais Rebuttal Report, fn. 13.

interpretation to his “correlation” results by concluding that he can interpret “[Unusual] abnormal returns following the [news] Days as attributable to those public statements.”¹⁸ I explained in my Rebuttal Report why Dr. [REDACTED]’s results are flawed, and why he cannot interpret his results as indicating that Ripple news caused high abnormal XRP returns.¹⁹ Dr. [REDACTED] did not respond to these criticisms.

12. Instead, in his Supplemental Report Dr. [REDACTED] departs from his flawed “correlation” framework and presents calculations that amount to showing that Unusual days are Unusual – a tautology. In essence, his calculations quantify the size of the abnormal returns on Unusual days without linking them to Ripple’s actions. Although he focuses on Unusual days that coincide with Ripple news, analogous calculations may be performed based on days not coincident with Ripple news or selected in any number of ad hoc ways from the pool of Unusual days. The common denominator for any and all such exercises is that abnormal returns are analyzed only on Unusual days. That this produces unusual cumulative returns is not surprising, since the Unusual days were selected precisely because, within the context of Dr. [REDACTED]’s models, they appear to show unusually high returns.

13. More specifically, Dr. [REDACTED] removes the “abnormal” portion of the total return on those days he selected to show that the overall prices are affected.²⁰ Dr. [REDACTED] focuses on only Unusual days coincident with Ripple news he identified and ignores any Unusual days not coincident with Ripple news.

14. As a thought experiment, Dr. [REDACTED] could, for instance, have selected all Wednesdays among the Unusual trading days he identified. As an alternative selection procedure among his Unusual trading days, choosing Wednesdays is

¹⁸ [REDACTED] Supplemental Report, ¶ 10.

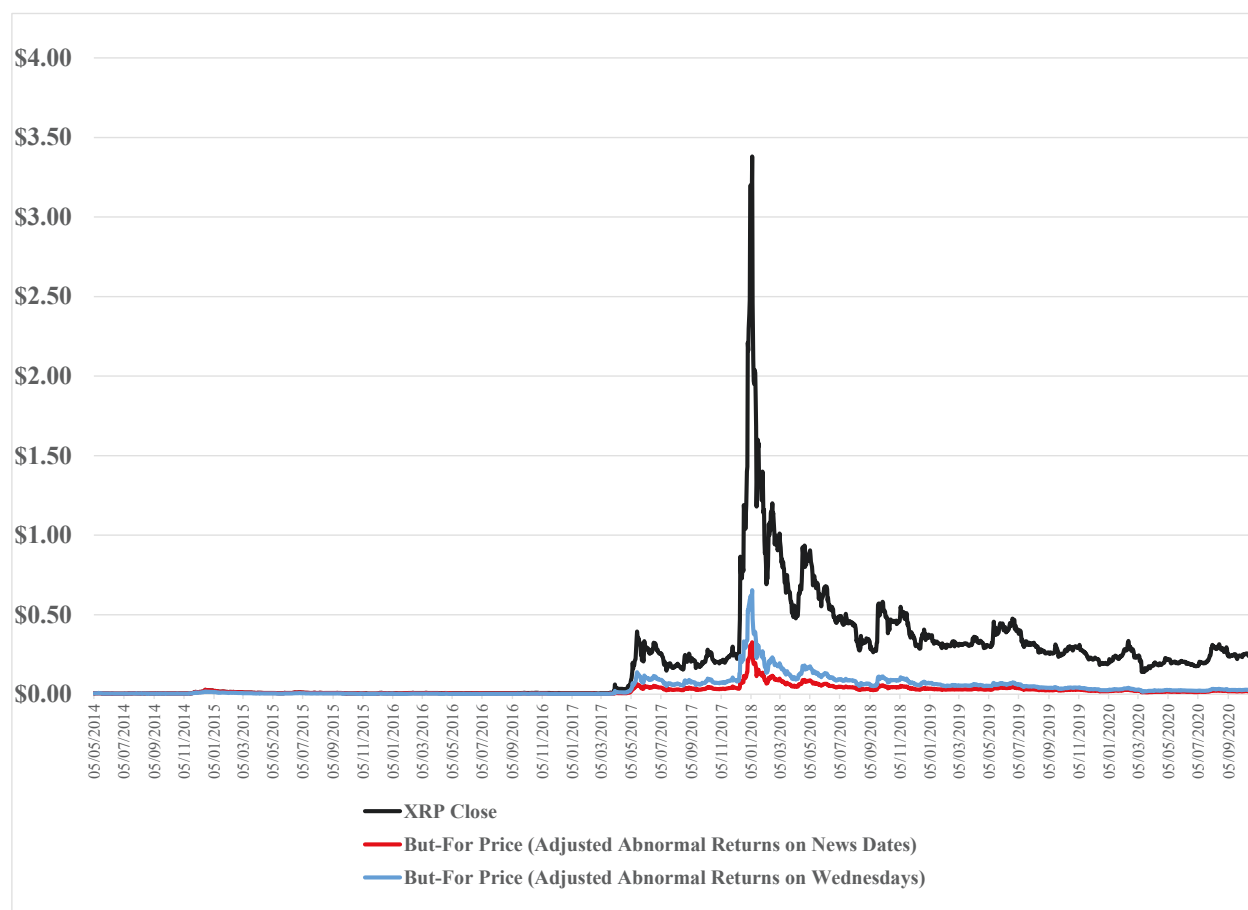
¹⁹ Marais Rebuttal Report, ¶¶ 18-20.

²⁰ Dr. [REDACTED]’s price charts focus on the wrong quantity in any case – whether or not the price of XRP exceeded some arbitrary point is not relevant for whether returns were affected or not by the Ripple news.

facially not related to Ripple news.²¹ I have implemented this thought experiment by applying Dr. [REDACTED]'s methodology of removing abnormal returns to Unusual Wednesdays, and compared the resulting price series to his “but-for” prices. Figure 2 below is based on Dr. [REDACTED]'s Figure 4, where he removes the 1-day abnormal returns on Unusual Ripple news days and calculates the resulting would-have-been prices of XRP. He points, based on his own version of this chart, to the fact that the actual price of XRP (black line) is substantially higher than his but-for price of XRP (red line). The figure below demonstrates that removing abnormal returns on Unusual Wednesdays (blue line) produces results very similar to removing abnormal returns on Unusual days that coincide with Ripple news (red line). In other words, one can achieve Dr. [REDACTED]'s “results” by picking virtually any arbitrary subset of Unusual days and removing abnormal returns on those days. It is obvious that this striking reduction in prices occurs because the selected days are Unusual, not because they coincide specifically with Ripple news or with Wednesdays.

²¹ Two of the 16 Unusual Wednesdays also have Ripple news identified by Dr. [REDACTED].

Figure 1: Based on █████ Figure 4: Actual vs. Counterfactual XRP (One-Day Application) Adjusted for Abnormal Returns on News Days and Wednesdays



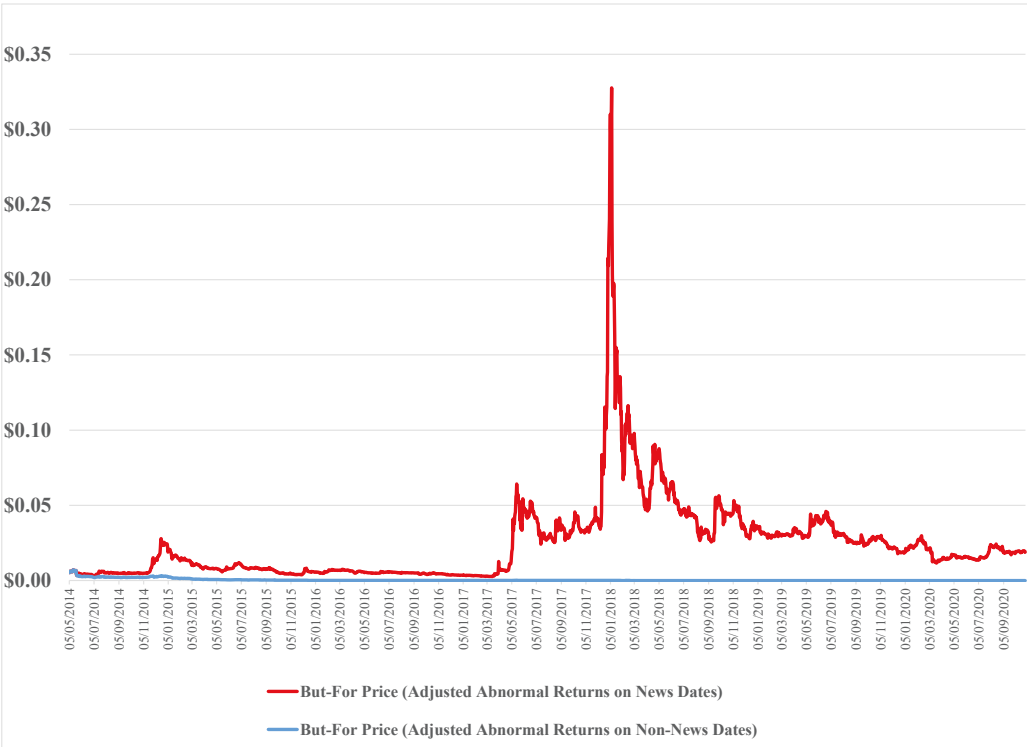
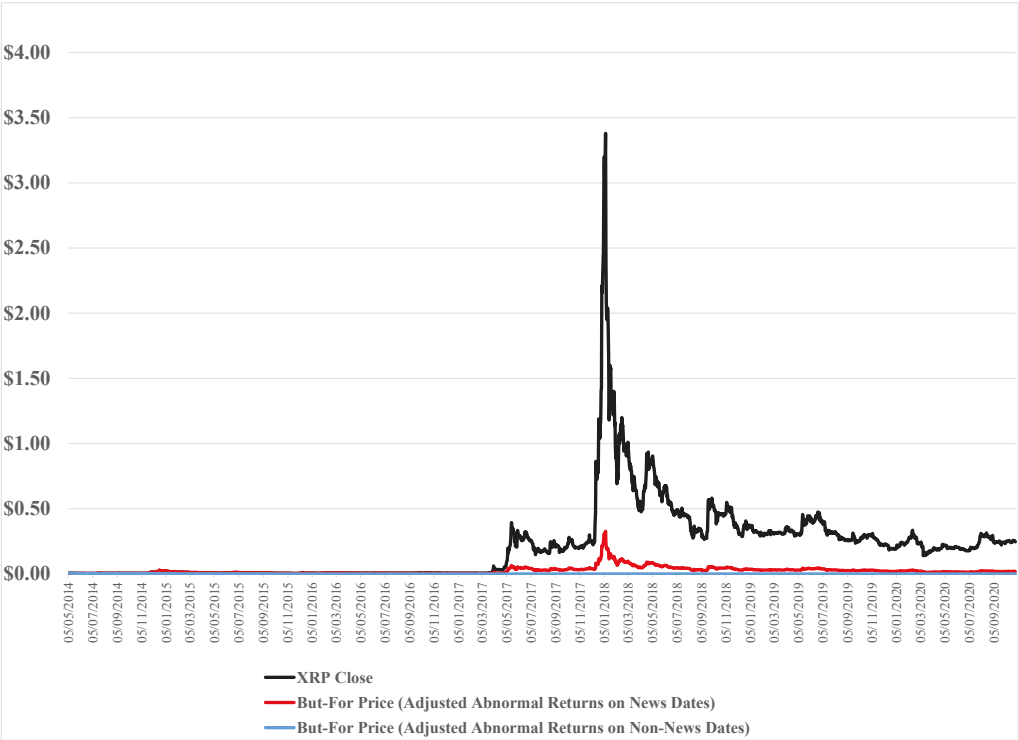
15. As I explained in my Rebuttal Report, most “Unusual” days are not coincident with “Ripple news” identified by Dr. █████.²² For instance, the excerpt in ¶ 6 above shows that out of 235 Unusual trading days Dr. █████’s identified using his Model 1, only 24 coincided with his Select Ripple news days while 211 did not coincide with Ripple news. In fact, I demonstrated that the overall impact of returns on such Unusual-no-news days is much larger than the impact of returns on Unusual-news days Dr. █████ chose to focus on. Below I demonstrate that an analogous result holds within Dr. █████’s newly introduced would-have-been price

²² Marais Rebuttal Report, ¶ 22.

charts where he selectively removes abnormal returns on some, but not all, Unusual days.

16. Figure 2 below presents XRP price series after removing abnormal returns on Unusual days that do *not* coincide with Ripple news. As before, black and red lines indicate the actual price of XRP and Dr. [REDACTED]'s "but-for" price, respectively. The blue line indicates the would-have-been prices of XRP obtained by removing the abnormal portion of the total return on Unusual days *not* coincident with Ripple news. The second panel of the chart presents a magnified image of a portion of the same chart. It is obvious that the "but-for" prices obtained by removing abnormal returns on Unusual-not-news (blue line) days, rather than on Unusual-news days, fall substantially below Dr. [REDACTED]'s but-for prices (red line).

Figure 2: Based on ██████████ Figure 4: Actual vs. Counterfactual XRP (One-Day Application) Adjusted for Abnormal Returns on News Days and Non-News Days



17. Removal of the abnormal returns components on virtually any arbitrary set of Unusual days is expected to reduce the would-have-been prices; Unusual days are so labeled precisely because prices increased by unusual margins over the expected values (based on Dr. [REDACTED]'s flawed models) on those days. Therefore, Dr. [REDACTED]'s novel results in his Supplemental Report amount to a tautology. Moreover, his results do not link abnormal returns to Ripple news generally. Dr. [REDACTED] focuses only on Unusual-news days and ignores all remaining Unusual days. Therefore, one cannot draw any conclusions, let alone a conclusion about a specific causal relationship, about any alleged relationship between XRP returns (or prices) and Ripple news based on his new analyses.

IV. The [REDACTED] Event Study Methodology Is Not Designed Appropriately to Provide a Reliable Basis for the Novel Calculations Presented in His Supplemental Report; as a Consequence, their Results Are Flawed and Uninformative

18. For constructing the hypothetical, would-have-been XRP price series shown in his Supplemental Report, Dr. [REDACTED] must replace the observed total XRP return on each trading day with Ripple news with an *imputed* return that would, supposedly, have been observed, but for the Ripple news he identified. This “normal” return imputation calculation is a novel aspect of the [REDACTED] Supplemental Report with no clear analog in the [REDACTED] Opening Report or my Rebuttal Report. Put differently, this is a novel analysis directed at a novel concept.

19. Unlike the total XRP returns, which are observed and known with certainty, the portion that is attributable to any news event — including Ripple news — cannot be observed directly and must be estimated. Dr. [REDACTED] employs his event study methodology for this purpose. Like any statistical estimation procedure, Dr. [REDACTED]'s event study calculations are subject to both potential specification error and sampling error. Dr. [REDACTED] makes no express allowance for either in the calculations he presents in his Supplemental Report. I show below that his event study approach suffers from substantial statistical uncertainty,

which renders his approach ill-suited for his calculations. Moreover, the estimation errors are *compounded* in his calculations because he sums portions of returns (estimated with error) over time.

