

Revenue Recognition at TSA, Inc.—A Roller Coaster Ride

Uday Chandra

University at Albany, SUNY

Saurav K. Dutta

Curtin University and University at Albany, SUNY

David J. Marcinko

Skidmore College

ABSTRACT: This case chronicles revenue recognition practices at TSA, Inc. from 1997 to 2002. As growth in TSA's revenue declined, the company's revenue recognition practices became more aggressive. In 2002, TSA's incoming auditors re-evaluated its revenue recognition policies and restated its financial statements for three prior years. The case provides a real-world situation with complex contracts through which students can improve their understanding of the five-step revenue recognition process under ASC 606, which became effective in fiscal year 2018 for most public entities. Further, it is a rich setting in which to illustrate the judgment and complexity involved in revenue recognition. The case provides students with an opportunity to approach revenue recognition from different perspectives—that of corporate accountant, manager, external auditor, and investor—and is designed for use in Intermediate Accounting as well as in capstone accounting courses at both the undergraduate and graduate levels.

Keywords: revenue recognition; ASU 2014-09; ASC 606; software license fees; earnings management.

THE CASE

Transaction Systems Architects, Inc. (TSA) was incorporated as a public company on November 2, 1993. The company develops and markets software to facilitate electronic payments and commerce, which is primarily used by financial institutions, retailers, and e-payment processors to route and process transactions. In addition to developing its own software, TSA also markets software developed by other parties and provides maintenance and upgrade services to its clients. As of September 30, 2000, the company had customers in 79 countries, including 100 of the world's 500 largest banks and 21 of the 100 largest U.S. retailers (TSA, Inc. [TSAI] 2003).

The company generates revenue primarily through the following means:

- *Software license fees:* The company typically licenses its software for periods of up to 60 months. Licensees are normally given the following payment options:
- Under the first payment option, the company collects the entire license fee at inception. This is categorized as a Paid-Up-Front (PUF) contract.
- Under the second payment option, the licensee pays a portion of the total software license fees at the beginning of the term (initial license fee [ILF]), and the remainder over the license term (monthly license fee [MLF]). In certain arrangements, the customer is contractually committed to making MLF payments for a minimum number of months even when the customer prematurely cancels the contract.

Under either payment option, the company is not obligated to refund any payments received from the customer.

The authors thank Valaria P. Vendrzyk (editor), Derek Oler (associate editor), and two anonymous reviewers for their helpful suggestions. We are grateful to Dennis Caplan for his suggestions and encouragement. We benefited from the comments of Edward Walker (discussant) and workshop participants at the 2017 American Accounting Association Annual Meeting. We also thank Alfred Liu, William Riccardi, and Richard Schneible for allowing us to administer a survey in their classes. The contribution of students who provided us with valuable feedback on the case is gratefully acknowledged.

Supplemental material can be accessed by clicking the link in Appendix B.

Editor's Note: Accepted by Valaria P. Vendrzyk.

Submitted: August 2016
Accepted: February 2018
Published Online: March 2018

EXHIBIT 1

Accounting Guidance on Software Revenue Recognition

- This case covers a period over which accounting standards on revenue recognition evolved for the computer software industry. Prior to 1998, the applicable standard was Statement of Position (SOP) 91-1, *Software Revenue Recognition*, issued in 1991. This was superseded by SOP 97-2, *Software Revenue Recognition*, which became effective in March 1998. SOP 91-1 and SOP 97-2 were issued by the AICPA to provide industry-specific guidance within the conceptual framework provided by SFAC No. 5, *Recognition and Measurement in Financial Statements of Business Enterprises*, in which revenue is recognized when earned and realized/realizable. ASU 2014-09, *Revenue from Contracts with Customers*, (issued in May 2014, codified as ASC Topic 606), and subsequent updates (e.g., ASU 2016-10, *Identifying Performance Obligations and Licensing*) incorporate FASB's current views on revenue recognition.
 - This case chronicles events when SOP 91-1 and SOP 97-2 were in effect. Several of the case questions refer to ASC 606, which must be applied by public entities for annual fiscal periods beginning after December 15, 2017. It is important to note that while these standards differ in their details (and, in the case of ASU 2014-09, in the underlying conceptual framework as well), the appropriate revenue recorded for transactions included in this case does not change across these standards.
-

- *Maintenance fees*: These contracts oblige the company to provide post-contract customer support (PCS) to the client over a specified time period. PCS includes a right to periodic upgrades and technical support. The term for PCS is generally shorter than the term of the licensing agreement and is renewable for the duration of the license period.
- *Services*: Other professional services provided by TSA include training, installation, and consulting.

