UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): August 1, 2019

Commission file number 001-16111

GLOBAL PAYMENTS INC.
(Exact name of registrant as specified in charter)

Georgia **(State or other jurisdiction of incorporation or organization)**	**58-2567903** **(I.R.S. Employer Identification No.)**
3550 Lenox Road, Atlanta, Georgia **(Address of principal executive offices)**	**30326** **(Zip Code)**

Registrant's telephone number, including area code: (770) 829-8000

NONE
(Former name, former address and former fiscal year, if changed since last report)

Securities registered pursuant to Section 12(b) of the Act

Title of each class	Ticker symbol	Name of exchange on which registered
Common stock, no par value	**GPN**	**New York Stock Exchange**

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

☒ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 8.01. Other Events.

As previously announced, on May 27, 2019, Global Payments Inc. ("Global Payments") entered into an Agreement and Plan of Merger (the "Merger Agreement") with Total System Services, Inc. ("TSYS"), pursuant to which TSYS will merge with and into Global Payments (the "Merger"), with Global Payments as the surviving entity in the Merger. The Merger is currently expected to close in the fourth quarter of 2019, subject to the satisfaction or waiver of the closing conditions specified in the Merger Agreement.

Global Payments is filing: (i) as Exhibit 99.1 to this Current Report on Form8-K, TSYS' audited consolidated financial statements as of December 31, 2018 and 2017 and for each of the fiscal years ended December 31, 2018, 2017 and 2016; (ii) as Exhibit 99.2, TSYS' interim unaudited consolidated financial statements as of June 30, 2019 and for the three and six months ended June 30, 2019 and 2018; (iii) as Exhibit 99.3, Management's Discussion and Analysis of Financial Condition and Results of Operations of TSYS for the year ended December 31, 2018; (iv) as Exhibit 99.4, Management's Discussion and Analysis of Financial Condition and Results of Operations of TSYS for the three and six months ended June 30, 2019; (v) as Exhibit 99.5, information related to TSYS' business and operations and information related to certain material regulatory matters related to TSYS' business; (vi) as Exhibit 99.6, information related to certain material risks related to TSYS' business, operations and financial condition; (vii) as Exhibit 99.7, the unaudited pro forma condensed combined financial statements of Global Payments and TSYS, including (a) the unaudited pro forma condensed combined consolidated statement of income of Global Payments and TSYS for the six months ended June 30, 2019, giving effect to the Merger as if it had occurred on January 1, 2018, and the unaudited pro forma condensed combined consolidated balance sheet of Global Payments and TSYS as of June 30, 2019, giving effect to the Merger as if it had occurred on June 30, 2019, and (b) for the year ended December 31, 2018, the unaudited pro forma condensed combined consolidated statement of income of Global Payments and TSYS for the year ended December 31, 2018, giving effect to the Merger as if it had occurred on January 1, 2018; and (viii) as Exhibit 23.1, the consent of KPMG LLP, independent registered public accounting firm of TSYS.

This Current Report on Form 8-K does not modify or update the consolidated financial statements of Global Payments included in Global Payments' Annual Report on Form 10-K for the year ended December 31, 2018, nor does it reflect any subsequent information or events. The information referenced in items (i)–(vi) above was previously disclosed by TSYS in its reports filed with the U.S. Securities and Exchange Commission (the "SEC"), including its Annual Report on Form 10-K for the fiscal year ended December 31, 2018 and its Quarterly Report on Form10-Q for the fiscal quarter ended June 30, 2019.

Forward-Looking Statements

Certain of the matters discussed in this communication which are not statements of historical fact constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements, which are based on current expectations, estimates and projections about the industry and markets in which TSYS and Global Payments operate and beliefs of and assumptions made by TSYS management and Global Payments management, involve uncertainties that could significantly affect the financial condition, results of operations, business plans and the future performance of TSYS, Global Payments or the combined company. Words such as "believes," "anticipates," "expects," "intends," "targeted," "estimates," "forecasts," "projects," "plans," "may," "could," "should," "would" and similar expressions are intended to identify forward-looking statements but are not the exclusive means of identifying these statements. Such forward-looking statements include, but are not limited to, statements about the strategic rationale and financial benefits of the transaction, including expected future financial and operating results and the combined company's plans, objectives, expectations and intentions. All statements that address operating performance, events or developments that we expect or anticipate will occur in the future — including statements relating to projections of revenue, income or loss, earnings or loss per share, the payment or nonpayment of dividends, capital structure and other financial items; statements of plans and objectives of TSYS or Global Payments or their management or board of directors, including those relating to products or services; and statements of future economic performance — are forward-looking statements. These statements are not guarantees of future performance and involve certain risks, uncertainties and assumptions that are difficult to predict. Although we believe the expectations reflected in any forward-looking statements are based on reasonable assumptions, we can give no assurance that our expectations will be attained, and therefore actual outcomes and results may differ materially from what is expressed or forecasted in such forward-looking statements. In addition to factors previously disclosed in Global Payments' reports filed with the SEC and those identified elsewhere in this communication, the following factors, among others, could cause actual results to differ materially from forward-looking statements or historical performance: the occurrence of any event, change or other circumstances that could give rise to the right of one or both of TSYS and Global Payments to terminate the Merger Agreement; the outcome of any legal proceedings that may be instituted against TSYS, Global Payments or their respective directors in respect of the Merger or the Merger Agreement; the ability to obtain regulatory approvals and meet other closing conditions to the Merger on a timely basis or at all, including the risk that regulatory approvals required for the Merger are not obtained on a timely basis or at all, or are obtained subject to conditions that are not anticipated or that could adversely affect the combined company or the expected benefits of the transaction; the ability to obtain approval by TSYS shareholders and Global Payments shareholders on the expected terms and schedule; difficulties and delays in integrating the TSYS and Global Payments businesses, including with