20. In his Opening Report, Dr. [REDACTED] presented a total of 20 distinct regression models for estimating an “expected” XRP return on each trading day, *i.e.*, the return supposedly *expected* to have been observed had no idiosyncratic XRP-specific information — such as Ripple news — affected XRP’s closing price on that day. Each regression model is re-estimated for each trading day based on a trailing 180-day estimation period. Dr. [REDACTED] does not identify any of his proposed models as a preferred choice, uniquely or otherwise. His different models sometimes imply very different expected return values. For instance, the exemplar news day Dr. [REDACTED] chose to use for describing his calculations, May 16, 2017, illustrates this phenomenon.²³ Based on his Model 1, which does not control for *any* factors that might affect the price of XRP, he claims that the abnormal return on that day was a *positive* 23.9 percent, effectively the difference between a total return of 25.7 percent and an expected return of 1.8 percent.²⁴ However, Dr. [REDACTED] overlooks the fact that his other models produce essentially opposite results. For instance, his Model 16, which controls for Bitcoin and Ethereum returns and their lagged values, the lagged value for XRP, and account growth and its lagged value, yields for that same trading day a *negative* abnormal return of -20 percent (the difference between the total return of 25.7 percent and expected return of 45.7 percent). Moreover, Dr. [REDACTED] found this negative abnormal return to be statistically significant using his non-parametric approaches. Figure 3 below shows that Dr. [REDACTED]’s expected returns (blue diamonds) are often above the actual returns (green diamonds), implying negative abnormal returns.

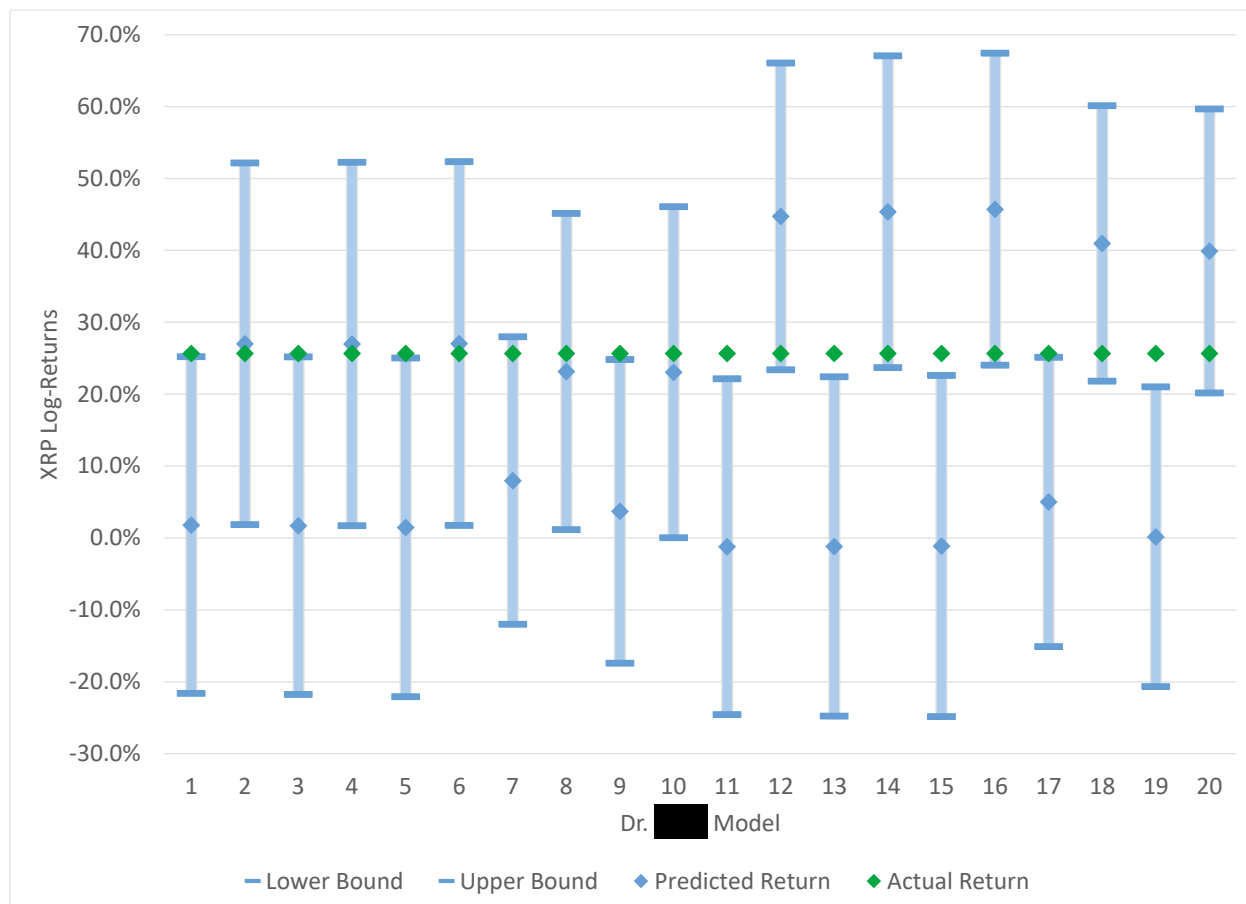
²³ [REDACTED] Supplemental Report, ¶ 11.

²⁴ Note that these are log-returns and the precise returns are different. In this section, I follow Dr. [REDACTED]’s convention for simplicity.

21. Further, Dr. [REDACTED] has not established that any of his 20 alternative models can be used to reliably forecast XRP returns. Many of his regression models result in very imprecise predictions, as measured by the standard errors of the forecasts.²⁵ Figure 3 below illustrates this issue. In addition to the actual and predicted returns for Dr. [REDACTED]'s exemplar Ripple news day of May 16, 2017, the figure shows the 95 percent confidence intervals associated with his predicted returns. His parametric two-sided approach would fail to reject the hypothesis that his predicted return is indistinguishable from the actual return for any model in the chart where the actual return (green diamond) overlaps with the 95 percent confidence interval (blue bar). Even for statistically significant returns where the actual return (green diamond) is outside of the confidence interval, the difference between upper or lower bound and the actual return is relatively small. In other words, Dr. [REDACTED]'s models produce very imprecise estimates. Dr. [REDACTED] simply ignores — and in no way accounts for — this statistical uncertainty, which is over and above the specification uncertainty illustrated by the fact that his alternative models sometimes produce markedly differing predictions (see ¶ 20 above).

²⁵ A related issue is that some of Dr. [REDACTED]'s models have no, or almost no, explanatory power as measured by the R². In other words, some of his models explain close to zero variation in XRP returns observed in the data.

Figure 3: XRP Predicted Log>Returns for May 16, 2017 Based on Dr. [REDACTED]'s 20 Event Study Models



22. In addition, Dr. [REDACTED] uses moving (trailing) 180-day estimation windows to predict expected XRP returns on each trading day. Thus, his novel calculation is internally inconsistent in that his estimation windows *include* the Unusual days he previously identified, which are, in effect, the information-driven outlier observations he identified. This jumbling of “normal” observations with outlier observations may affect his results. Dr. [REDACTED] does not consider or explain what effect the inclusion of such days has on the predictive performance of his regression models.

V. Conclusion

23. I hold each opinion expressed in this report to a reasonable degree of economic, mathematical, and statistical certainty. My opinions are based on

information, data, and analyses of types typically and reasonably relied upon by experts in economics, statistics, and applied mathematics. I may perform further work, and I may supplement this report in light of additional information or analysis. In particular, I understand that I may be asked to assess and respond to any opinions or exhibits offered by the parties at or before a trial in this matter.

I declare under penalty of perjury that the foregoing is true and correct. Executed on May 13, 2022.


M. Laurentius Marais

Attachment A:
Materials Considered

Materials Considered

1. Expert Report of M. Laurentius Marais, PhD, November 12, 2021.
2. Amended Expert Report of [REDACTED], Ph.D., October 6, 2021.
3. Supplemental Expert Report of [REDACTED], Ph.D., February 28, 2022.

Exhibit 22

**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)

Expert Report of Peter Easton

October 4, 2021

I. QUALIFICATIONS

1. My name is Peter Easton. I am the Notre Dame Alumni Professor of Accountancy and Director of the Center for Accounting Research and Education at the Mendoza College of Business, the University of Notre Dame. I was first appointed to these positions in 2003.

2. My educational background includes two bachelor's degrees in Agricultural Science (majoring in Agricultural Economics) in 1973 and Economics in 1978 from the University of Adelaide in Adelaide, Australia. I completed a Diploma of Technical Teaching at the University of South Australia in Adelaide, Australia, in 1978, and a Diploma in Financial Management at the University of New England in Armidale, Australia, in 1980. I graduated with a Ph.D. in Business Administration (majoring in Accounting and Finance) from the University of California at Berkeley, in 1984.

3. In addition to my position on the faculty of the University of Notre Dame, I also serve as a Distinguished Professor at the Limperg Institute in the Netherlands. I have held this position since 2000. Prior to my appointment at the University of Notre Dame, I spent eight years as a chaired professor of accounting at the Ohio State University and, prior to that, five years as a chaired professor of accounting at Macquarie University in Australia. I have also served as an accounting professor on the faculties at the University of Chicago Booth School of Business, the University of Melbourne, the Graduate School of Business at Seoul National University, the Department of Accounting at the National University of Singapore, the Australian Graduate School of Management, Hong Kong Polytechnic University, and the China Europe International Business School.

4. Over the past 40 years, my academic research has focused on the role of accounting information in securities valuation and investors' decision making. I have published numerous

articles in leading peer-reviewed academic accounting journals and am the author of five textbooks on accounting and valuation. In addition to publishing, I have served as Associate Editor for the four leading peer-reviewed academic accounting journals in the United States, as well as the leading peer-reviewed academic accounting journals in Australia, Canada, and Europe. I served as Editor of the *Review of Accounting Studies* from 2003 to September 2021 when I became Editor-in-Chief of a new peer-reviewed journal: *Accounting for Sustainability and Responsible Investing*.

5. My teaching, as well as a large part of my consulting activities, involves detailed analysis of complex accounting issues, scrutiny of financial statements, valuing the related entity, forecasting future financial statements, and exploring the link between the financial statements and the value and viability of the underlying entity. I am the principal author on two widely adopted textbooks: *Financial Accounting for MBAs*, which is in its 8th edition and adopted by 665 universities and *Financial Statement Analysis and Valuation*, now in its 6th edition and adopted by 424 universities. Sales of my textbooks exceed 250,000 units.

6. I have testified in deposition, at trial, and at arbitration regarding issues involving complex accounting matters, loss causation, valuation, and damages, and I have been admitted as an accounting and valuation expert in the Delaware Court of Chancery.

7. My curriculum vitae is attached as **Appendix A** to this report, along with a list of my prior testimonies given in the past five years and the articles I have written.

II. INTRODUCTION AND ASSIGNMENT

8. I understand that the U.S. Securities and Exchange Commission (“SEC”) alleges that Ripple Labs Inc. (“Ripple” or “the Company”) and two senior executives (collectively, “Defendants”) engaged in the offer and distribution of the digital asset XRP, which transactions

the SEC contends involved an “investment contract” and therefore a security, without registering those offers and sales with the SEC as required under federal securities laws.¹

9. I have been retained by Kellogg, Hansen, Todd, Figel & Frederick, P.L.L.C., counsel for Defendant Ripple (“Counsel”), to provide expert testimony in connection with this litigation, based on my expertise as an accounting professor and leading author of accounting treatises, as well as my review of the record evidence and other publicly available information, regarding the following topics:

- i. How would a hypothetical purchaser or holder of XRP understand the proper accounting for XRP transactions based on the applicable accounting guidance?
- ii. Did Ripple account for the offer and sales of XRP, as alleged in the Complaint, in accordance with the applicable accounting guidance?
- iii. Could Ripple, consistent with the applicable accounting guidance, properly account for transactions in XRP as securities transactions?

III. SUMMARY OF OPINIONS

10. Based on my analysis and review of the record evidence and relevant accounting guidance, I have concluded the following:

- i. Ripple, and other companies holding cryptocurrencies (including XRP), account for those holdings as indefinite-lived intangible assets (“Intangible Assets”). Ripple accounts for monetary and non-monetary sales of XRP as revenues. MoneyGram International, Inc. (“MoneyGram”), a publicly traded holder of XRP, accounts for its receipt of XRP in exchange for providing services to Ripple as a reduction in the cost of providing those services.
- ii. While there currently is no authoritative U.S. Generally Accepted Accounting Principles (“U.S. GAAP”) directly applicable to the accounting for cryptocurrencies, the available guidance, analogous U.S. GAAP, and the practices of other publicly traded companies holding cryptocurrencies are all consistent with the manner in which Ripple accounts for XRP on its balance sheet

¹ *Securities and Exchange Commission v. Ripple Labs, Inc., Bradley Garlinghouse, and Christian A. Larsen*. First Amended Complaint, filed February 18, 2021, ¶ 1.

(i.e., as an Intangible Asset), and are inconsistent with the notion that those cryptocurrencies (including XRP) are securities under U.S. GAAP.²

- iii. Based on my understanding of the offer and sales of XRP as alleged in the Complaint, it would be improper for Ripple to account for sales and transactions involving XRP as the offer and sale of securities under U.S. GAAP. In contrast, Ripple's accounting for sales of XRP as revenues – and not as the issuance of debt or equity securities – is consistent with U.S. GAAP's guidance for the accounting for consideration received in return for a company delivering goods, or providing or receiving services, as part of its on-going operations.

11. This declaration summarizes the results of my analyses, my opinions, and the supporting evidence. Section IV discusses relevant accounting guidance for cryptocurrencies and securities. Section V discusses how Ripple and publicly traded companies with holdings of XRP or other cryptocurrencies account for those holdings. In Section VI, I explain the basis for my opinions that Ripple's accounting for XRP as an Intangible Asset is consistent with the available accounting guidance and practice of publicly traded companies, and that accounting for XRP as a security is inconsistent with U.S. GAAP. Finally, Section VI sets forth the basis for my opinion that, based on existing accounting principles, an objective purchaser or recipient of XRP would understand that he or she had acquired an Intangible Asset, and not an investment contract or a security, in connection with the transactions described in the Complaint.

12. **Appendix B** lists the documents I have considered in performing my analyses and reaching my opinions. I have been assisted in my work by a team of professionals at Compass Lexecon working under my direct supervision.³ My compensation and the compensation received by Compass Lexecon is not contingent on the outcome of this litigation.

² As discussed later in this report, there is U.S. GAAP for debt and equity securities but not for investment contracts, as the SEC uses that term.

³ Compass Lexecon is being compensated for its professional services at its standard rates. My standard rate is \$1,100 per hour, while those of my colleagues range from \$250 - \$955 per hour.

IV. ACCOUNTING GUIDANCE FOR CRYPTOCURRENCIES AND SECURITIES

13. In this section, I discuss background on cryptocurrencies and relevant accounting guidance. In addition, I summarize authoritative guidance for accounting for securities.

A. Cryptocurrencies

14. In general terms, a cryptocurrency is a digital asset that uses an encrypted online ledger, or blockchain, to provide secure transactions.⁴ Unlike fiat currencies, cryptocurrencies are not backed or managed by a government or other regulating body.

15. Cryptocurrencies are primarily traded on cryptocurrency exchanges.⁵ Bitcoin, which was first created in 2009 and has been trading publicly since 2010, is the most widely used cryptocurrency.⁶ The table below lists the top 10 trading cryptocurrencies ranked in terms of value in circulation as of September 27, 2021:⁷

⁴ Lam Pak Nian and David Lee Kuo Chuen, *Handbook of Digital Currency: Bitcoin, Innovation, Financial Instruments, and Big Data* 8 (2015); David W. Perkins, R45427: *Cryptocurrency: The Economics of Money and Selected Policy Issues*, Cong. Rsch. Serv. (2020), <https://crsreports.congress.gov/product/pdf/R/R45427>, p. 7-8.

⁵ Kendall Little, *Want to Buy Crypto? Here's What to Look for In a Crypto Exchange*, NextAdvisor (July 20, 2021), <https://time.com/nextadvisor/investing/cryptocurrency/what-are-cryptocurrency-exchanges/>.

⁶ Kai Sedgwick, *Bitcoin History Part 6: The First Bitcoin Exchange*, Bitcoin (Dec. 25, 2018), <https://news.bitcoin.com/bitcoin-history-part-6-the-first-bitcoin-exchange/>. New bitcoins can be created by a process called “mining,” with a maximum of 21 million bitcoins in existence at any time. See Bitcoin, *Frequently Asked Questions*, <https://bitcoin.org/en/faq>.