The contractual agreements under which TSA offered these services to its customers were complex, and they are typical of those in the software industry today. Further, when faced with incentives to overstate its revenues and earnings, the company exploited the discretion inherent in accounting rules to alter the amount and timing of revenues reported, updating its policy on revenue recognition several times between 1996 and 2002. These changes in revenue recognition policy had a significant impact on TSA's reported earnings and major economic consequences for the company and its managers and shareholders.

Financial statements drawn up under ASC 606 guidance (effective fiscal year 2018 onward for most public entities) are not yet available. This case provides a real-world situation with complex contracts to which students can apply the five-step revenue recognition process under the recent revenue recognition rules as well as to explore the consequences of revenue management.

TSA's Original Revenue Recognition Practices

The recognition of revenue is a key step in reporting the financial performance of an enterprise. Timing in the recognition of revenue is important because earnings and its components measure financial performance over a specific period. Financial analysts pay close attention to revenue growth, particularly for technology firms. Revenue recognition standards for the software industry relevant to this case are identified in Exhibit 1.

Prior to 1999, TSA employed conservative revenue recognition policies that were consistent with guidance offered in Statement of Position (SOP) 91-1 (AICPA 1991). Under this standard, revenue from software contracts is recognized when delivery has occurred, the customer has accepted the product, no significant vendor obligations remain, and collectability is probable.

Further, SOP 91-1 specifies that revenue should not be recognized for license payments due more than 12 months after delivery if a significant portion of the fee is due after expiration of the license or if contingencies exist that may cause subsequent adjustment of the revenue booked. The company's approach to revenue recognition for license fees is described in its 1996 annual report as follows:

The Company typically charges a one-time, paid-up-front fee (PUF) for perpetual usage or an ongoing monthly licensing fee (MLF) for month-to-month usage of its software products. Under a PUF arrangement, substantially all revenue related to the transaction is recognized when the software is installed (because the customer does not have the ability to cancel the contract), while under a MLF arrangement, the revenue is recognized on a monthly basis (because the customer typically has the ability to cancel its contract at any time). Consequently, under an MLF contract, revenue and cash flow are deferred. A key component of the Company's strategy is to continue to seek to increase MLF revenue. (TSAI 1996)

TSA booked revenues from maintenance fees ratably over the term of the arrangement on a straight-line basis. Revenues from other professional services (e.g., installation) were booked using the percentage-of-completion method for fixed-price contracts where progress toward completion was based on labor hours worked. In contracts in which the services were essential

to the functionality of another element of the license arrangement, revenue was recognized over time for both the software and services elements of the arrangement.

In October 1997, the AICPA issued SOP 97-2 to supersede SOP 91-1. SOP 97-2, paragraph 8 states that revenue should be recognized when all of the following criteria are met:

- Persuasive evidence of an arrangement exists.
- Delivery has occurred.
- The vendor's fee is fixed and determinable.
- Collectibility is probable.

Paragraph 27 expands on the meaning of “fixed and determinable” as follows:

[A]ny extended payment terms in a software licensing arrangement may indicate that the fee is not fixed or determinable. Further, if payment of a significant portion of the software licensing fee is not due until after the expiration of the license or more than twelve months after delivery, the licensing fee should be *presumed not to be fixed or determinable*. However, this presumption may be overcome by evidence that the vendor has a standard business practice of using long-term or installment contracts and a history of successfully collecting under the original payment terms without making concessions. In such a situation, a vendor should consider such fees fixed or determinable and should recognize revenue upon delivery of the software. (AICPA 1997; emphasis added)

Revenue recognition criteria for SOP 91-1 and 97-2, although different in wording, are similar in practice for single-element contracts of the type discussed in this case. TSA's 1997 annual report repeated its 1996 note verbatim and reported the issuance of SOP 97-2. Further, it stated that “(t)he Company believes its current revenue recognition accounting policies are in substantial compliance with SOP 97-2” (TSAI 1997).