respect to implementing systems to prevent a material security breach of any internal systems or to successfully manage credit and fraud risks in business units; failing to fully realize anticipated cost savings and other anticipated benefits of the Merger when expected or at all; business disruptions from the proposed Merger that will harm TSYS' or Global Payments' business, including current plans and operations; potential adverse reactions or changes to business relationships resulting from the announcement or completion of the Merger, including as it relates to TSYS' or Global Payments' ability to successfully renew existing client contracts on favorable terms or at all and obtain new clients; failing to comply with the applicable requirements of Visa, Mastercard or other payment networks or card schemes or changes in those requirements; the ability of TSYS or Global Payments to retain and hire key personnel; the diversion of management's attention from ongoing business operations; uncertainty as to the long-term value of the common stock of Global Payments following the Merger, including the dilution caused by Global Payments' issuance of additional shares of its common stock in connection with the transaction; the continued availability of capital and financing following the Merger; the business, economic and political conditions in the markets in which TSYS and Global Payments operate; the impact of new or changes in current laws, regulations, credit card association rules or other industry standards, including privacy and cybersecurity laws and regulations; and events beyond TSYS' or Global Payments' control, such as acts of terrorism.

Any forward-looking statements speak only as of the date of this communication or as of the date they were made, and neither TSYS nor Global Payments undertakes any obligation to update forward-looking statements. For a more detailed discussion of these factors, also see the information under the captions "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Global Payments' most recent annual reports on Form 10-K for the year ended December 31, 2018, quarterly reports on Form10-Q for the period ended June 30, 2019, and any material updates to these factors contained in any of Global Payments' future filings and in Exhibits 99.3, 99.4 and 99.6 to this Current Report on Form 8-K.

As for the forward-looking statements that relate to future financial results and other projections, actual results will be different due to the inherent uncertainties of estimates, forecasts and projections and may be better or worse than projected and such differences could be material. Given these uncertainties, you should not place any reliance on these forward-looking statements. Annualized, pro forma, projected and estimated numbers are used for illustrative purpose only, are not forecasts and may not reflect actual results.

Additional Information and Where to Find It

In connection with the Merger, Global Payments filed with the SEC a registration statement on FormS-4 to register the shares of Global Payments' common stock to be issued in connection with the Merger on July 23, 2019. The registration statement includes a joint proxy statement/prospectus. Global Payments and TSYS commenced mailing the joint proxy statement/prospectus to shareholders on or about July 25, 2019. SHAREHOLDERS OF GLOBAL PAYMENTS AND TSYS ARE URGED TO READ THE REGISTRATION STATEMENT ON FORM S-4 AND THE RELATED JOINT PROXY STATEMENT/PROSPECTUS INCLUDED WITHIN THE REGISTRATION STATEMENT ON FORM S-4, AS WELL AS ANY AMENDMENTS OR SUPPLEMENTS TO THOSE DOCUMENTS AND ANY OTHER RELEVANT DOCUMENTS FILED OR TO BE FILED WITH THE SEC IN CONNECTION WITH THE MERGER BECAUSE THEY CONTAIN IMPORTANT INFORMATION ABOUT TSYS, GLOBAL PAYMENTS AND THE PROPOSED MERGER.

Investors and security holders may obtain copies of these documents free of charge through the website maintained by the SEC at www.sec.gov or from TSYS at its website, www.tsys.com, or from Global Payments at its website, www.globalpaymentsinc.com. Documents filed with the SEC by TSYS will be available free of charge by accessing TSYS' website at www.tsys.com under the heading Investor Relations or, alternatively, by directing a request by telephone or mail to TSYS at One TSYS Way, Columbus, Georgia 31901, and documents filed with the SEC by Global Payments will be available free of charge by accessing Global Payments' website at www.globalpaymentsinc.com under the heading Investor Relations or, alternatively, by directing a request by telephone or mail to Global Payments at 3550 Lenox Road, Suite 3000 Atlanta, Georgia 30326, Attention: Investor Relations.