⁷ Investing, *All Cryptocurrencies*, <https://www.investing.com/crypto/currencies> (retrieved September 27, 2021).

Name	Symbol	Price (USD)	Value in Circulation (Billions)	Vol (24H) (Billions)
bitcoin	BTC	\$43,170.00	\$811.79	\$29.72
ether	ETH	\$3,053.81	\$358.41	\$18.86
Cardano	ADA	\$2.1898	\$70.19	\$3.19
Tether	USDT	\$1.0004	\$68.58	\$69.70
Binance Coin	BNB	\$344.71	\$57.96	\$1.44
XRP	XRP	\$0.9446	\$44.06	\$3.00
Solana	SOL	\$145.033	\$43.07	\$2.95
USD Coin	USDC	\$0.9999	\$31.12	\$2.98
Polkadot	DOT	\$28.581	\$28.23	\$1.68
Dogecoin	DOGE	\$0.20352	\$26.73	\$0.84689

B. Accounting Guidance for Cryptocurrencies

16. The Financial Accounting Standards Board (“FASB”) is the source of authoritative U.S. GAAP.⁸ Despite the rise in transactions involving cryptocurrencies by both individuals and corporations, the FASB has not provided any guidance on the topic of accounting for cryptocurrencies.^{9,10} Similarly, the SEC, which has the authority to set and enforce accounting

⁸ The SEC has delegated its authority to set U.S. accounting standards to the FASB and finds that “FASB’s financial accounting and reporting standards are recognized as ‘generally accepted’ for purposes of the federal securities laws.” SEC, *Policy Statement: Reaffirming the Status of the FASB as a Designated Private-Sector Standard Setter*, SEC Release Nos. 33-8221; 34-47743; IC-26028; FR-70 (Last modified on Apr. 25, 2003), <https://www.sec.gov/rules/policy/33-8221.htm>.

⁹ On May 12, 2021, “the Congressional Blockchain Caucus, sent a letter to Chairman Richard Jones of the Financial Accounting Standards Board (FASB) urging the establishment of appropriate accounting standards for companies with digital asset holdings. Currently, the FASB has not developed any accounting standards for bitcoin holdings, and uniform accounting standards are needed to provide companies and stakeholders the necessary clarity to confidently engage with these assets.” Press Releases, *Emmer Urges FASB to Issue Clear Accounting Standards for Virtual Currencies* (May 12, 2021), <https://emmer.house.gov/2021/5/emmer-urges-fasb-to-issue-clear-accounting-standards-for-virtual-currencies>.

¹⁰ Mark Maurer, *Accountants, Lawmakers Urge Rules on Crypto Accounting*, The Wall Street Journal (July 19, 2021), <https://www.wsj.com/articles/accountants-lawmakers-urge-rules-on-crypto-accounting-11626687002>. (“On the accounting front however, there hasn’t been much progress. The Financial Accounting Standards Board, which sets accounting standards for public and private companies and nonprofits in the U.S., last year decided against adding the topic to its agenda, saying investing in cryptocurrencies isn’t widespread among companies.”).

standards that public companies in the United States must follow, has also failed to provide any guidance regarding the accounting for cryptocurrencies.^{11,12}

17. Despite the lack of authoritative guidance from the SEC or the FASB on how to account for holdings of cryptocurrencies, the increased prevalence of companies purchasing and holding cryptocurrencies has led to discussions within the accounting profession of the proper accounting treatment for these transactions under existing U.S. and international accounting guidance. Among the considerations are whether holdings of cryptocurrencies (an asset of the holder) fall within the following potential balance sheet classifications: Cash and Cash Equivalents, Investments, Inventory, Property, and Intangible Assets. The table below summarizes the U.S. GAAP definitions of each asset category:

¹¹ Robert Herdman, *Testimony Concerning The Roles of the SEC and the FASB in Establishing GAAP*, Before the House Subcommittee on Capital Markets, Insurance, and Government Sponsored Enterprises, Committee on Financial Services (May 14, 2002), <https://www.sec.gov/news/testimony/051402tsrk.htm>.

¹² While not providing any accounting guidance on cryptocurrencies, I understand that the SEC has asserted in this litigation that it has issued guidance to determine whether a digital asset is a security, one example of which is an investment contract, according to federal securities laws. SEC, *Framework for "Investment Contract" Analysis of Digital Assets* (April 3, 2019), <https://www.sec.gov/corpfin/framework-investment-contract-analysis-digital-assets>. I also understand that the SEC contends in this case that XRP is a security because it is an "investment contract." I express no opinion on how XRP should be treated as a matter of the federal securities laws. However, from an accounting perspective, the GAAP definition of an "investment contract" refers to contracts issued by insurance companies and is therefore inconsistent with the SEC's definition of "investment contract" for purposes of determining whether a cryptocurrency is a security. Below I discuss the authoritative accounting guidance for securities.

Category	Source	FASB Definition
Cash	[1]	Consistent with common usage, cash includes not only currency on hand but demand deposits with banks or other financial institutions . Cash also includes other kinds of accounts that have the general characteristics of demand deposits in that the customer may deposit additional funds at any time and also effectively may withdraw funds at any time without prior notice or penalty. All charges and credits to those accounts are cash receipts or payments to both the entity owning the account and the bank holding it. For example, a bank's granting of a loan by crediting the proceeds to a customer's demand deposit account is a cash payment by the bank and a cash receipt of the customer when the entry is made.
Cash Equivalents	[1]	Cash equivalents are short-term, highly liquid investments that have both of the following characteristics: a. Readily convertible to known amounts of cash b. So near their maturity that they present insignificant risk of changes in value because of changes in interest rates. Generally, only investments with original maturities of three months or less qualify under that definition. Original maturity means original maturity to the entity holding the investment. For example, both a three-month U.S. Treasury bill and a three-year U.S. Treasury note purchased three months from maturity qualify as cash equivalents. However, a Treasury note purchased three years ago does not become a cash equivalent when its remaining maturity is three months. Examples of items commonly considered to be cash equivalents are Treasury bills, commercial paper, money market funds, and federal funds sold (for an entity with banking operations).
Investments in: Debt Securities	[1]	Any security representing a creditor relationship with an entity. The term debt security also includes all of the following: a. Preferred stock that by its terms either must be redeemed by the issuing entity or is redeemable at the option of the investor b. A collateralized mortgage obligation (or other instrument) that is issued in equity form but is required to be accounted for as a nonequity instrument regardless of how that instrument is classified (that is, whether equity or debt) in the issuer's statement of financial position c. U.S. Treasury securities d. U.S. government agency securities e. Municipal securities f. Corporate bonds g. Convertible debt h. Commercial paper i. All securitized debt instruments, such as collateralized mortgage obligations and real estate mortgage investment conduits j. Interest-only and principal-only strips.
Investments in: Equity Securities	[1]	Any security representing an ownership interest in an entity (for example, common, preferred, or other capital stock) or the right to acquire (for example, warrants, rights, forward purchase contracts, and call options) or dispose of (for example, put options and forward sale contracts) an ownership interest in an entity at fixed or determinable prices.
Investments in: Investment Contracts	[1]	Long-duration contracts that do not subject the insurance entity to risks arising from policyholder mortality or morbidity.
Inventory	[1]	The aggregate of those items of tangible personal property that have any of the following characteristics: a. Held for sale in the ordinary course of business b. In process of production for such sale c. To be currently consumed in the production of goods or services to be available for sale.
Property, Plant & Equipment	[2]	Property, plant, and equipment typically consist of long-lived tangible assets used to create and distribute an entity's products and services and include: a. Land and land improvements b. Buildings c. Machinery and equipment d. Furniture and fixtures.
Intangible Assets	[1]	Assets (not including financial assets) that lack physical substance. (The term intangible assets is used to refer to intangible assets other than goodwill.)

[1] ASC Master Glossary (emphasis added).

[2] ASC 360-10-05-3.

18. Based on my understanding of U.S. GAAP, including the definitions provided above, it is my opinion that cryptocurrencies **are not**:

- Cash or Cash Equivalents because they do not represent fiat currency or short-term, highly liquid investments that present insignificant risks of changes in value;
- Debt Securities because they do not represent a creditor relationship between issuer and holder;
- Equity Securities because they do not provide the holder with an ownership interest in an entity or the right to acquire or dispose of an ownership interest;
- Investment Contracts because they are not investments linked to insurance policies;
- Inventory or Property, Plant, and Equipment because they do not represent tangible property.

19. Cryptocurrencies **do** appear to meet the definition of Intangible Assets given that they lack physical substance and they are not a Financial Asset.¹³

20. Below, I discuss the applicable sources of non-binding accounting guidance for cryptocurrencies. The general consensus of these sources is that companies account for holdings of cryptocurrencies as Intangible Assets.

1. *IASB*

21. The International Accounting Standards Board (“IASB”) publishes accounting standards (referred to as International Financial Reporting Standards, or “IFRS”) which are the accounting principles adopted by many countries throughout the world. In May 2019, the IFRS Interpretations Committee provided accounting guidance for cryptocurrencies having all of the following characteristics:

¹³ A Financial Asset is “Cash, evidence of an ownership interest in an entity, or a contract that conveys to one entity a right to do either of the following:

- a. Receive cash or another financial instrument from a second entity.
- b. Exchange other financial instruments on potentially favorable terms with the second entity.”

ASC Master Glossary: Financial Asset.

- (a) a cryptocurrency that is a digital or virtual currency recorded on a distributed ledger and uses cryptography for security.
- (b) a cryptocurrency that is not issued by a jurisdictional authority or other party.
- (c) a holding of a cryptocurrency that does not give rise to a contract between the holder and another party.¹⁴

In particular, the IFRS guidance provides two options for the accounting treatment of a company's holdings of cryptocurrency:

The Committee concluded that IAS 2 *Inventories* applies to cryptocurrencies when they are held for sale in the ordinary course of business. If IAS 2 is not applicable, an entity applies IAS 38 *Intangible Assets* to holdings of cryptocurrencies.¹⁵

22. I note, however, that the IFRS definition of inventory contrasts with that of the FASB (summarized in the table above), which specifies that inventory consists only of tangible assets.¹⁶

23. In a publication discussing the IFRS guidance, Big 4 public accounting firm Ernst & Young (“EY”) noted: “The IFRS [Interpretations Committee] observed that a holding of cryptocurrency meets the definition of an intangible asset in IAS 38 on the grounds that: (a) it is capable of being separated from the holder and sold or transferred individually; and (b) it does not give the holder a right to receive a fixed or determinable number of units of currency.”¹⁷

¹⁴ IFRS Staff Paper, Project: *Holdings of Cryptocurrencies* (June 2019), <https://www.ifrs.org/content/dam/ifrs/meetings/2019/june/ifric/ap12-holdings-of-cryptocurrencies.pdf>, ¶ 1.

¹⁵ IFRS Staff Paper, Project: *Holdings of Cryptocurrencies* (June 2019), ¶ 2. Unlike U.S. GAAP, IAS 2 *Inventories* applies to inventories of Intangible Assets. *Id.*, p. 24. The guidance covers only the accounting for holdings of cryptocurrencies, not how sales would be accounted for if the cryptocurrency is “held for sale in the ordinary course of business.” *Id.*

¹⁶ According to IAS 2.6: “Inventories include assets held for sale in the ordinary course of business (finished goods), assets in the production process for sale in the ordinary course of business (work in process), and materials and supplies that are consumed in production (raw materials).” Deloitte, *IAS 2 — Inventories*, <https://www.iasplus.com/en/standards/ias/ias2> (retrieved October 2, 2021).

¹⁷ EY, *Holdings of Cryptocurrencies*, IFRS Developments Issue 150 (August 2019), https://assets.ey.com/content/dam/ey-sites/ey-com/en_gl/topics/ifrs/ey-devel150-cryptocurrency-holdings-august-2019.pdf, p. 1.

2. AICPA

24. The American Institute of Certified Public Accountants (“AICPA”), the U.S. entity that certifies public accountants, has published non-binding guidance on the accounting and auditing of digital assets, of which crypto assets are one example.¹⁸ The first question in the guide addresses how a purchaser of crypto assets such as bitcoin or ether (*i.e.*, a cryptocurrency) accounts for its holdings:

Question 1:

How should an entity that does not apply specialized industry guidance (for example, it is not applying FASB Accounting Standards Codification [ASC] 946, Financial Services — Investment Companies) account for purchases of crypto assets for cash?

For purposes of this Q&A, the term *crypto asset* is specific to the type of digital assets that

- a. function as a medium of exchange and
- b. have all the following characteristics:
 - i. They are not issued by a jurisdictional authority (for example, a sovereign government).
 - ii. They do not give rise to a contract between the holder and another party.
 - iii. They are not considered a security under the Securities Act of 1933 or the Securities Exchange Act of 1934.

These characteristics are not all-inclusive, and other facts and circumstances may need to be considered. **Examples of crypto assets meeting these characteristics include bitcoin, bitcoin cash, and ether.**¹⁹

Response 1:

The FASB ASC Master Glossary defines *intangible assets* as assets (not including financial assets) that lack physical substance. Accordingly, crypto assets with the previously described characteristics meet the definition of intangible assets and would generally be accounted for under FASB ASC 350, *Intangibles — Goodwill and Other*.

These crypto assets generally would not meet the definitions of other asset classes within generally accepted accounting principles (GAAP), and therefore, accounting for them as other than intangible assets may not be appropriate, as described in the following examples:

- Crypto assets will not meet the definition of *cash* or *cash equivalents* (as defined in the FASB ASC Master Glossary) when they are not considered legal tender and are not backed by sovereign

¹⁸ AICPA, *Accounting for and auditing of digital assets* (2019), <https://www.aicpa.org/content/dam/aicpa/interestareas/informationtechnology/downloadabledocuments/accounting-for-and-auditing-of-digital-assets.pdf>.

¹⁹ From the perspective of an accountant assessing the proper accounting treatment for XRP transactions, it is evident that XRP has characteristics a., b.i., and b.ii. The assessment of b.iii. is a legal, not an accounting issue, that I understand is a fundamental legal question in this litigation.

governments. In addition, these crypto assets typically do not have a maturity date and have traditionally experienced significant price volatility.

- Crypto assets will not be *financial instruments* or *financial assets* (as defined in the FASB ASC Master Glossary) if they are not *cash* (see previous discussion) or an ownership interest in an entity and if they do not represent a contractual right to receive cash or another financial instrument.
- Although these crypto assets may be held for sale in the ordinary course of business, they are not tangible assets and therefore may not meet the definition of *inventory* (as defined in the FASB ASC Master Glossary).²⁰

25. Based on this guidance, the purchaser of crypto assets (*i.e.*, cryptocurrency) records the purchase price on the balance sheet as an Intangible Asset. The FASB provides authoritative guidance regarding the accounting for Intangible Assets.²¹ The value recorded for the Intangible Asset must be assessed at least annually and, if the current fair value has declined below the purchase price, the company records an expense called an impairment charge and reduces the balance down to its current fair value.²² Unlike for a financial instrument (*e.g.*, an investment in a security),²³ however, the recorded value of Intangible Assets cannot be written up if, for example, the market price of the cryptocurrency rises above the recorded value (referred to as the carrying amount).²⁴

²⁰ AICPA, *Accounting for and auditing of digital assets* (2019), p. 3 (internal note omitted).

²¹ ASC 350 *Intangibles – Goodwill and Other*.