A New Business Practice and Change to Financial Reporting

In its 1998 annual report, TSA distinguished between initial license fees and monthly license fees and emphasized that the monthly license fees are not recognized up front because the “fixed and determinable” and/or “collectibility” criteria in SOP 97-2 have not been met. The new footnote read as follows:

Software license fees are comprised of initial license fees (ILF), monthly license fees (MLF), and software modification fees. Software license fees are recognized when all significant vendor obligations are performed and certain software revenue recognition criteria are met (i.e., evidence of a contract, delivery of the software, fixed and determinable fees, and collectibility of fees). ILF revenues, where the Company collects a significant portion of the total software license fees at the beginning of the software license term, are recognized upon delivery of the software. MLF revenues are recognized ratably over the contract term because the “fixed and determinable fees” and/or the “collectibility” revenue recognition criteria have not been met. Software modification fees are recognized upon delivery. (TSAI 1998)

The 1998 footnote additionally disclosed a new program whereby TSA sold the rights to future payment streams from guaranteed monthly license fees to financial institutions for cash. This portion of the note read as follows:

In fiscal 1998, the Company initiated a program to sell the rights to future payment streams under selected MLF contracts to financing institutions on a non-recourse basis. Upon determination that 1) the Company has surrendered control over the future payment stream to the financing institutions in accordance with the provisions of SFAS No. 125, “Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities,” and 2) the MLF arrangements have satisfied all of the software revenue recognition criteria, the Company has recognized software license fees equal to the net proceeds from these arrangements. The software license fee revenues recognized as the result of this program in fiscal 1998 totaled approximately \$9.2 million. (TSAI 1998)

Under this program, the company transferred revenues of \$9.2 million in 1998 that would have been otherwise recognized in subsequent years when those fees were billed and collected. Annual MLF revenues for fiscal years 1994 through 1998 are reported in Table 1.

Note that 1998 MLF revenues would have been reported at \$34.5 million, only marginally higher than those for fiscal 1997, instead of the \$43.7 million reported as a result of the new program to sell the MLF cash streams. Total revenues for 1998 grew to \$299.3 million up from \$244.0 million in 1997. The company's executives were rewarded for this growth. Notably, Mr. William Fisher, CEO, received a bonus payment of \$255,768, which represents a 35 percent increase over his bonus in 1997. Additionally, the firm's managers and directors held options to purchase 2,794,437 common shares on September 30,

TABLE 1
TSA's Revenues from Monthly License Fees (1994–1998)

	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>
MLF Revenues (\$M)	6.6	13.6	22.0	32.4	43.7
Growth in MLF Revenues	—	106.1%	61.8%	47.3%	34.9%
Operating Income (\$M)	(28.7)	9.1	23.3	38.6	51.0
Operating Cash Flow (\$M)	12.8	11.2	21.8	34.0	35.4

Data for fiscal years 1994 through 1998 are obtained from TSA's Form 10-K for fiscal year 1998 (TSAI 1998).

1997, of which 909,429 were exercisable. During fiscal 1998, additional 387,650 stock options were awarded and 325,371 options were exercised (TSAI 1999a).

As part of its growth strategy, TSA acquired five companies in 1998, using its common stock as consideration in all of these acquisitions. It continued this practice in 1999.

Reevaluating Revenue Recognition Policies

In 1999, management moved even more aggressively to grow TSA's reported revenues by reconsidering its previously stated interpretation of SOP 97-2. Recall that prior to 1999, the company recognized revenues on monthly license fees when the payments were billed and collected, or subsequently when all other revenue recognition criteria were met. In its 1997 annual report, TSA stated that these revenue recognition policies were consistent with guidance in SOP 97-2. The company materially altered its interpretation of SOP 97-2 in fiscal 1999. In its 1999 annual report, TSA argued that:

SOP 97-2 specifies that extended payment terms in a software licensing arrangement may indicate that the software license fees are not deemed to be fixed or determinable. In addition, if payment of a significant portion of the software license fees is not due until more than twelve months after delivery, the software license fees should be presumed not to be fixed or determinable, and thus should be recognized as the payments become due. However, SOP 97-2 specifies that if the Company has a standard business practice of using extended payment terms in software licensing arrangements and has a history of successfully collecting the software license fees under the original terms of the software licensing arrangement without making concessions, the Company can overcome the presumption that the software license fees are not fixed or determinable. If the presumption is overcome, the Company should recognize the software license fees when all other SOP 97-2 revenue recognition criteria are met.