Participants in the Solicitation

TSYS and Global Payments and certain of their respective directors and executive officers may be deemed to be participants in the solicitation of proxies from the shareholders of Global Payments and TSYS in respect of the Merger under the rules of the SEC. Information about Global Payments' directors and executive officers is available in Global Payments' proxy statement dated March 13, 2019 for its 2019 Annual Meeting of Shareholders. Information about TSYS' directors and executive officers is available in TSYS' proxy statement dated March 20, 2019 for its 2019 Annual Meeting of Shareholders. Other information regarding the participants in the proxy solicitation and a description of their direct and indirect interests, by security holdings or otherwise, are contained in the joint proxy statement/prospectus and other relevant materials to be filed with the SEC regarding the merger when they become available. Investors should read the joint proxy statement/prospectus carefully before making any voting or investment decisions. You may obtain free copies of these documents from Global Payments or TSYS using the sources indicated above.

No Offer or Solicitation

This communication shall not constitute an offer to sell or the solicitation of an offer to buy any securities, nor shall there be any sale of securities, in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction. No offering of securities shall be made except by means of a prospectus meeting the requirements of Section 10 of the Securities Act.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description
23.1	Consent of KPMG LLP (with respect to Total System Services, Inc.).
99.1	Audited consolidated financial statements of Total System Services, Inc. as of December 31, 2018 and 2017 and for each of the fiscal years ended December 31, 2018, 2017 and 2016.
99.2	Interim unaudited consolidated financial statements of Total System Services, Inc. as of June 30, 2019 and for the three and six months ended June 30, 2019 and 2018.
99.3	Management's Discussion and Analysis of Financial Condition and Results of Operations of Total System Services, Inc. for the year ended December 31, 2018.
99.4	Management's Discussion and Analysis of Financial Condition and Results of Operations of Total System Services, Inc. for the three and six months ended June 30, 2019 and 2018.
99.5	Information related to Total System Services, Inc.'s business and operations and information related to certain material regulatory matters related to Total System Services, Inc.'s business.
99.6	Information related to certain material risks related to Total System Services, Inc.'s business, operations and financial condition.
99.7	Unaudited pro forma condensed combined financial statements (a) as of and for the six months ended June 30, 2019 and (b) for the year ended December 31, 2018.

Signatures

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

GLOBAL PAYMENTS INC.

Date: August 1, 2019

By: /s/ Cameron M. Bready
Cameron M. Bready
Senior Executive Vice President and Chief Financial Officer

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

The Board of Directors
Total System Services, Inc.:

We consent to the incorporation by reference in the registration statements (No.333-169436 and No. 333-177026) on Form S-8, the registration statement (No. 333-220380) on Form S-3 and the registration statement (No. 333-232545) on Form S-4 of Global Payments Inc. and subsidiaries of our report dated February 21, 2019, with respect to the consolidated balance sheets of Total System Services, Inc. (the Company) as of December 31, 2018 and 2017, the related consolidated statements of income, comprehensive income, cash flows, and changes in equity for each of the years in the three-year period ended December 31, 2018, and the related notes and financial statement schedule (collectively, the "consolidated financial statements"), and the effectiveness of internal control over financial reporting as of December 31, 2018, which report appears in the Form 8-K of Global Payments Inc. dated August 1, 2019.

Our report dated February 21 2019, on the effectiveness of internal control over financial reporting as of December 31, 2018, contains an explanatory paragraph that states that the Company acquired Cayan Holdings LLC (Cayan) and iMobile3, LLC (iMobile3) during 2018, and management excluded from its assessment of the effectiveness of the Company's internal control over financial reporting as of December 31, 2018 Cayan and iMobile3's internal controls over financial reporting associated with total assets of $1.2 billion and total revenues of $179 million included in the consolidated financial statements of the Company as of and for the year ended December 31, 2018. Our audit of internal control over financial reporting of the Company also excluded an evaluation of the internal control over financial reporting of Cayan and iMobile3.