²² ASC 350-30-35-18 (“An intangible asset that is not subject to amortization shall be tested for impairment annually and more frequently if events or changes in circumstances indicate that it is more likely than not that the asset is impaired”); ASC 350-30-35-19 (“The quantitative impairment test for an indefinite-lived intangible asset shall consist of a comparison of the fair value of the asset with its carrying amount. If the carrying amount of an intangible asset exceeds its fair value, an entity shall recognize an impairment loss in an amount equal to that excess”); ASC 350-30-35-20 (“Subsequent reversal of a previously recognized impairment loss is prohibited”). See also AICPA, *Accounting for and auditing of digital assets* (2019), p. 5-7.

²³ EY, *Technical Line: A holder’s accounting for cryptocurrencies*, (October 18, 2018), https://www.ey.com/en_us/assurance/accountinglink/technical-line---a-holder-s-accounting-for-cryptocurrencies, p. 5 (“A financial instrument is cash, an ownership interest in an entity or a contract that imposes an obligation to deliver or a right to receive cash or another financial instrument.”).

²⁴ See, *e.g.*, PwC, *Point of view: Cryptocurrencies: Time to consider plan B* (March 2018), p. 1 (“Under the current US accounting framework, cryptocurrency is not cash, currency, or a financial asset; rather, it should likely be accounted for as an indefinite-lived intangible asset. The implication of this model is that declines in the market price of cryptocurrencies would be included in earnings, while increases in value beyond the original cost or recoveries of previous declines in value would not be captured.”).

26. The AICPA guidance also clarifies that the accounting treatment of digital assets (including cryptocurrencies) is different for companies that meet the FASB requirements to be an investment company or broker-dealer (*i.e.*, in the business of investing or trading in those cryptocurrencies).²⁵ In particular, an investment company “should determine whether its holdings of digital assets represents a debt security, equity security, or an other investment” and apply the relevant FASB guidance for those instruments.²⁶ This guidance requires an investment company to account for its holdings of digital assets as investments (*i.e.*, to assess and adjust the carrying value upward or downward to reflect fair value in each reporting period).²⁷ Similarly, the AICPA guidance states that digital assets owned by a broker-dealer as part of its proprietary trading portfolio are considered to be inventory, and “should be measured at fair value with changes in fair value recognized in profit and loss.”²⁸ Therefore, the AICPA guidance treats holdings of a digital asset by a registered investment company or broker-dealer the same as it would holdings of commodities or physical assets that those companies are in the business of investing or trading, and does not imply that cryptocurrencies are investments (or securities).

3. *Public Accounting Firms*

27. Prior to the AICPA’s issuance of the guidance discussed above, the Big 4 public accounting firms in the U.S. – EY, KPMG LLP (“KPMG”), Deloitte & Touche (“Deloitte”), and Pricewaterhouse Coopers (“PwC”) – all weighed in with interpretive guidance on the accounting

²⁵ AICPA, *Accounting for and auditing of digital assets* (2019), p. 12 and 14. FASB ASC 946 *Financial Services – Investment Companies* defines an investment company as an entity regulated under the Investment Company Act of 1940. ASC 946-10-15-4. The FASB provides specialized industry guidance for broker-dealers in FASB ASC 940 *Financial Services – Brokers and Dealers*.

²⁶ AICPA, *Accounting for and auditing of digital assets* (2019), p. 12.

²⁷ *Id.*; ASC 946-320-35-1; ASC 946-325-30-1. As explained above, companies that are not investment companies account for holdings of digital assets accounted as Intangible Assets and therefore are required to adjust the carrying value of the digital assets downward if their valued is impaired, but cannot increase the carrying value if the fair value of the digital asset increases.

²⁸ AICPA, *Accounting for and auditing of digital assets* (2019), p. 14.

for cryptocurrencies. In particular, the firms all provided general guidance that cryptocurrencies should be accounted for as Intangible Assets along with some discussion of the possibility of recording as inventory or investment (in the case where the reporting firm is an investment company).

28. For example, a KPMG “Defining Issues” publication on blockchain technologies, including cryptocurrencies, provides the firm’s views on the proper accounting treatment:

Cryptocurrencies like bitcoin may exhibit certain characteristics of assets covered by different accounting codification topics. For example, some have suggested that bitcoin is akin to traditional currencies like those backed by sovereign governments. Others view bitcoin as a commodity, such as ‘digital gold.’

However, we believe that cryptocurrencies would generally meet the definition of an indefinite-lived **intangible asset** because they do not convey specific rights in the same way as financial instruments.

Indefinite-lived intangible assets are not amortized, but are required to be recognized and measured at their historical cost; impairment is recognized when their carrying amount exceeds fair value. The subsequent reversal of previously recognized impairment losses is prohibited.

While many believe cryptocurrencies like bitcoin would be better measured at fair value each period, outside of a few specific circumstances (i.e., cryptocurrency held as an investment by an investment company), US GAAP does not permit fair value accounting for an intangible asset.²⁹

29. Similarly, a Deloitte “Financial Reporting Alert” on the classification of cryptocurrency holdings states:

The guidance in U.S. GAAP does not currently directly address the accounting for cryptocurrencies. For the reasons explained below, we believe that cryptocurrencies should generally be accounted for as indefinite-lived intangible assets under ASC 350; however, there may be limited circumstances in which cryptocurrencies are (1) held for sale in the ordinary course of business and thus considered inventory (as in the case of a broker) or (2) accounted for as an investment by an investment company.³⁰

²⁹ KPMG, *Defining Issues: Blockchain and digital currencies challenge traditional accounting and reporting models* (July 18, 2018), <https://assets.kpmg/content/dam/kpmg/bm/pdf/2018/10/defining-issues-18-13-blockchain.pdf>, p. 2-3 (emphasis in original; footnotes omitted).

³⁰ Deloitte, *Financial Reporting Alert 18-9: Classification of Cryptocurrency Holdings* (July 9, 2018), <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/audit/ASC/FRA/2018/us-aers-fra-classification-of-cryptocurrency-holdings.pdf>, p. 2. The guidance further explains that: “in the absence of future standard setting by the FASB, it may be acceptable in certain circumstances for entities to account for cryptocurrencies as inventory if part of their primary business is to hold such cryptocurrencies in a manner similar to how brokers hold inventories.” *Id.*, p. 3.

30. The Deloitte guidance also explains: “Cryptocurrencies are not financial assets because they are not cash, an ownership interest in an entity, or a contract establishing a right or obligation to deliver or receive cash or another financial instrument. Since they lack physical substance, they are generally considered intangible assets.”^{31,32}

31. EY’s guidance concluded that cryptocurrencies met U.S. GAAP’s definition of an Intangible Asset because they are “nonfinancial assets that lack physical substance” and are not financial instruments because they “are not cash or an ownership interest in an entity, and they do not represent a contractual obligation to deliver or a right to receive cash or another financial instrument.”³³

32. A PwC publication discusses “[t]he accounting possibilities for cryptocurrency,” and concludes:

Under the current US accounting framework, cryptocurrency is not cash, currency, or a financial asset; rather, it should likely be accounted for as an indefinite-lived intangible asset. The implication of this model is that declines in the market price of cryptocurrencies would be included in earnings, while increases in value beyond the original cost or recoveries of previous declines in value would not be captured.³⁴

33. PwC also notes that the guidance for internally-generated cryptocurrency is less clear:

When cryptocurrency is purchased, the intangible asset would be measured at the price paid or consideration given to obtain the cryptocurrency. However, the question for miners is more complicated. Unlike a direct purchase, miners are awarded units, but they incur costs of computing

³¹ *Id.*, p. 2.

³² The FASB defines **Cash** to “include[] not only currency on hand but demand deposits with banks or other financial institutions,” but does not include “Treasury bills, commercial paper, money market funds, and federal funds sold,” which are considered to be **Cash Equivalents**. See ASC Master Glossary: Cash and Cash Equivalents.

³³ EY, *Technical Line: A holder’s accounting for cryptocurrencies* (October 18, 2018), p. 5.

³⁴ PwC, *Point of view: Cryptocurrencies: Time to consider plan B* (March 2018), p. 1.

equipment, electricity, and other expenses. At issue for the miners is whether the associated costs should be capitalized as an intangible asset or expensed.³⁵

34. As the excerpts provided above demonstrate, the guidance issued by the Big 4 accounting firms is consistent with the non-binding guidance issued in 2019 by the AICPA: holders of cryptocurrencies (other than investment companies) should account for their holdings as Intangible Assets.

35. None of these sources provide any guidance regarding the sale of cryptocurrency by companies as part of their operations or the use of cryptocurrency as a medium of exchange in operational transactions. By analogy to existing U.S. GAAP, however, it appears that companies that sell cryptocurrency as part of their operations would account for the proceeds from sales of those holdings as Revenues and also record an expense (Cost of Sales) equal to the carrying value of the cryptocurrency held as Intangible Assets.³⁶ Similarly, the guidance suggests that companies with holdings of cryptocurrencies that are not for sale in the ordinary course of business would record a gain or loss in conjunction with sales of those holdings equal to the net proceeds less the carrying value of Intangible Assets sold.³⁷

³⁵ *Id.*, p. 3. PwC cautions, however, that the limited guidance on accounting for costs incurred to internally develop Intangible Assets generally limits capitalization. *Id.*, p. 4.

³⁶ According to the FASB's Statement of Financial Accounting Concepts:

— Revenues are inflows or other enhancements of assets of an entity or settlements of its liabilities (or a combination of both) from delivering or producing goods, rendering services, or other activities that constitute the entity's ongoing major or central operations.

— Expenses are outflows or other using up of assets or incurrences of liabilities (or a combination of both) from delivering or producing goods, rendering services, or carrying out other activities that constitute the entity's ongoing major or central operations.

FASB Statement of Financial Accounting Concepts No. 6: Elements of Financial Statements, at CON6-2.

³⁷ According to the FASB's Statement of Financial Accounting Concepts:

— Gains are increases in equity (net assets) from peripheral or incidental transactions of an entity and from all other transactions and other events and circumstances affecting the entity except those that result from revenues or investments by owners.

C. Accounting Guidance for Securities

36. The FASB provides two definitions of a security. Under the first definition, a security is defined as: “The evidence of debt or ownership or a related right. It includes options and warrants as well as debt and stock.”³⁸

37. Under the second definition, the FASB defines a security as: “A share, participation, or other interest in property or in an entity of the issuer or an obligation of the issuer that has all of the following characteristics:

- a. It is either represented by an instrument issued in bearer or registered form or, if not represented by an instrument, is registered in books maintained to record transfers by or on behalf of the issuer.
- b. It is of a type commonly dealt on the securities exchanges or markets or, when represented by an instrument, is commonly recognized in any area in which it is issued or dealt in as a medium for investment.
- c. It either is one of a class or series or by its terms is divisible into a class or series of shares, participations, interests, or obligations.”³⁹

38. The FASB classifies securities issued by companies as either debt or equity securities. A debt security is “[a]ny security representing a creditor relationship with an entity.”⁴⁰

The guidance explains that proceeds received from an investor are considered to be debt if:

- a. The transaction does not purport to be a sale (that is, the form of the transaction is debt).
- b. The entity has significant continuing involvement in the generation of the cash flows due the investor (for example, active involvement in the generation of the operating revenues of a product line, subsidiary, or business segment).
- c. The transaction is cancelable by either the entity or the investor through payment of a lump sum or other transfer of assets by the entity.

— Losses are decreases in equity (net assets) from peripheral or incidental transactions of an entity and from all other transactions and other events and circumstances affecting the entity except those that result from expenses or distributions to owners.

FASB Statement of Financial Accounting Concepts No. 6: Elements of Financial Statements, at CON6-2.

³⁸ ASC Master Glossary: Security.

³⁹ *Id.*

⁴⁰ ASC Master Glossary: Debt Security.

- d. The investor's rate of return is implicitly or explicitly limited by the terms of the transaction.
- e. Variations in the entity's revenue or income underlying the transaction have only a trifling impact on the investor's rate of return.
- f. The investor has any recourse to the entity relating to the payments due the investor.⁴¹

39. The FASB defines an equity security as follows:

Any security representing an ownership interest in an entity (for example, common, preferred, or other capital stock) or the right to acquire (for example, warrants, rights, forward purchase contracts, and call options) or dispose of (for example, put options and forward sale contracts) an ownership interest in an entity at fixed or determinable prices.⁴²

40. The FASB provides guidance on the accounting for debt or equity securities issued by companies.⁴³ The amount of proceeds a company receives from the issuance of debt is accounted for as a liability, while the proceeds for issuances of equity (*e.g.*, common stock, preferred stock) are accounted for as equity on the company's balance sheet. Unlike a sale of goods held on a company's balance sheet as inventory, there is no income statement impact (*i.e.*, no revenue or expenses) associated with issuing debt or equity.

41. The FASB also provides guidance on the accounting for investments in debt and equity securities.⁴⁴ That guidance provides that a company's holdings of debt and equity securities are recorded as an Investment (an asset) on its balance sheet.⁴⁵ How a company accounts for subsequent changes in value of debt securities depends on its intention for holding that security

⁴¹ ASC 470-10-25-2.

⁴² ASC Master Glossary: Equity Security. More broadly, the FASB clarifies that equity represents the residual claim on the assets of a company. ASC 505-10-05-3 ("Equity, sometimes referred to as net assets, is the residual interest in the assets of an entity that remains after deducting its liabilities.").

⁴³ ASC 470 *Debt*; ASC 505 *Equity*. The FASB has issued separate guidance for companies registered under the Investment Company Act of 1940 (FASB ASC 946 *Financial Services – Investment Companies*).

⁴⁴ ASC 320 *Investments – Debt Securities*; ASC 321 *Investments – Equity Securities*. As noted above, the FASB has provided specialized industry guidance for investment companies and broker-dealers in ASC 946 *Financial Services – Investment Companies* and ASC 940 *Financial Services – Brokers and Dealers*.

⁴⁵ ASC 320-10-45-1; ASC 321-10-45-1.

(e.g., with intent to trade or hold to maturity),⁴⁶ while equity securities are generally accounted for at fair value.⁴⁷

V. ACCOUNTING FOR XRP AND OTHER CRYPTOCURRENCIES BY RIPPLE AND PUBLICLY TRADED COMPANIES

42. In this section, I discuss the cryptocurrency XRP and Ripple’s accounting treatment for its transactions in XRP. I also discuss the accounting practices for companies holding XRP and other cryptocurrencies.

A. XRP

43. Ripple is a private corporation that provides global financial settlement solutions based on blockchain technology.⁴⁸ Ripple’s payment services utilize the cryptocurrency XRP and the open-source XRP Ledger to provide liquidity in global payments.⁴⁹ As shown in the table above (*supra*, ¶ 15), XRP is ranked sixth among cryptocurrencies in terms of value in circulation.

44. Shortly after Ripple’s formation, the developers of the XRP Ledger contributed 80 billion XRP to the Company.⁵⁰ Ripple’s audited financial statements explain that “[s]ince inception, the Company has generated revenue primarily through the sales of XRP, the proceeds of which help Ripple develop our software and related services business.”⁵¹

⁴⁶ ASC 320-10-25-1; ASC 320-10-35-1 (noting that debt securities held for trading purposes or available for sale are measured at fair value, while debt securities held to maturity are measured at amortized cost).

⁴⁷ ASC 321-10-35-1 (“Except as provided in paragraph 321-10-35-2 [Equity Securities without Readily Determinable Fair Values], investments in **equity securities** shall be measured subsequently at **fair value** in the statement of financial position. Unrealized **holding gains and losses** for equity securities shall be included in earnings.”).

⁴⁸ Ripple Consolidated Financial Statements For the years ended December 31, 2020 and 2019 (RPLI_SEC 0920429-75), p. 8.

⁴⁹ *Id.*, p. 8, 21.

⁵⁰ *Id.*, p. 14.

⁵¹ *Id.*, p. 21.