The Company has concluded that for certain software arrangements entered into after October 1, 1998 with extended guaranteed payment terms, the "fixed or determinable" presumption has been overcome and software license fees should be recognized upon meeting the SOP 97-2 revenue recognition criteria ("guaranteed software license fees"). (TSAI 1999b)

Based on this argument, TSA recorded "Recognized-Up-Front MLFs" of \$60.5 million in 1999. The amount of revenue recognized was the present value of the software license fees discounted at the company's incremental borrowing rate of approximately 10 percent. The amount recognized as revenue, but not billable to the customer until later, was reported under accrued receivables.

Revenues from software license fees for fiscal years 1998 through 2002 are reported in Table 2. Note that absent the accounting change, the revenues recognized as "Recognized-Up-Front MLFs" would be spread over the life of each contract (typically five years). That is, the \$60.5 million of revenue recorded in fiscal 1999 would have been spread over year 2000 and later. While this had a positive impact on fiscal 1999 revenue, it would reduce revenues reported in following years. In this situation, TSA would only be able to sustain year 1999's growth rate for revenues by entering into significantly larger numbers of software licensing contracts.

In 1999, the company continued its policy of selling the rights to certain guaranteed MLF payment streams initiated in 1998, which grew from \$9.2 million to \$30.5 million. The factoring transactions had limited effect on total revenues booked in 1999 because this amount was included in the \$60.5 million of "Recognized-Up-Front MLFs" reported for the year.

Back to the Past

TSA was unable to sustain revenue growth from software licensing fees beyond 1999 (refer to Table 2). Fiscal 2000 saw a substantial decline in recognized up-front MLFs accompanied by a small increase in MLF revenues other than those recognized

TABLE 2
Decomposition of TSA's Revenues from Software License Fees (1998–2002)
(in thousands of dollars)

	1998 (Annual)	1999 (Annual)	2000 (Annual)	2001 (Annual)	2002 (9 Mos.)
Initial license fees (ILF, PUF)	123,175	95,002	88,348	102,737	62,179
MLFs (other than Recognized-Up-Front MLFs)	43,700	54,500	57,681	49,748	33,742
Recognized-Up-Front MLFs	0	60,500	30,266	21,311	9,634
Total revenues from license fees	166,875	210,002	176,295	173,796	105,555

Data were obtained from TSA's Form 10-K for fiscal years 2000 (TSAI 2000) and 2002 (TSAI 2003).

up-front. The results for fiscal 2001 were even worse, with MLF revenues other than those recognized up-front declining to \$49,748,000, a reduction of 13.8 percent from the previous year. "Recognized up-front MLFs" declined yet again to \$21,311,000 from \$30,266,000 in the prior year, a decrease of 29.6 percent. However, several of TSA's press releases over this period projected highly optimistic performance for the future. For example, Mr. Fisher, CEO, stated in a press release on October 26, 2000:

For the year ending September 30, 2001, we expect the momentum in our business to drive our financials in the core business to historical levels . . . we are raising our revenue forecast for fiscal 2001 to between \$345 million and \$370 million, an increase of between 13 percent and 22 percent over fiscal 2000. We are leaving our pro forma EPS expectations the same, at between \$0.55 and \$0.70, which reflects an improvement to our previously forecasted EPS, offset by the expected dilution of the MessagingDirect acquisition. (U.S. District Court 2003a, para. 77)

Note from Table 3 that actual revenues were \$299.8 million (\$295.6 million restated) and earnings per share was $-\$1.26$ ($-\$2.35$ restated) for 2001.

The decline in the company's reported revenue and income had consequences for executive compensation. Mr. Fisher's bonus for 1999 was \$231,489, slightly below that in 1998. The bonus payment in 2000 declined to \$69,833, a decrease of nearly 70 percent, and Mr. Fisher received no bonus at all in 2001. He was ultimately relieved of his duties as CEO (TSAI 2002) and replaced by Gregory D. Derkacht.

Mr. Derkacht's first letter to the shareholders began as follows: "Fiscal 2002 was a challenging year for TSA." A few weeks earlier, in its Form 8-K filing with the Securities and Exchange Commission, the company had disclosed that it would restate its financial statements for fiscal years 1999, 2000, and 2001 following a re-audit, and that it faced the possibility of being delisted from NASDAQ.