45. Ripple’s audited financial statements explain how, for use in its operations, the Company manages its access to the XRP held as Intangible Assets:

The Company utilizes a cryptographic escrow feature of the XRP Ledger to create certainty of XRP available to Ripple at any given time. The Company uses the escrow feature to establish escrow contracts that will expire on the first day of every month, with each monthly expiration representing 1 billion XRP. Only after the contracts expire do the XRP become available for Ripple’s use. At the beginning of each month XRP are placed in new escrow contracts with expiration scheduled for the first month which does not yet have 1 billion XRP scheduled for escrow expiration. As of December 31, 2020, 48.2 billion XRP were subject to these time-based escrow contracts. During the years ended December 31, 2020 and 2019, of the 12.0 billion XRP released annually from escrow contracts 10.3 billion XRP and 9.4 billion XRP, respectively, were placed into new escrow contracts, with the last contract expiring on January 1, 2025.⁵²

B. Ripple’s Accounting for XRP

46. Ripple is not a publicly traded company and does not otherwise meet the requirements to file its financial statements with the SEC. Since at least 2014, however, Ripple’s annual financial statements have been audited by a public accounting firm and, in each year, have received “clean” audit opinions (*i.e.*, that the financial statements are presented in accordance with U.S. GAAP).^{53,54} Although providing clean audit opinions, Ripple’s auditor BPM LLP did provide the following “emphasis of matter” paragraph in its audit reports for the years 2015 – 2018 acknowledging the lack of U.S. GAAP regarding the accounting for cryptocurrencies:⁵⁵

⁵² *Id.* Unused XRP are placed back in escrow. According to Ripple’s 2017 audited financial statements, “[i]n December 2017, the Company placed a cryptographic escrow on 55 billion units of XRP to create certainty of XRP supply at any given time.” Ripple Consolidated Financial Statements for the years ended December 31, 2017 and 2016 (RPLI_SEC0296631-69), p. 13.

⁵³ See Ripple Audited Financial Statements (“AFS”) for the years-ended December 31, 2014 (RPLI_SEC0090938-62), 2015 (RPLI_SEC 0302366-92) (“Ripple 2015 AFS”), 2016 (RPLI_SEC 0302336-64), 2017 (RPLI_SEC 0296631-69) (“Ripple 2017 AFS”), 2018 (RPLI_SEC 0265036-75), 2019 (RPLI_SEC 0301113-60) (“Ripple 2019 AFS”), and 2020 (RPLI_SEC 0920429-75) (“Ripple 2020 AFS”).

⁵⁴ For example, Ripple’s 2020 audited financial statements contain the standard language used in a “clean” audit opinion: “In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Ripple Labs Inc. and its subsidiaries as of December 31, 2020 and 2019, and the results of their operations and their cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.” Ripple 2020 AFS, p. 1.

⁵⁵ The auditor includes an “emphasis of matter” paragraph to “draw users’ attention to a matter or matters presented or disclosed in the financial statements that are of such importance that they are fundamental to users’ understanding of the financial statements.” AICPA, *AU-C Section 706: Emphasis-of-Matter Paragraphs and Other-Matter*

Emphasis of Matter - Accounting for Digital Currencies

As discussed in Note 2 to the consolidated financial statements, U.S. GAAP contains no authoritative guidance related to the accounting for XRP, bitcoin, digital assets or virtual currencies (“digital currencies”). As a result, transactions involving digital currencies have been accounted for analogizing to existing accounting standards that management believes are appropriate to the circumstances. There can be no certainty as to when the Financial Accounting Standards Board or other standard setters will issue accounting standards for digital currencies, if at all. Our opinion is not modified with respect to that matter.⁵⁶

47. Since 2019, “Big 4” public accounting firm Deloitte has been Ripple’s auditor. In both 2019 and 2020, Deloitte issued audit reports with clean audit opinions, and did not add an emphasis of matter paragraph regarding the lack of U.S. GAAP on accounting for XRP.⁵⁷ Therefore, the Company’s audited financial statements make clear that, according to Ripple’s auditors, its accounting for XRP transactions was in accordance with the applicable authoritative guidance or, if no such guidance has been issued, to appropriate analogous guidance for each of the fiscal years 2014 – 2020.

48. In the remainder of this sub-section, I discuss Ripple’s accounting for its holdings of XRP and XRP-related transactions based on the disclosures in Ripple’s 2020 AFS.

1. *Balance Sheet*

49. Ripple’s holdings of XRP appear on its balance sheet as either Purchased XRP or XRP Derivative Assets/Liabilities:

Paragraphs in the Independent Auditor’s Report (2020), <https://www.aicpa.org/content/dam/aicpa/research/standards/auditattest/downloadabledocuments/au-c-00706.pdf>, ¶.01.a.

⁵⁶ See, e.g., Ripple 2017 AFS, p. 1.

⁵⁷ See Ripple 2020 AFS, p. 1. In 2019, Deloitte added an emphasis of matter paragraph to explain that the 2018 financial statements included within the audit report had been restated to correct the accounting for non-monetary XRP transactions to be in accordance with ASC 606 *Revenue from Contracts with Customers*. Ripple 2019 AFS, p. 1 & 21. The FASB did not require non-public companies like Ripple to adopt ASC 606 until annual reporting periods beginning after December 15, 2018 (*i.e.*, for Ripple, the financial statement year beginning January 1, 2019). See ASC 606-10-65-1. In 2020, Deloitte added the following emphasis of matter paragraph: “As discussed in Note 10 to the consolidated financial statements, the Company is a defendant in a lawsuit filed by the Securities and Exchange Commission. Our opinion is not modified with respect to this matter.” Ripple 2020 AFS, p. 1.

	2020	2019
ASSETS		
Current assets:		
Cash and cash equivalents		
Purchased XRP		
Accounts receivable, net		
Income taxes receivable		
Prepaid expenses and other current assets		
XRP derivative asset		
Total current assets		
Restricted cash, net of current		
Property and equipment, net		
Investments at fair value		
Cost method investments		
Equity method investments		
Deferred tax asset		
Operating lease right-of-use asset		
Other assets		
Total assets		
LIABILITIES, CONVERTIBLE REDEEMABLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable		
Accrued expenses and other current liabilities		
Deferred revenue		
Income tax payable		
Lease liability		
XRP derivative liability		
Total current liabilities		
Long term liabilities:		
Lease liability, net of current		
XRP derivative liability, net of current		
Other long-term liabilities		
Total liabilities		
Commitments and contingencies (Note 10)		
Series A convertible redeemable preferred stock, \$0.0001 par value; 45,634 shares authorized; 44,321 and 45,634 shares issued and outstanding as of December 31, 2020 and 2019, respectively (aggregate liquidation preference of \$39,463 as of December 31, 2020)		
Series B convertible redeemable preferred stock, \$0.0001 par value; 27,528 shares authorized; 26,146 and 27,528 shares issued and outstanding as of December 31, 2020 and 2019, respectively (aggregate liquidation preference of \$49,830 as of December 31, 2020)		
Series C convertible redeemable preferred stock, \$0.0001 par value; 4,879 shares authorized; 3,650 and 3,253 shares issued and outstanding as of December 31, 2020 and 2019, respectively (aggregate liquidation preference of \$336,673 as of December 31, 2020)		
Stockholders' equity:		
Class A and B common stock and additional paid-in capital, \$0.0001 par value; 180,000 Class A shares authorized, 38,578 and 36,600 shares issued and outstanding as of December 31, 2020 and 2019, respectively; 35,331 Class B shares authorized, 34,645 and 34,825 shares issued and outstanding as of December 31, 2020 and 2019, respectively		
Treasury stock, at cost 279 shares as of December 31, 2020		
Notes receivable from stockholders		
Accumulated other comprehensive income		
Retained earnings		
Total Ripple Labs Inc. stockholders' equity		
Noncontrolling interest		
Total liabilities, convertible redeemable preferred stock, noncontrolling interest, and stockholders' equity		

50. The XRP contributed to the Company as part of its formation is considered an Intangible Asset but does not appear as a line item on Ripple's balance sheet because its cost basis is zero.⁵⁸

⁵⁸ "These contributed XRP are recorded at a cost basis of zero on our consolidated balance sheets." Ripple 2020 AFS, p. 14.

51. Ripple began to purchase XRP on the open market in the second half of 2020.⁵⁹

As of December 31, 2020 and 2019 the Company owned 54.9 billion XRP and 57.2 billion XRP, respectively. Of the 54.9 billion XRP owned as of December 31, 2020, majority of which were held at a zero-cost basis while 64.5 million XRP were held at a cost basis of \$11.8 million.⁶⁰

As of December 31, 2020, the \$11.8 million of Purchased XRP, which, like Contributed XRP, is considered to be an Intangible Asset, was classified as a current asset.⁶¹

52. Ripple also records assets and liabilities related to XRP Derivatives Transactions (see discussion below).

2. *Income Statement*

53. Ripple's 2020 audited financial statements summarize the income statement amounts recorded for XRP Related Transactions.⁶²

The following table presents amounts which were recognized in our consolidated statements of operations for the years ended December 31 (in thousands):

	2020		2019	
XRP transactions	\$		\$	
Non-monetary XRP transactions				
Cost of net revenues				
Research and development				
Selling and marketing				
General and administrative				
Realized gains on XRP derivatives				
Unrealized gains (losses) on XRP derivatives	\$		\$	

3. *Accounting for XRP Transactions*

54. Below I explain the balance sheet and income statement effects of Ripple's transactions involving XRP.

⁵⁹ "There were no XRP purchased during the year ended December 31, 2019." *Id.*

⁶⁰ *Id.*

⁶¹ I understand that the classification of Purchased XRP as a current asset is based on the timing of its intended use in Ripple's operations.

⁶² Ripple 2020 AFS, p. 22.

a) Monetary XRP Transactions

55. Ripple’s audited financial statements explain that: “XRP transactions revenue consists of sales of XRP for fixed monetary consideration, and is recognized upon delivery of XRP to the customer.”⁶³ I understand that third parties purchase XRP from Ripple for various purposes, including in order to facilitate transactions across foreign currency exchanges using Ripple’s Wallet Send/ On Demand Liquidity (“ODL”) product.⁶⁴ Ripple’s sales of XRP also “serv[e] as a source of capital to fund the Company’s operations” and are made “for the purpose of providing liquidity to customers.”⁶⁵

56. The accounting for monetary XRP transactions depends on whether Ripple’s sales of XRP come from its internal supply of XRP or from XRP purchased on the market. When Ripple sells XRP that was contributed to Ripple by the creators of the XRP ledger, which as discussed above has a cost basis of zero, the Company simply records the cash received from purchasers as an asset and a corresponding amount of XRP Transaction revenue on its income statement.

57. As discussed above, Ripple purchased XRP on the open market during the second half of 2020. Ripple’s audited financial statements explain that: “XRP owned by the Company is accounted for as intangible assets with an indefinite life and is recorded at cost subject to impairment.”⁶⁶ When Ripple sells XRP out of its inventory of Purchased XRP, the Company makes a second accounting entry to reduce the Purchased XRP asset balance and to record an

⁶³ *Id.*, p. 11. “During the year ended December 31, 2020, [REDACTED] customers accounted for 96% of revenue generated from monetary transactions.” *Id.*, p. 8.

⁶⁴ The Wallet Send product began in July 2020 and effectively replaced Ripple’s previous platform to facilitate transfers using XRP (XRPO).

⁶⁵ Ripple 2018 AFS, p. 10.

⁶⁶ Ripple 2020 AFS, p. 14. The Company had a balance of Purchased XRP of \$11.8 million as of December 31, 2020 and recognized \$6.8 million of impairment charges related to Purchased XRP as “Cost of net revenues” during 2020. *Id.*, p. 2, 21.

expense (“Cost of net revenues”) at an amount equal to the cost basis of the Purchased XRP being sold.⁶⁷

b) Non-Monetary XRP Transactions

58. Ripple generates non-monetary revenue from XRP transactions in which the Company pays for services with XRP (*i.e.*, uses its “inventory” of XRP with a zero costs basis as currency to settle liabilities).

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.⁶⁸

59. I understand that non-monetary XRP transactions typically arise from service and incentive contracts that Ripple entered into with suppliers or contractors. The non-monetary revenue recorded is offset by an associated “non-monetary” expense categorized based on the substance of the services provided: Research and development;⁶⁹ Selling and marketing;⁷⁰ and General and administrative.⁷¹

⁶⁷ I understand that the Company’s inventory of Purchased XRP is tracked in separate wallets for each purchase and accounted for on a FIFO basis.

⁶⁸ Ripple 2020 AFS, p. 11.

⁶⁹ Ripple’s audited financial statements explain that the Company “expense[s] research and development and software development costs, including costs to develop software products or the software component of products to be sold, leased, or marketed to external users, before technological feasibility is reached.” *Id.*, p. 13.

⁷⁰ For example, costs associated with the Company’s Commercial Agreement with MoneyGram “to facilitate cross-border non-U.S. dollar exchange settlements” on Ripple’s ODL platform was recorded as a selling and marketing expense. “The Company recognized \$62.9 million and \$12.8 million of non-monetary XRP transaction revenue and \$61.6 million and \$14.1 million of sales and marketing expense related to payments under the commercial agreement in the years ended December 31, 2020 and 2019, respectively.” *Id.*, p. 41.

⁷¹ For example, in 2019 Ripple granted its CEO 250 million XRP. The XRP were transferred at the time of grant, with 50% vested at the time of grant, and the remaining vesting on a quarterly basis over the next four years. Ripple records the compensation cost as the XRP vest as general and administrative expense. “In connection with this arrangement, the Company recognized [REDACTED] and [REDACTED] in nonmonetary XRP transaction revenue and [REDACTED] and [REDACTED] in general and administrative expense in the years ended December 31, 2020 and 2019, respectively.” *Id.*, p. 40.

60. Ripple records two sets of accounting entries associated with non-monetary XRP transactions. First, at the time Ripple receives an invoice from its supplier or contractor, the Company records an expense in one of the four categories described above on its income statement and an associated liability (an “accrued expense”) on its balance sheet, with both amounts equal to the invoice amount. Second, at the time Ripple “pays” the invoice, the Company removes the liability from its balance sheet and records non-monetary XRP transaction revenue on its income statement.⁷²

61. The only difference between the amount of expense recorded and non-monetary XRP revenue generated is the result of timing differences between when the expense is incurred and the XRP is distributed in payment of that expense.⁷³ As of December 31, 2019 and 2020, there was a minimal difference between the sum of expenses and non-monetary revenue:⁷⁴

	<u>2020</u>		<u>2019</u>	
Non-monetary XRP transactions	\$		\$	
Cost of net revenues				
Research and development				
Selling and marketing				
General and administrative				
Net revenue (expense)	\$		\$	

62. As an example of the offset of revenues and expenses associated with non-monetary XRP transactions, Ripple’s audited financial statements disclose that in conjunction with the Company’s Commercial Agreement with MoneyGram, Ripple recognized \$75.7 million in non-

⁷² I understand that Ripple records revenue equal to the market rate of XRP as of 9 am Pacific Time on the date paid.

⁷³ Differences between the timing of the receipt of XRP units as revenue and payment of XRP units for expenses lead to differences between the recorded dollar amount of revenues and expenses because of changes in the dollar value of XRP units over time.

⁷⁴ Ripple 2020 AFS, p. 22.

monetary XRP transaction revenue and \$75.7 million in Selling and marketing expenses over the two-years 2019 – 2020.⁷⁵

63. Finally, Ripple’s 2020 audited financial statements explain that “Ripple acts as a custodian of XRP on behalf of third parties.”⁷⁶ I understand that Ripple performs this service for customers at no charge and that the \$6.6 billion in XRP held on behalf of external parties pursuant to these arrangements is not carried on Ripple’s balance sheet (*i.e.*, Ripple does not take ownership of the stored XRP).

c) XRP Derivative Transactions

64. Ripple also engages in various derivative transactions involving XRP:

In connection with various contractual arrangements the Company gave rights to third parties to purchase XRP. . . . As of December 31, 2020, options to purchase [REDACTED] XRP remained outstanding, with average per XRP purchase price of less than [REDACTED]. All outstanding options are vested and exercisable as of December 31, 2020 and are included in XRP derivative liability with an intrinsic value of [REDACTED].⁷⁷

65. I understand that certain of these options to purchase XRP were issued in approximately 2014 to an early advisor of the Company. Additionally, in 2015, Ripple issued options in order to settle claims with certain founders.

During most of 2015, Ripple was a party to legal actions between it and one of its founders, Jed McCaleb. There were a number of other parties involved in these proceedings, but the other two primary parties were the Stellar Development Foundation (“Stellar”) and Bitstamp Ltd (“Bitstamp”). After extensive motion practice in the spring and summer of 2015, Ripple, Mr. McCaleb and Stellar entered into mediation in November 2015. After a series of mediations and much subsequent negotiations, Ripple, Mr. McCaleb and Stellar entered into a formal settlement agreement dated February 4, 2016 according to which: 1) approximately \$1 million of interpleaded funds were released to Stellar; 2) approximately 96 million interpleaded XRP were released to Ripple; 3) Mr. McCaleb would sell all of his shares of Ripple to third-party investors; 4) Ripple would custody 5.3 billion XRP belonging to Mr. McCaleb and that Mr. McCaleb would sell this tranche of XRP pursuant to strict limits; and 5) Mr. McCaleb would donate another 2 billion XRP

⁷⁵ “The Company recognized \$62.9 million and \$12.8 million of non-monetary XRP transaction revenue and \$61.6 million and \$14.1 million of sales and marketing expense related to payments under the commercial agreement in the years ended December 31, 2020 and 2019, respectively.” *Id.*, p. 41.

⁷⁶ *Id.*, p. 21.

⁷⁷ *Id.*, p. 22.

to a charity of his own choosing, the Silicon Valley Charitable Foundation. Other than legal expenses which were expensed as incurred, none of the terms of the settlement or events leading to the settlement impacted our consolidated financial statements as of and for the years ended December 31, 2015 and 2014.⁷⁸

66. Ripple's audited financial statements explain that the Company also recorded XRP derivative liabilities in conjunction with two service contracts that require future settlement in XRP:

During the year ended December 31, 2020, the Company engaged two service providers to support XRP liquidity on certain exchanges. The contractual arrangements contain certain payout provisions that could result in settlement via delivery of certain units of XRP contingent on the XRP to U.S. dollar conversion rate at the date of the contract termination (January 2021 and February 2021). This has been accounted for as a derivative, and as of December 31, 2020, is included in XRP derivative liability with a fair value of [REDACTED]. See Note 7 for further detail on the valuation method and assumptions.⁷⁹

67. Ripple's audited financial statements also describe its accounting treatment for derivatives: "We recognize all derivative instruments at fair value. Changes in the value of XRP options and embedded XRP derivatives are presented as unrealized gains (losses) on XRP derivatives Any gains resulting from settling of derivatives through delivery of XRP are presented in realized gains on XRP derivatives."⁸⁰

C. Accounting Practices of Firms Holding Cryptocurrencies

68. While there are no publicly traded U.S. companies that issue cryptocurrency, it is instructive to examine the accounting treatment of firms that hold the cryptocurrencies bitcoin and ether, and the accounting treatment of firms that hold XRP. These companies follow the non-binding guidance issued by the AICPA and account for cryptocurrency holdings as Intangible Assets and not as investments in securities.

⁷⁸ Ripple 2015 AFS, p. 17.

⁷⁹ Ripple 2020 AFS, p. 22.

⁸⁰ *Id.*, p. 18.

1. U.S. Public Companies Holding bitcoin or ether

69. I identified three publicly traded U.S. corporations that currently have significant holdings of the cryptocurrencies bitcoin or ether: Tesla Inc. (“Tesla”), Microstrategy Incorporated (“Microstrategy”), and Coinbase Global, Inc. (“Coinbase”).

a) Tesla

70. Tesla disclosed in its 2020 10-K filing that the company began to invest in bitcoin and was considering accepting bitcoin as a form of payment.⁸¹ Tesla also explained that applicable accounting guidance required that the company account for its bitcoin holdings as an Intangible Asset:

Digital assets are considered indefinite-lived intangible assets under applicable accounting rules. Accordingly, any decrease in their fair values below our carrying values for such assets at any time subsequent to their acquisition will require us to recognize impairment charges, whereas we may make no upward revisions for any market price increases until a sale. As we currently intend to hold these assets long-term, these charges may negatively impact our profitability in the periods in which such impairments occur even if the overall market values of these assets increase.⁸²

71. Following news of Tesla’s investment in bitcoin, market commentators discussed the lack of accounting guidance and the possibility of future impairment losses, which could not be recovered even if the price of bitcoin rose:

The upshot [of the AICPA guidance to account for digital assets as Intangible Assets]: A company buying or investing in Bitcoin takes the value of the cryptocurrency at cost and records it as an asset on its balance sheet. There it stays, at the same amount, unless its value declines. If the company sees signs that the value has weakened, the company must record an impairment, which hits the income statement and reduces earnings. It must test the asset for impairment at least once a year, but more often if there are indications that the value is lower.⁸³

⁸¹ Tesla Inc. Form 10-K for the fiscal year ended December 31, 2020 (“Tesla 2020 10-K”), p. 33.

⁸² Tesla 2020 10-K, p. 33.

⁸³ Nicola M. White, *Tesla Bitcoin Bet Exposes Limits of Crypto Accounting Rules* (February 9, 2021), <https://news.bloombergtax.com/financial-accounting/tesla-bitcoin-bet-exposes-limits-of-crypto-accounting-rules>.

72. Such a scenario came about in the second quarter of 2021, when Tesla recorded an impairment charge of \$23 million even though “Bitcoin prices, currently at roughly \$38,455, have moved up about 9% since the end of last quarter.”^{84,85}

b) Microstrategy

73. Microstrategy was the first major U.S. corporation to disclose a significant investment in bitcoin. In its 2020 10-K, Microstrategy explained the investment as follows:

We also pursue a business strategy of acquiring bitcoin when our cash, cash equivalents and short-term investments exceed current working capital requirements, and we may from time to time, subject to market conditions, issue debt or equity securities in capital raising transactions with the objective of using the proceeds to purchase bitcoin. We view our bitcoin holdings as long-term holdings and we do not plan to engage in regular trading of bitcoin or to hedge or otherwise enter into derivative contracts with respect to our bitcoin holdings, though we may sell bitcoin in future periods as needed to generate cash for treasury management and other general corporate purposes.

We believe that bitcoin is attractive because it can serve as a store of value, supported by a robust and public open source architecture, that is untethered to sovereign monetary policy and can therefore serve as a hedge against inflation. We also believe that bitcoin offers additional opportunity for appreciation in value with increasing adoption due to its limited supply. In addition, we believe that our bitcoin strategy is complementary to our analytics software and services business, as we believe that our bitcoin and related activities in support of the bitcoin network enhance awareness of our brand and can provide opportunities to secure new customers for our analytics offerings. We are also exploring opportunities to apply bitcoin related technologies such as blockchain analytics into our software offerings.⁸⁶

74. Microstrategy’s 2020 10-K also explains that the company accounts for its bitcoin holdings as Intangible Assets:

During the second half of 2020, the Company purchased an aggregate of \$1.125 billion in digital assets, comprised solely of bitcoin. The Company accounts for its digital assets as indefinite-lived intangible assets in accordance with Accounting Standards Codification (“ASC”) 350,

⁸⁴ Jonathan Ponciano, *Tesla’s Bitcoin Investment Fell \$1 Billion Last Quarter Amid Crypto Market Crash*, Forbes, (July 27, 2021), <https://www.forbes.com/sites/jonathanponciano/2021/07/27/teslas-bitcoin-investment-fell-1-billion-last-quarter-amid-crypto-market-crash/?sh=43e6228b231d>

⁸⁵ Had the accounting guidance instead required Tesla to record its holdings in bitcoin as investments in securities accounted for at fair value, the company would have recorded gains or losses in correspondence with changes in the fair value of its holdings.

⁸⁶ Microstrategy Incorporated Form 10-K for the fiscal year ended December 31, 2020 (“Microstrategy 2020 10-K”), p. 5. *See also id.*, p. 10 (“We view our bitcoin holdings as long-term holdings and we do not plan to engage in regular trading of bitcoin or to hedge or otherwise enter into derivative contracts with respect to our bitcoin holdings, though we may sell bitcoins in future periods as needed to generate cash for treasury management and other general corporate purposes.”).

Intangibles—Goodwill and Other. ... The Company’s digital assets are initially recorded at cost. Subsequently, they are measured at cost, net of any impairment losses incurred since acquisition.⁸⁷

75. While its financial statements only reflect declines in the price of bitcoin, Microstrategy’s extensive bitcoin holdings in relation to its total assets means that the company’s stock price reflects the volatility associated with both increases and decreases in the price of bitcoin.⁸⁸

c) Coinbase

76. In audited financial statements attached to Coinbase’s registration statement for its IPO in 2021, the company explained that it “derive[s] the majority of [its] net revenue from transaction fees generated in connection with the purchase, sale, and trading of Bitcoin and Ethereum.”⁸⁹ Consistent with Tesla and Microstrategy, Coinbase accounted for its holdings of bitcoin and ether as Intangible Assets:

Our crypto assets held are accounted for as intangible assets with indefinite useful lives, and are initially measured at cost. Impairment exists when the carrying amount exceeds its fair value, which is measured using the quoted price of the crypto asset at the time its fair value is being measured. We assign costs to transactions on a first-in, first-out basis.⁹⁰

2. Companies Holding XRP

77. As part of a commercial agreement with Ripple, MoneyGram received XRP for facilitating international foreign exchange transactions on Ripple’s ODL platform. MoneyGram’s 2020 10-K described the agreement with Ripple:

In June 2019, we entered into a commercial agreement with Ripple Labs, Inc., a developer of blockchain technology and a cryptocurrency named XRP, to utilize their On Demand Liquidity

⁸⁷ Microstrategy 2020 10-K, p. 76.

⁸⁸ Kevin Stankiewicz, *Microstrategy now owns over 100,000 bitcoins worth more than \$3 billion after latest purchase* (June 21, 2021), <https://www.cnbc.com/2021/06/21/microstrategy-owns-over-3-billion-worth-of-bitcoin-after-new-purchase.html> (“The shares have risen around 423% from its Aug. 10 close to Friday’s closing price of \$646.46” but noting that “Bitcoin has suffered a rough trading stretch in the past two months after hitting its all-time high near \$65,000 in April.”).

⁸⁹ Coinbase Form 424(b)4, filed April 14, 2021, p. 18.

⁹⁰ *Id.*, p. 117.

(“ODL”) platform, as well as XRP, for cross-border foreign exchange transaction for the Company's own account. The Company is compensated by Ripple for developing and bringing liquidity to certain foreign exchange markets, facilitated by the ODL platform, and providing a reliable level of foreign exchange trading activity. We refer to this compensation as market development fees. Per the terms of the commercial agreement, the Company does not pay fees to Ripple for its usage of the ODL platform or the related software and there are no claw-back or refund provisions. The market development fees are recorded as a reduction of the “Transaction and operations support” line in the accompanying Consolidated Statements of Operations.⁹¹

78. MoneyGram explained its accounting for the XRP it received from Ripple as follows:

The Company accounts for the XRP received as an indefinite-lived intangible asset, which is measured based on the fair market value of the XRP. Any future liquidation of such indefinite-lived intangible assets will result in capital gains or losses and will be recorded within “Occupancy, equipment and supplies” in the Consolidated Statement of Operations. See Note 9 — *Goodwill and Intangible Assets* for more information on the Company's indefinite-lived intangible assets.

MoneyGram recognizes the XRP fees received from Ripple as vendor consideration, which is presented as an offset to costs incurred to the vendor within “Transaction and operations support” in the Consolidated Statements of Operations. All activity related to the Ripple commercial agreement, including purchases and sales of XRP and consideration received in XRP, is presented as part of operating activities in the Consolidated Statement of Cash Flows.⁹²

79. These disclosures demonstrate that MoneyGram’s accounting for its holdings of XRP is consistent with both the existing accounting guidance for cryptocurrencies and the practices of other U.S. publicly traded companies holding cryptocurrencies discussed above. Moreover, MoneyGram’s accounting for the fees received from Ripple in the form of XRP as a reduction in its cost of providing the XRP transactions (*i.e.*, as a contra-expense on its income statement) is consistent with the accounting treatment it would have used had the fees been paid instead with U.S. dollars.

⁹¹ MoneyGram International, Inc. Form 10-K for the fiscal year ended December 31, 2020 (MoneyGram 2020 10-K), p. 2.

⁹² MoneyGram 2020 10-K, p. F-45.

VI. RIPPLE'S ACCOUNTING FOR XRP IS IN ACCORDANCE WITH EXISTING ACCOUNTING GUIDANCE AND PRACTICE

80. In this section, I explain why Ripple's accounting treatment is in accordance with U.S. GAAP and other authoritative accounting guidance.

A. Ripple Properly Accounts for XRP as an Intangible Asset

81. Even though the FASB has failed to provide authoritative guidance on the accounting for cryptocurrencies, I explained in Section IV that the available guidance calls for companies to account for holdings of cryptocurrencies as Intangible Assets. The discussion in Section V demonstrates that the practice of U.S. publicly traded corporations comports with that guidance. Therefore, Ripple's accounting for its holdings of XRP as an Intangible Asset is consistent with both the available accounting guidance and with practice for companies holding cryptocurrencies.

82. Ripple generates revenue from the sales of XRP to customers to facilitate cross-border payments. Ripple properly accounts for this revenue in accordance with the FASB's guidance on revenue generated from contracts with customers.⁹³ Ripple also generates non-monetary revenue from XRP transactions in which the Company pays for services with XRP. These transactions are akin to barter transactions, and are properly accounted for in accordance with the FASB's guidance on non-monetary transactions.⁹⁴ Since the XRP that Ripple sells has a

⁹³ Ripple 2020 AFS, p. 11 ("XRP transactions revenue consists of sales of XRP for fixed monetary consideration, and is recognized upon delivery of XRP to the customer.") See ASC 606-10-5-4: "An entity recognizes revenue when (or as) it satisfies a performance obligation by transferring a promised good or service to a customer (which is when the customer obtains control of that good or service). The amount of revenue recognized is the amount allocated to the satisfied performance obligation."

⁹⁴ ASC 845 *Nonmonetary Transactions*. In particular, ASC 845-10-30-1 states: "In general, the accounting for nonmonetary transactions should be based on the fair values of the assets (or services) involved, which is the same basis as that used in monetary transactions. Thus, the cost of a **nonmonetary asset** acquired in **exchange** for another nonmonetary asset is the fair value of the asset surrendered to obtain it, and a gain or loss shall be recognized on the exchange. The fair value of the asset received shall be used to measure the cost if it is more clearly evident than the fair value of the asset surrendered. Similarly, a nonmonetary asset received in a **nonreciprocal transfer** shall be recorded at the fair value of the asset received."

cost basis of zero, its transfer results in profit equal to the fair value of the amount of XRP transferred. As discussed above, however, these non-monetary transactions result in a net profit that approximates zero in any given period (*i.e.*, the only difference between the amount of revenue and expense recorded for non-monetary XRP transactions is the result of differences in timing between when the services are performed and Ripple pays for them by distributing XRP).

83. Ripple records XRP Derivative Assets and Liabilities at their fair value on its balance sheet, and recognizes Realized and Unrealized Gains(Losses) on XRP Derivatives on its income statement in accordance with U.S. GAAP for derivative instruments.⁹⁵ A derivative instrument is a financial instrument or a contract that meets certain characteristics;⁹⁶ however, that does not signify that the XRP underlying the derivative is a financial instrument.⁹⁷

B. XRP Does Not Have the Characteristics of a Security as Defined by U.S. GAAP

84. Based on my understanding of Ripple's XRP transactions, XRP does not have the characteristics of a security as defined by U.S. GAAP, and thus Ripple's transactions in XRP should not be accounted for as involving transactions in a security.