The re-audit followed the imminent demise of TSA's prior auditors, Arthur Andersen. The investigation revealed that the company could not collect several "guaranteed" MLF amounts previously booked as revenue without making significant concessions. Furthermore, it was apparent that the collection of these MLFs was not reasonably assured at the inception of the

TABLE 3
Comparison of Original and Restated Income Statement Data

	1999		2000		2001	
	Original	Restated	Original	Restated	Original	Restated
Revenue (\$M)	354.8	279.6	303.6	254.7	299.8	295.6
Operating Income (\$M)	70.3	(10.3)	(24.9)	(52.9)	1.7	(56.1)
Net Income (\$M)	44.7	(12.0)	2.1	(50.1)	(43.0)	(80.1)
Earnings per Share (\$)	1.01	(0.38)	0.07	(1.58)	(1.26)	(2.35)

Data were obtained from TSA's Form 10-K for fiscal year 2002 (TSAI 2003).

contract. Also, TSA reversed its 1999 claim of having met the “fixed and determinable” criteria for unbilled sales of software, stating that:

For software license agreements in which a significant portion of the fee is due more than 12 months after delivery, the software license fee is deemed not to be fixed and determinable. For software license arrangements in which the fee is not considered fixed or determinable, the software license fee is recognized as revenue as payments become due and payable. (TSAI 2003)

TSA now decided to no longer recognize guaranteed MLFs up front and restated its prior financial statements to reflect this change. In short, TSA reverted to the revenue recognition policies in effect prior to 1998 in this regard.

The re-audit also revealed other significant violations of revenue recognition rules. For example, TSA recognized revenues over fiscal years 1999–2001 for several contracts:

- prior to delivery of software and/or commencement of the license term.
- before customer acceptance of the software.
- up front, even when the software required significant production, modification, and customization.
- on a gross (rather than net) basis when it was acting as a sales agent or distributor for another company’s products. (TSAI 2003)

Corrections were made for these—and other identified—accounting errors in the restated financial statements. Selected items from TSA’s original and restated financial statements are reported in Table 3.

Market reaction to news of the revenue restatements was adverse and swift. When the company announced that it was reviewing certain prior financial transactions that would likely lead to a restatement of its financial statements from 1999 onward after the markets closed on August 14, 2002, its stock price fell to \$8.50 per share on August 15 from \$10.72 at the end of the previous day, a decline of 20.7 percent. Additionally, when TSA announced its restated financials on November 19, 2002, its stock price fell to \$7.35 from a close of \$9.50 per share on the previous day, a decline of 22.6 percent.

Aftermath

In November 2003, a class action lawsuit was filed on behalf of TSA’s shareholders. The plaintiffs argued that:

- “the company’s decision to issue restatement was itself an admission that its financial statements were materially false and that prior financial statements had failed to follow GAAP.”
- “the accounting principles violated were extremely simple”
- “[given] the magnitude of the restatement and *the speed* with which the new outside auditor, KPMG, determined they were necessary, the individual defendants could not have been unaware of facts and circumstances leading to the issuance of false financial statements.” (U.S. District Court 2003b; emphasis added)

Subsequently, a settlement was reached for \$24.5 million and the lead counsel for the plaintiff collected attorney fees of \$7 million (U.S. District Court 2007, paras. 18–19).

The company continues to operate as a going concern in 2018 under the new name ACI Worldwide with its common shares trading at around \$20. The products and services offered by ACI Worldwide are similar to those reported for TSA in this case, and it continues to earn a substantial portion of its revenues through software license fees (ILF/MLF), maintenance fees, and services.

CASE REQUIREMENTS

Requirement 1

Consider the following excerpt:

[A] recent survey of financial executives noted that the revenue recognition process is increasingly more complex to manage, more prone to error, and more material to financial statements compared to any other area in financial reporting. The report went on to note that revenue recognition is a top fraud risk and that regardless of the accounting rules followed (GAAP or IFRS), the risk of errors and inaccuracies in revenue reporting is significant. (Kieso, Weygandt, and Warfield 2013, 1042)

From the TSA case, provide one example of each assertion that the revenue recognition process is (a) complex to manage, (b) prone to error, (c) material to financial statements, and (d) a top fraud risk.