85. The authoritative accounting guidance for an Intangible Asset is distinguishable from that for a security as evidenced by the different accounting treatment applied to each summarized in Section IV. The AICPA guidance makes clear that investment companies (*i.e.*, those regulated under the Investment Company Act of 1940) should account for their holdings of digital assets as an investment asset. I do not understand that the SEC is contending that Ripple is

⁹⁵ ASC 815 *Derivatives and Hedging*. See ASC 815-10-05-4: "This Topic requires that an entity recognize derivative instruments, including certain derivative instruments embedded in other contracts, as assets or liabilities in the statement of financial position and measure them at **fair value**."

⁹⁶ ASC 815-10-15-83.

⁹⁷ For example, an underlying could be "[a] climatic or geological condition (such as temperature, earthquake severity, or rainfall), another physical variable, or a related index." ASC 815-10-15-88.

an investment company, nor am I aware of any accounting standards or guidance that would provide support for treating Ripple as an investment company. Moreover, the AICPA guidance specifically states: “Crypto assets will not be *financial instruments* or *financial assets* (as defined in the FASB ASC Master Glossary) if they are not *cash* (see previous discussion) or an ownership interest in an entity and if they do not represent a contractual right to receive cash or another financial instrument.”⁹⁸ A financial instrument is an investment in a security.⁹⁹

86. Given the substance of the XRP transactions described above in Section V.B., it is my opinion that XRP is not a security according to U.S. GAAP. Purchasers of XRP have no claims against the assets or future profits of Ripple and no right to influence the operations of Ripple. Moreover, there is no creditor relationship between Ripple and holders of XRP. Instead, XRP and other cryptocurrencies have characteristics that are consistent with U.S. GAAP’s definition of an Intangible Asset. Therefore, it is my opinion that Ripple’s holdings of Purchased XRP are properly accounted for as an Intangible Asset and not a debt or equity security.

87. To see why XRP is properly accounted for as an Intangible Asset and not as a debt or equity security, consider the following hypothetical examples:

- i. Assume that instead of contributing XRP, creators of the XRP Ledger had contributed their holdings of Facebook stock in exchange for equity capital in Ripple. In that instance, the Facebook stock would have been recorded as

⁹⁸ AICPA, Accounting for and auditing of digital assets (2019), p. 3.

⁹⁹ According to the FASB, the definition of a financial instrument is as follows:

Cash, evidence of an ownership interest in an entity, or a contract that both:

- a. Imposes on one entity a contractual obligation either:
 1. To deliver cash or another financial instrument to a second entity
 2. To exchange other financial instruments on potentially unfavorable terms with the second entity.
- b. Conveys to that second entity a contractual right either:
 1. To receive cash or another financial instrument from the first entity
 2. To exchange other financial instruments on potentially favorable terms with the first entity.

ASC Master Glossary: Financial Instrument.

an Investment in Equity Securities on Ripple's balance sheet at an amount equal to its fair value. In each subsequent account period, Ripple would revalue that investment at its fair value (*i.e.*, based on Facebook's stock price) and would record unrealized gains or losses based on the change in carrying value. Sales of holdings of Facebook stock to provide funds for Ripple's operations would be accounted for as sales of investment securities (*i.e.*, as an investing activity). Proceeds from such sales would be accounted for as gains (or losses), calculated based on the difference between the cash proceeds received and the carrying value of the investment.

- ii. Assume that Ripple issued an investment contract that promised the holder a guaranteed return on that investment (*e.g.*, repayment of the amount invested along with additional payments that are contingent on Ripple's financial performance). Issuances of this type of investment contract to provide funds for Ripple's operations would be accounted for as a financing activity. In particular, this contract would be accounted for as the issuance of debt – *i.e.*, an asset (Cash) and liability (Debt) equal to the amount of consideration received – and Ripple would assess in each subsequent period the amount of its obligation under the contingent consideration portion of the contract and record a liability for this amount. There is no effect on Ripple's income statement associated with the issuance of this contract (*i.e.*, no revenue, expense, gain, or loss).
- iii. Assume that Ripple issued an investment contract that provided the holder with an ownership interest in Ripple. In this situation, the value of the contract to the recipient is also predicated on the success of Ripple's business (*i.e.*, its future financial performance). But unlike the previous example, the holder is not provided with any guaranteed return and only has a residual claim on Ripple's net assets. Issuances of this type of investment contract to provide funds for Ripple's operations would be accounted for as a financing activity. In particular, this contract would be accounted for as the issuance of equity – *i.e.*, an asset (Cash) and equity (Common Stock) equal to the amount of consideration received. There is no effect on Ripple's income statement associated with the issuance of this contract (*i.e.*, no revenue, expense, gain, or loss).

88. Unlike these hypothetical examples, I understand that Ripple engages in transactions in XRP in order to facilitate transactions using the ODL platform. In these circumstances, Ripple's transfers of XRP are typical operating transactions, and are, therefore, properly treated as Revenue on the income statement. There is no balance sheet entry to record a liability or equity associated with the sale of XRP as a company would record upon issuing debt or equity securities. This accounting treatment is appropriate because, unlike the case for issuances

of equity and debt securities, Ripple has no future obligation to the holder of XRP. In particular, based on my understanding of Ripple's XRP Transactions, Ripple has no "creditor relationship" with the purchaser of XRP,¹⁰⁰ nor does the purchase of XRP provide the holder with "an ownership interest in" Ripple.¹⁰¹

89. Similarly, Ripple's issuance of XRP in non-monetary transactions are distinguishable from situations in which Ripple provides shares of the Company as stock-based compensation to consultants and employees. In the case of stock-based compensation, the stock options or warrants issued provide the holder with a claim on the equity of Ripple and they are accounted for as such.¹⁰² In contrast, Ripple's distributions of XRP as compensation to employees or as consideration to contractors are properly recorded as current period expenses for services provided. This is because, unlike for transactions involving debt, equity, or employee stock options, once the XRP is distributed, Ripple has no future obligation to the holder and the holder has no future claim to Ripple's equity.

90. In summary, based on existing accounting principles, it is my opinion that an objective purchaser or recipient of XRP would understand that he or she had acquired an Intangible Asset, and not an investment contract or a security, in connection with the transactions described in the Complaint.

¹⁰⁰ ASC Master Glossary: Debt Security.

¹⁰¹ ASC Master Glossary: Debt Security.

¹⁰² Under ASC 718-10-25-2, companies record an increase to equity upon the issuance of stock-based compensation, and proceeds from exercise of stock options and warrants as cash flows from financing activities on the statement of cash flows. Consistent with this U.S. GAAP, proceeds from the exercise of stock options and warrants are shown as financing cash flows on the Ripple's statement of cash flows and issuance of stock in connection with the exercise of stock options is represented as a change in equity. Ripple 2020 AFS, p. 5-6.

VII. CONCLUSION

91. Based on my analysis and review of the record evidence and relevant accounting guidance, I have concluded the following:

- i. Ripple, and other companies holding cryptocurrencies (including XRP), account for those holdings as Intangible Assets. Ripple accounts for monetary and non-monetary sales of XRP as revenues. MoneyGram accounts for its receipt of XRP in exchange for providing services to Ripple as a reduction in the cost of providing those services.
- ii. While there currently is no authoritative U.S. GAAP directly applicable to the accounting for cryptocurrencies, the available guidance, analogous U.S. GAAP, and the practices of other publicly traded companies holding cryptocurrencies are all consistent with the manner in which Ripple accounts for XRP on its balance sheet (*i.e.*, as Intangible Asset), and are inconsistent with the notion that those cryptocurrencies (including XRP) are securities under U.S. GAAP.
- iii. Based on my understanding of the offer and sales of XRP as alleged in the Complaint, it would be improper for Ripple to account for sales and transactions involving XRP as the offer and sale of securities under U.S. GAAP. In contrast, Ripple's accounting for sales of XRP as revenues – and not as the issuance of debt or equity securities – is consistent with U.S. GAAP's guidance for the accounting for consideration received in return for a company delivering goods, or providing or receiving services, as part of its on-going operations.

I declare under penalty of perjury that the foregoing is true and correct. Executed on October 4, 2021.



Peter Easton

APPENDIX A
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EDUCATION

Ph.D.	1984	University of California, Berkeley
Dip. Fin. Mgmt.	1980	University of New England
Dip. T. Tech.	1978	University of South Australia
B.Ec.	1978	University of Adelaide
B.Ag.Sc.	1973	University of Adelaide

ACADEMIC AND PROFESSIONAL EXPERIENCE

Notre Dame Alumni Professor of Accountancy and Director, Center for Accounting Research and Education, Mendoza College of Business, University of Notre Dame, 2003 - present

Distinguished Professor, Limperg Institute, The Netherlands, 2000 – present

Member, Scientific Council, CenTER, Tilburg University, 2009 - present

Member, Academic Advisory Board, Northern Trust Global Investments, 2004 - 2017

Visiting Professor, University of Adelaide, 2014 – 2016

Visiting Professor, University of New South Wales, 2013 - 2014

Visiting Professor, University of Technology, Sydney, 2010 – 2013

Visiting Professor, Graduate School of Business, Seoul National University, 2008, 2009

Tang Peng Yeu Visiting Professor, Department of Accounting, National University of Singapore, 2009

Professorial Fellow, University of Melbourne, Australia, 1998 - 2009

Visiting Professor of Accounting, Graduate School of Business, University of Chicago, 1988-2002 and 2007-2008

ACADEMIC AND PROFESSIONAL EXPERIENCE (CONTINUED)

John J. Gerlach Professor of Accounting, Fisher College of Business, The Ohio State University, 1995-2003

Price Waterhouse Professor of Accounting and Finance, Macquarie University, Australia, 1988-1995

Visiting Professor of Accounting, Australian Graduate School of Management, 1991

Assistant Professor of Accounting, Graduate School of Business, University of Chicago, 1983-1988

Teaching Associate, University of California, Berkeley, 1979-1983

Lecturer, School of Accountancy, South Australian Institute of Technology, 1975-1979

Lecturer, South Australian Department of Further Education, 1973-1975

BOOKS

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Review of Accounting Studies, Associate Editor, 1994 – 2003 and Editor, 2003 - 2021
Accounting and Business Research, Associate Editor, 1995 - present
Accounting and Finance, Associate Editor, 2000 - present
Journal of Business, Finance and Accounting, Associate Editor, 2000 - present
Journal of Accounting, Auditing and Finance, Associate Editor, 2000 – present
Journal of Accounting Research, Associate Editor, 1997 - 2017
Contemporary Accounting Research, Associate Editor, 1998 - 2007
Journal of Accounting and Economics, Associate Editor, 1994 - 2003
Accounting Horizons, Associate Editor, 1994-1996, 1997- 2001
Accounting Review, 1988-90
Accounting Forum, 1979-85

AD HOC REVIEWER

Abacus, *Accounting Review*, *Australian Journal of Management*, *British Accounting Review*, *Critical Finance Review*, *Econometrica*, *Economic Enquiry*, *Journal of Accounting and Public Policy*, *Journal of Business*, *Journal of Econometrics*, *Journal of Empirical Finance*, *Journal of Finance*, *Marketing Science*, *Review of Financial Studies*

PH.D. COMMITTEE MEMBERSHIP (completed dissertations)

John R.M. Hand and Messod D. Berneish, University of Chicago
Sue Wright, Macquarie University
Julian Yeo and Yahya Al Jabr, University of Melbourne
Kirsten Anderson, Tae Hee Choi, Greg Sommers, Gary Taylor, David Hyland, John Griffin, and Keji Chen, The Ohio State University
Valeri Nikolaev, Stephan Hollander, Edith Yeung, and Yuping Yia, Tilburg University
Arnt Verriest, Catholic University of Leuven
Marcel Tuijn, Erasmus University of Rotterdam

AWARDS AND HONORS

Office of the Dean Research Mission Award, University of Notre Dame, 2019
Limperg Medal, The Netherlands, 2018
Thought Leader, China Europe International Business School, 2018
Don Trow Visiting Fellow, Victoria University of Wellington, 2014, 2015
Financial Accounting Reporting Section, American Accounting Association Best Paper, 2013
Notre Dame Faculty spotlight, the University of Notre Dame, 2011
Honored Research Faculty, the University of Notre Dame, 2010
William and Mary Ann Arthur Dean's Innovation Award, The Ohio State University, 2001
MBA Finance Association Outstanding Teaching Award, The Ohio State University, 1999
Pace Setter Outstanding Graduate Teaching Award, The Ohio State University, 1999
University of Melbourne, Silver Medal, 1998
Australian Research Council Grants, 1991-93, 1993-95, 1994-96
Macquarie University Research Grants, 1989, 1990, 1991, 1992, 1993, 1994
Accounting and Auditing Directorate Grant, 1993
SEC and Financial Reporting Institute Research Fellowship, 1986
American Accounting Association Doctoral Consortium Fellow, 1982
Ernst and Whinney Doctoral Dissertation Award, 1982
Anson Herrick/Arthur Young and Co. Fellowship, 1981
University of California Graduate Assembly Outstanding Teaching Award, 1980
University of California Professional Accounting Program Fellowship, 1980
University of California Teaching Fellowship, 1979
Australian Institute of Agricultural Science Medal, 1973

CONSULTATIONS AND EXECUTIVE EDUCATION

Compass Lexecon
Coherent Economics
Cornerstone Research
Analysis Group
NERA Economic Consulting
Charles River Associates
Navigant Economics
Chicago Partners LLC
Bain and Company
Barclays Australia Investment Services
IBM (Australia)
Price Waterhouse (Chicago, London, and Sydney offices)

LITIGATION CONSULTATIONS IN THE PAST 5 YEARS

In Drivetrain LLC v. Thomas S. Hall, et al. before the Court of Chancery of the State of Delaware. C.A. No. 2019-0650. Testifying expert for the plaintiff.

In Philipsen and Seymour v. American Medical Systems, LLC in the Federal Court of Australia. Affidavit for the Court.

In re Schultz et al. v. Sinav Ltd. et al. Case no. 2014 L 15 in the Circuit Court for the Fifteenth Judicial Circuit Ogle County, Illinois. Testifying expert for the defendant.

INVITED PRESENTATIONS

2021

CARE conference; Sustainable Investment Forum, North America; University of Technology, Sydney, Summer Accounting Conference

2020

Accounting Design Project, Columbia University, Indiana University; CAFR Fundamental Analysis Symposium, Hong Kong Polytechnic University; Egyptian Online Seminars in Business, Accounting and Finance; Financial Accounting and Reporting Section, American Accounting Association annual meeting, Nashville; University of London Business School; University of New South Wales; University of Santa Clara

2019

Burton conference, Columbia University; Center for the Economic Analysis of Risk, Georgia State University; Financial Accounting and Reporting Section, American Accounting Association annual meeting, Seattle; IE Business School, Madrid; *Journal of International Accounting Research* annual conference; Limperg Institute, Erasmus University of Rotterdam; Maastricht University; Northwestern University; University of Quebec at Chicoutimi, Saguenay, Canada; University of Amsterdam; University of Florida; University of Mannheim

2018

China Europe International Business School, Shanghai; Erasmus University of Rotterdam; Financial Accounting and Reporting Section, American Accounting Association annual meeting, Austin; Hong Kong Polytechnic University; Limperg Institute, Tilburg University; Monash University; Midwest Accounting Research annual conference, Indiana University; *Journal of International Accounting Research* annual conference, Ca' Foscari University, Venice, Italy

2017

Babeş-Bolyai University, Cluj, Romania; Baeur Accounting Research Symposium, Cass Business School; *Journal of, Auditing, and Finance* annual conference, University of Otago; *Journal of Business, Finance, and Accounting* annual Capital Markets conference, Hong Kong Polytechnic University; *Journal of International Accounting Research* annual conference, University of Adelaide; Midwest Finance Association Annual Meetings, Chicago; Limperg Institute, Tilburg University; University of Amsterdam; University of Houston; London School of Economics

INVITED PRESENTATIONS (CONTINUED)

2016

CARE conference, Leesburg, Virginia; Joint journal conference of JIAR and AOS, University of Augsburg (plenary speaker); McMaster University Accounting Conference; Methodological and Empirical Advances in Financial Analysis conference, University of Sydney; Shanghai Advanced Institute of Finance; Tilburg University; University of Adelaide; University of Michigan; University of Minnesota Empirical conference; University of Notre Dame

2015

Accounting and Finance Association of Australia and New Zealand annual meetings, Hobart; American Accounting Association annual meetings, Chicago; Business Links, Center for Accounting, Governance and Taxation Research; Dopuch Conference, Washington University, St. Louis; Erasmus University of Rotterdam; George Washington University; INSEAD Accounting Symposium, Singapore; Tilburg University; University of Adelaide; University of Amsterdam; University of Auckland; University of California, Berkeley; University of Lausanne; University of Otago; University of Texas, Dallas; Victoria University of Wellington

2014

Baruch College, City University of New York; CARE conference, Hong Kong; London Business School; Ohio State University; Rutgers University; Tilburg University; University of Illinois, Champaign; University of New South Wales; University of Sydney

2013

CARE conference, Washington, DC; Duke University; Hong Kong Polytechnic University; University of California, Berkeley; University of Cyprus; University of Missouri, Columbia; University of New South Wales; University of Technology, Sydney; University of Toronto; World Finance Conference, Cyprus

2012

American Accounting Association Financial Accounting and Reporting section mid-year meetings, Chicago; CARE conference, London; Arizona State University; Lancaster University; London Business School; Pennsylvania State University; Tilburg University; University of Iowa; University of North Carolina Tax conference; University of Technology, Sydney

INVITED PRESENTATIONS (CONTINUED)

2011

American Accounting Association annual meetings, San Francisco; Brock University; Louisiana State University; London Business School; Tel Aviv University; Tilburg University; University of Iowa; CARE conference, New York; University of Notre Dame; University of Technology, Sydney

2010

Boston University; Brock University; Indiana University; London Business School; Michigan State University; Northwestern University; Tilburg University; Yale University; University of Houston; University of Notre Dame; University of Technology, Sydney; University of Texas, Austin; University of Washington

2009

American Accounting Association annual meetings, New York; Katholieke Universiteit Leuven; Korea Financial Supervisory Commission; Korean Accounting Association; Korean Accounting Standards Board; CARE conference, Singapore; National University of Singapore; Seoul National University; Tilburg University; University of Bocconi; University of Chicago; University of Illinois; University of Melbourne; University of Miami; University of Notre Dame

2008

Ball and Brown tribute conference, University of New South Wales; College of William and Mary; University of Cincinnati 4th Annual Accounting Research Symposium; University of Chicago; Northwestern University; Stanford University Summer camp; Seoul National University; Tilburg University; University of Colorado, Denver; University of Melbourne; University of Notre Dame

2007

American Accounting Association Financial Accounting and Reporting Section Annual Meetings, San Antonio; *Contemporary Accounting Research* 22nd annual conference, Montreal; Baruch College; Limperg Institute; National University of Singapore; Pennsylvania State University; Tilburg University; University of California, Riverside; University of Macedonia; University of Melbourne; University of Notre Dame; University of Texas, Dallas

INVITED PRESENTATIONS (CONTINUED)

2006

American Accounting Association Annual Meetings, Washington, DC; Brock University; Dartmouth College; Finance, Economics, and Accounting annual meeting, Georgia State University; Georgetown University; Harvard University; Lancaster University; Limperg Institute; London Business School Summer Symposium; New York University; Tilburg University; Pennsylvania State University; University of Melbourne; University of Minnesota; University of Notre Dame

2005

American Finance Association annual meetings, Philadelphia; American Accounting Association Financial Accounting and Reporting section mid-year meetings, San Diego; Brigham Young University; Drexel University; *Journal of Business, Finance, and Accounting* Capital Markets conference; Limperg Institute; Tilburg University; University of Colorado, Boulder; University of Illinois; University of Melbourne; Fifth Annual Netherlands Accounting Research conference (plenary speaker), Erasmus University; University of Toronto

2004

Arizona State University; Barclays Global Investors; Columbia University; IAAER/SAAA conference, Durbin, South Africa; Finance, Economics, and Accounting annual meeting, University of Southern California; INSEAD; *Journal of Accounting, Auditing, and Finance* conference; Limperg Institute; London Business School; Monash University; Texas A&M University; Plenary speaker, Accounting Research Forum; Tilburg University; University at Buffalo; University of Houston; University of Melbourne; University of Notre Dame

2003

American Accounting Annual Meetings Honolulu; City University; Plenary Speaker, Irish Accounting and Finance Association Annual Meetings, Tallah; Florida State University, Plenary speaker, Accounting Research Forum, University of Amsterdam; Limperg Institute, The Netherlands; Plenary Speaker Midwest Annual Meetings American Accounting Association; *Review of Accounting Studies* conference; University of Houston; Nederlands Instituut van Registeraccountants; Nyenrode University; University of Notre Dame; University of Rochester; University of Utah Winter Accounting Conference

INVITED PRESENTATIONS (CONTINUED)**2002**

American Accounting Association Doctoral Consortium, Tahoe Village – Distinguished Faculty Speaker; American Accounting Association annual meetings, San Antonio; Burton Conference, Columbia University; Capital Markets Conference, *Journal of Business, Finance, and Accounting*, Market-Based Accounting Research Conference; CIBER Doctoral Internationalization Consortium, University of Washington; Emory University; George Washington University; Florida State University; Ohio State University; Southern Methodist University; Nyenrode University; *Review of Accounting Studies* conference, University of Michigan; University of Alabama; University of Arizona; University of Groningen, Financial Statement Analysis Conference; University of Southern California; University of Melbourne; University of Notre Dame

2001

Big-10 Doctoral Consortium, University of Michigan; Canadian Accounting Association Doctoral Consortium; Chazen International Valuation Conference, Columbia University; First Annual Winter Accounting Conference, University of Utah; Nyenrode University; Ohio State University; University of Cincinnati; University of Glasgow; Louisiana State University; University of Maryland; University of Massachusetts; University of Minnesota; Virginia Commonwealth University

2000

American Accounting Association Doctoral Consortium, Tahoe Village – Distinguished Faculty Speaker; American Accounting Association/British Accounting Association Second Globalization Conference, Cambridge – Distinguished International Speaker; Michigan State University; Nederlands Instituut van Registeraccountants, Nyenrode University; Ohio State University; PricewaterhouseCoopers Summer Research Symposium; *Review of Accounting Studies* conference; Stanford University; Texas A&M University; University of Chicago; University of Oregon; University of Iowa; University of Missouri, Columbia; University of Southern California; University of Utah

1999

American Accounting Association Doctoral Consortium, Tahoe Village – Distinguished Faculty Speaker; American Accounting Association/Taiwan Accounting Association First Globalization Conference, Taipei – Distinguished International Speaker; Duke University; *Maandblad voor Accountancy en Bedrijfseconomie* conference, Amsterdam – plenary speaker; New York University; University of California, Berkeley; Virginia Tech

INVITED PRESENTATIONS (CONTINUED)

1998

American Accounting Association annual meetings, New Orleans; Australian Society of Certified Practicing Accountants; Columbia University; Dartmouth College; Duke University; Hong Kong University of Science and Technology; Kent State University; Ninth Annual Financial Economics and Accounting Conference; Northwestern University; University of Melbourne; University of Notre Dame; Washington University

1997

Baruch College; Indiana University; Massachusetts Institute of Technology; University of Chicago; University of Iowa; University of Pennsylvania (Wharton); Accounting Association of Australia and New Zealand

1996

Carnegie Mellon University; Pennsylvania State University; University of Alabama; University of Texas, Austin

1992-1995

Accounting Association of Australia and New Zealand Annual Meetings, Darwin and Wollongong; American Accounting Association Annual Meetings, Toronto, Orlando, and San Francisco; American Finance Association Annual Meetings, New York; Australian Banking and Finance Conference, University of New South Wales; Australian Graduate School of Management; British Accounting Association, University of Strathclyde; Columbia University; Duke University; Macquarie University; Monash University; New York University; Northwestern University; The Ohio State University; Southern Methodist University; University of Auckland; University of California, Berkeley; University of California, Los Angeles; University of Chicago; University of Illinois; University of Queensland; University of Michigan, Ann Arbor; University of Southern California; University of Wisconsin, Madison; Vanderbilt University

APPENDIX B

List of Materials Considered

Court Filings

1. In the Matter of Ripple Labs Inc. Wells Submission on Behalf of Ripple Labs Inc., October 22, 2020
2. Securities and Exchange Commission v. Ripple Labs, Inc., Bradley Garlinghouse, and Christian A. Larsen. First Amended Complaint, filed February 18, 2021

Ripple Financial Statements

1. Ripple Lab Inc., Consolidated Financial Statements For the years ended December 31, 2020 and 2019 (RPLI_SEC 0920429-75)
2. Ripple Lab Inc., Consolidated Financial Statements For the years ended December 31, 2019 and 2018 (RPLI_SEC 0301113-60)
3. Ripple Lab Inc., Consolidated Financial Statements For the years ended December 31, 2018 and 2017 (RPLI_SEC0265036-75)
4. Ripple Lab Inc., Consolidated Financial Statements For the years ended December 31, 2017 and 2016 (RPLI_SEC0296631-69)
5. Ripple Lab Inc., Consolidated Financial Statements For the years ended December 31, 2016 and 2015 (RPLI_SEC0302336-64)
6. Ripple Lab Inc., Consolidated Financial Statements For the years ended December 31, 2015 and 2014 (RPLI_SEC0302366-92)
7. Ripple Lab Inc., Consolidated Financial Statements For the years ended December 31, 2014 and 2013 (RPLI_SEC0090938-62)

SEC Filings

1. Coinbase Form 424(b)4, filed April 14, 2021
2. Microstrategy Incorporated Form 10-K for the fiscal year ended December 31, 2020
3. MoneyGram International, Inc. Form 10-K for the fiscal year ended December 31, 2020
4. Tesla Inc. Form 10-K for the fiscal year ended December 31, 2020

Accounting Guidance

1. AICPA, "Accounting for and auditing of digital assets," December 2019
2. AICPA, AU-C Section 706: Emphasis-of-Matter Paragraphs and Other-Matter Paragraphs in the Independent Auditor's Report
3. Deloitte, "Bitcoin Holdings: Why Tax and Accounting Matter," March 8, 2021
4. Deloitte, "Financial Reporting Alert 18-9: Classification of Cryptocurrency Holdings," July 9, 2018

5. Deloitte, “Corporates investing in crypto: Considerations regarding allocations to digital assets,” 2021
6. EY, “A holder’s accounting for cryptocurrencies,” Technical Line, October 18, 2018
7. EY, “Holdings of Cryptocurrencies,” IFRS Developments Issue 150, August 2019
8. FASB ASC Master Glossary: Cash
9. FASB ASC Master Glossary: Cash Equivalents
10. FASB ASC Master Glossary: Debt Security
11. FASB ASC Master Glossary: Equity Security
12. FASB ASC Master Glossary: Financial Asset
13. FASB ASC Master Glossary: Financial Instrument
14. FASB ASC Master Glossary: Intangible Assets
15. FASB ASC Master Glossary: Inventory
16. FASB ASC Master Glossary: Investment Contracts
17. FASB ASC Master Glossary: Security
18. FASB ASC 320 Investments - Debt Securities
19. FASB ASC 321 Investments - Equity Securities
20. FASB ASC 350 Intangibles - Goodwill and Other
21. FASB ASC 360 Property, Plant, and Equipment
22. FASB ASC 470 Debt
23. FASB ASC 505 Equity
24. FASB ASC 606 Revenue from Contracts
25. FASB ASC 718 Compensation - Stock Compensation
26. FASB ASC 815 Derivatives & Hedging
27. FASB ASC 845 Nonmonetary Transactions
28. FASB ASC 940 Financial Services - Brokers and Dealers
29. FASB ASC 946 Financial Services - Investment Companies
30. FASB Statement of Financial Accounting Concepts No. 6: Elements of Financial Statements
31. IAS 2 – Inventories
32. IFRS Staff Paper, “Project: Holdings of Cryptocurrencies,” June 2019
33. KPMG, “Defining Issues: Blockchain and digital currencies challenge traditional accounting and reporting models,” July 18, 2018
34. PwC, “Point of view: Cryptocurrencies: Time to consider plan B,” March 2018

Other Public Documents and Data

1. <https://bitcoin.org/en/faq>
2. Congressional Blockchain Caucus, Letter to Chairman Richard Jones of the Financial Accounting Standards Board (FASB), “Emmer Urges FASB to Issue Clear Accounting Standards for Virtual Currencies,” May 12, 2021
3. Greenberg, Andy, “Crypto Currency,” Forbes, April 20, 2011
(<https://www.forbes.com/forbes/2011/0509/technology-psilocybin-bitcoins-gavin-andresen-crypto-currency.html?sh=b40e39e353ee>)
4. <https://www.investing.com/crypto/currencies>
5. Little, Kendall, “Want to Buy Crypto? Here’s What to Look for In a Crypto Exchange,” NextAdvisor, July 20, 2021 <https://time.com/nextadvisor/investing/cryptocurrency/what-are-cryptocurrency-exchanges/>
6. Maurer, Mark “CFO Journal: Accountants, Lawmakers Urge Rules on Crypto Accounting,” The Wall Street Journal, July 19, 2021
7. Nian, Lam Pak and David LEE Kuo Chuen, “Handbook of Digital Currency: Bitcoin, Innovation, Financial Instruments, and Big Data,” Elsevier Inc., 2015
8. Perkins, David W. “Cryptocurrency: The Economics of Money and Selected Policy Issues,” Congressional Research Service R45427, April 9, 2020
9. Ponciano, Jonathan, “Tesla’s Bitcoin Bet Exposes Limits of Crypto Accounting Rules,” Forbes, July 27, 2021
10. Royal, James, Ph.D. and Kevin Voigt, “What Is Cryptocurrency? Here’s What You Should Know,” Nerd Wallet, August 18, 2021
(<https://www.nerdwallet.com/article/investing/cryptocurrency-7-things-to-know/>)
11. SEC, “Policy Statement: Reaffirming the Status of the FASB as a Designated Private-Sector Standard Setter,” SEC Release Nos. 33-8221; 34-47743; IC-26028; FR-70 Last modified on April 25, 2003
12. SEC, Herdman, Robert Testimony Before the House Subcommittee on Capital Markets, Insurance, and Government Sponsored Enterprises, Committee on Financial Services, “Testimony Concerning The Roles of the SEC and the FASB in Establishing GAAP,” May 14, 2002
13. SEC, “Framework for ‘Investment Contract’ Analysis of Digital Assets,” April 3, 2019
14. Sedgwick, Kai, “Bitcoin History Part 6: The First Bitcoin Exchange,” December 25, 2018
<https://news.bitcoin.com/bitcoin-history-part-6-the-first-bitcoin-exchange/>
15. Stankiewicz, Kevin, “Microstrategy now owns over 100,000 bitcoins worth more than \$3 billion after latest purchase,” CNBC, June 21, 2021
16. White, Nicola M., “Tesla Bitcoin Bet Exposes Limits of Crypto Accounting Rules,” Bloomberg, February 9, 2021

All other data and documents referenced in this report.