Requirement 2

In 2000, TSA stated in its footnote on revenue recognition that:

The Company recognizes software license fees upon execution of the signed contract, delivery of the software to the customer, determination that the software license fees are fixed or determinable, and determination that the *collection of the software license fees is probable*. [TSAI 2000, 40; emphasis added]

- a. Why is a judgment on probable collection of accounts receivable an important element in determining whether revenue should be recognized? How is this feature addressed in ASU 2014-09 (refer to ASC 606-10-25-1(e))? Distinguish between the role of collectability and credit risk in your answer (refer to BC 42, 43, 260, and 265 in ASU 2014-09) and explain why their accounting differs. In the five-step process for revenue recognition, to which step(s) does this requirement pertain? Explain.
- b. For certain contracts for which revenue was recognized in fiscal years 2000 and 2001, it was later determined that collection was not probable at the inception of the contract. TSA later restated its year 2000 and 2001 financial statements to correct for this error. In the corrected financial statements, software license revenue was recognized when cash was received on contracts where collectability was not reasonably assured at inception.

What would be the impact of this correction on (1) revenue and (2) bad debt expense in year 2000 and 2001 financial statements? Explain your answer. Consider only transactions for which the company failed to collect all or some of the license fees it initially recognized as revenues when collectability was not assured. TSA uses a balance sheet approach (percent of receivables) to estimate bad debt expense.

Requirement 3

Assume that TSA, Inc. entered into a contract with client Anon for \$230,000 on January 1, Year 1, to transfer a software license and an additional \$15,000 for installation of the software. The license entitles Anon to use the software in its current form over an unlimited period and does not include updates. Two years of customer support come free with the license. In recent stand-alone contracts with other customers for the same software, TSA has charged \$200,000 for the software license, \$40,000 for two-year customer support, and \$20,000 for installation. The software is usable without customer support from TSA and it can be installed by other vendors. The installation is expected to take 250 hours, of which 150 hours will be required in Year 1 and the remainder in Year 2. The entire fee of \$245,000 is collected on the contract date. Base your answers on the conceptual framework in ASC 606.

- a. Determine the number of performance obligations, and the contract price to be allocated to each, in the following situations:
 - i. The installation service does not modify the software.
 - ii. Installation involves customizing the software to work seamlessly with other software used by the customer. As before, the installation can be performed by other firms as well.
- b. Explain why your responses in i and ii above differ referring to ASC 606-10-55 (paras. 146 and 147) and 606-10-25 (paras. 14, 19, 20, and 21).
- c. How much revenue will be booked in Years 1 and 2 from the contract in each case? Assume that all conditions for revenue recognition other than those specified have been met in the situations above.

Requirement 4

Assume that TSA, Inc. entered into a five-year software arrangement on January 1, 1999, whereby the customer is contractually committed to make license payments of \$100,000 on the contract date (ILF) and \$2,000 at the end of each month during the license period (MLF). TSA's annual borrowing rate is estimated at 12 percent on January 1, 1999. Assume that all conditions for revenue recognition other than those specified have been met in the situations below.

- a. In 1999, TSA determined that the monthly license fees for this contract satisfied the “fixed and determinable” provision of SOP 97-2. The license fee revenue recognized up-front is the initial payment plus the present value of MLF payments. The difference between the payments to be received from the customer and the amount of license fee revenue recognized is accounted for as interest revenue using the effective interest method.
 - i. Prepare TSA's journal entries to record the contract on January 1, 1999 and receipt of the first installment of \$2,000 on January 31, 1999.

- ii. TSA sold the future payment stream from this license arrangement for \$65,000 on January 1, 2000 on a non-recourse basis. Prepare the journal entry to record this transaction assuming that the conditions for a sale are met.
- b. While reviewing this contract in 2003, TSA determined that monthly license fees for this contract did not meet the “fixed and determinable” provision of SOP 97-2 in January 1999. Prepare the journal entries for TSA on January 1, 1999 and January 31, 1999 under this assumption. Explain your answer referring to ASC 985-605-25-35.
- c. Now assume that the license pertains to software for financial transactions via the internet that is frequently updated because it is a potential target for hackers. The updates are essential in maintaining the utility of the software and are provided free of cost to the customer under the terms of the contract. Prepare the journal entries for TSA on January 1, 1999 and January 31, 1999 under this assumption. Explain your answer referring to ASC 606-10-55 (paras. 58, 59, 60, and 62) and ASC 606-10-55-140 (paras. D and F).
- d. Identify the total revenue recognized in each situation (a through c) above and how it is classified (i.e., under ILF, MLF, and Interest Revenue/Expense). How much revenue is booked in 1999 in each case? Provide reasons for differences in the timing of revenue recognition in the three situations, referring to relevant accounting standards.

Requirement 5

Review the plaintiff’s complaint in the class-action litigation against TSA and its management (http://www.labaton.com/en/cases/upload/TransSysArch_Complaint.pdf).

- a. Do you agree with the plaintiff’s argument? Why or why not?
- b. In your opinion, were TSA’s revenues misstated in 1998, 1999, and 2000? Discuss.
- c. Refer to paragraphs 16 through 27 in the complaint. In your opinion, did the named individual defendants have the motivation to willfully misrepresent the financial condition of the company?

Requirement 6

Provide an argument and evidence in support of the proposition that “misapplication of revenue recognition rules by TSA in 1998–2000 had a significant economic impact on (a) the firm, (b) its managers, and (c) owners/investors.”

Requirement 7

In ASU 2014-09, pages 7–8, FASB asserts that its new guidance on revenue recognition is principles-based whereas prior standards in this area followed a rules-based approach.

- a. Explain why you consider that ASU 2014-09 is principles-based.
- b. Provide a counter-argument that the standard is not entirely principles-based.

REFERENCES

- American Institute of Certified Public Accountants (AICPA). 1991. *Software Recognition. Statement of Position 91-1*. New York, NY: AICPA.
- American Institute of Certified Public Accountants (AICPA). 1997. *Software Recognition. Statement of Position 97-2*. New York, NY: AICPA.
- Financial Accounting Standards Board (FASB). 2014. *Accounting Standards Update No. 2014-09, Revenue from Contracts with Customers (Topic 606)*. Norwalk, CT: FASB.
- Financial Accounting Standards Board (FASB). 2016. *Accounting Standards Update No. 2016-10, Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing*. Norwalk, CT: FASB.
- Kieso, D. E., J. J. Weygant, and T. D. Warfield. 2013. *Intermediate Accounting*. 15th edition. Hoboken, NJ: John Wiley & Sons.
- TSA, Inc. (TSAI). 1996. *Form 10-K. Filed with the SEC on December 24*. Washington, DC: Government Printing Office.
- TSA, Inc. (TSAI). 1997. *Form 10-K. Filed with the SEC on December 23*. Washington, DC: Government Printing Office.
- TSA, Inc. (TSAI). 1998. *Form 10-K. Filed with the SEC on December 23*. Washington, DC: Government Printing Office.
- TSA, Inc. (TSAI). 1999a. *Form DEF 14A. Filed with the SEC on January 22*. Washington, DC: Government Printing Office.
- TSA, Inc. (TSAI). 1999b. *Form 10-K. Filed with the SEC on December 29*. Washington, DC: Government Printing Office.
- TSA, Inc. (TSAI). 2000. *Form 10-K. Filed with the SEC on December 29*. Washington, DC: Government Printing Office.
- TSA, Inc. (TSAI). 2002. *Form DEF 14A. Filed with the SEC on January 18*. Washington, DC: Government Printing Office.
- TSA, Inc. (TSAI). 2003. *Form 10-K. Filed with the SEC on January 13*. Washington, DC: Government Printing Office.

- United States District Court for the District of Nebraska. 2003a. *Desert Orchid Partners LLC v. Transaction Systems Architects Inc. Plaintiff's Complaint*. Case: 8:02CV553. Available at: http://www.labaton.com/en/cases/upload/TransSysArch_Complaint.pdf (last accessed July 5, 2018)
- United States District Court for the District of Nebraska. 2003b. *Desert Orchid Partners LLC v. Transaction Systems Architects Inc. Preliminary Ruling*. Case: 8:02CV553. Available at: https://www.labaton.com/en/cases/upload/TSA_MTD_Decision.pdf (last accessed July 5, 2018).
- United States District Court for the District of Nebraska. 2007. *Desert Orchid Partners LLC v. Transaction Systems Architects Inc. Final Judgment and Order of Dismissal*. Case: 8:02CV553. Available at: http://securities.stanford.edu/filings-documents/1026/TSAIE02-01/200732_r02o_02553.pdf (last accessed July 5, 2018).