Our report dated February 21, 2019 contains an explanatory paragraph that states that as discussed in Note 1 to the consolidated financial statements, the Company has changed its method of accounting for revenue recognition in 2018 due to the adoption of Accounting Standards Codification 606 (ASC 606), *Revenue from Contracts with Customers.*

/s/ KPMG LLP

Atlanta, Georgia
August 1, 2019

Audited consolidated financial statements of Total System Services, Inc.
as of December 31, 2018 and 2017 and for each of the fiscal years ended December 31, 2018, 2017 and 2016.
Index to Consolidated Financial Statements

Total System Services, Inc. and Subsidiaries

Consolidated Financial Statements:

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Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors Total System Services, Inc.:

Opinions on the Consolidated Financial Statements and Internal Control Over Financial Reporting

We have audited the accompanying consolidated balance sheets of Total System Services, Inc. and subsidiaries (the Company) as of December 31, 2018 and 2017, the related consolidated statements of income, comprehensive income, cash flows, and changes in equity for each of the years in the three-year period ended December 31, 2018, and the related notes and financial statement schedule (collectively, the consolidated financial statements). We also have audited the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018 based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

The Company acquired Cayan Holdings LLC (Cayan) and iMobile3, LLC (iMobile3) during 2018, and management excluded from its assessment of the effectiveness of the Company's internal control over financial reporting as of December 31, 2018 Cayan's and iMobile3's internal control over financial reporting associated with total assets of $1.2 billion and total revenues of $179 million included in the consolidated financial statements of the Company as of and for the year ended December 31, 2018. Our audit of internal control over financial reporting of the Company also excluded an evaluation of the internal control over financial reporting of Cayan and iMobile3.

Change in Accounting Principle

As discussed in Note 1 to the consolidated financial statements, the Company has changed its method of accounting for revenue recognition in 2018 due to the adoption of Accounting Standards Codification 606 (ASC 606), Revenue from Contracts with Customers.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's consolidated financial statements and an opinion on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and

disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG LLP

We have served as the Company's auditor since 1983.

Atlanta, Georgia
February 21, 2019

TOTAL SYSTEM SERVICES, INC.
CONSOLIDATED BALANCE SHEETS

(in thousands, except per share data)	December 31, 2018	December 31, 2017
Assets		
Current assets:		
Cash and cash equivalents (Note 4)	$ **471,156**	450,357
Accounts receivable, net of allowances for doubtful accounts and billing adjustments of $6.0 million and $5.9 million as of 2018 and 2017, respectively	**450,322**	412,322
Contract assets (Note 2)	**30,950**	—
Prepaid expenses and other current assets (Note 5)	**188,355**	216,565
Total current assets	**1,140,783**	1,079,244
Contract assets (Note 2)	**47,839**	—
Goodwill (Note 6)	**4,114,838**	3,264,071
Other intangible assets, net of accumulated amortization of $802.0 million and $600.9 million as of 2018 and 2017, respectively (Note 7)	**796,702**	727,146
Intangible assets - computer software, net of accumulated amortization of $893.4 million and $849.3 million as of 2018 and 2017, respectively (Note 8)	**534,536**	383,715
Property and equipment, net of accumulated depreciation and amortization of $522.7 million and $521.1 million as of 2018 and 2017, respectively (Note 9)	**383,074**	325,218
Contract cost assets, net of accumulated amortization (Notes 1 and 10)	**145,598**	258,665
Equity investments, net (Note 11)	**180,661**	163,518
Deferred income tax assets (Note 14)	**7,773**	6,091
Other assets	**116,905**	124,021
Total assets	$ **7,468,709**	6,331,689
Liabilities		
Current liabilities:		
Current portion of long-term borrowings (Note 12)	$ **20,807**	559,050
Accounts payable	**97,956**	62,310
Contract liabilities (Note 2)	**47,227**	52,913
Accrued salaries and employee benefits	**73,143**	82,135
Current portion of obligations under capital leases and license agreements (Note 12)	**8,318**	6,762
Other current liabilities (Note 13)	**268,150**	225,922
Total current liabilities	**515,601**	989,092
Long-term borrowings, excluding current portion (Note 12)	**3,843,394**	2,591,949
Deferred income tax liabilities (Note 14)	**380,278**	238,317
Contract liabilities (Note 2)	**21,489**	48,526
Obligations under capital leases and license agreements, excluding current portion (Note 12)	**46,147**	36,053
Other long-term liabilities	**75,894**	71,070
Total liabilities	**4,882,803**	3,975,007
Redeemable noncontrolling interest in consolidated subsidiary (Note 23)	**—**	115,689
Commitments and contingencies (Note 15)		
Shareholders' Equity		
Shareholders' equity:		
Common stock- $0.10 par value. Authorized 600,000 shares; 202,765 issued as of 2018 and 2017; 180,586 and 180,903 outstanding as of 2018 and 2017, respectively	**20,277**	20,277
Additional paid-in capital	**189,889**	162,806
Accumulated other comprehensive loss, net (Note 20)	**(60,223)**	(36,148)
Treasury stock, at cost (22,179 and 21,862 shares as of 2018 and 2017, respectively) (Note 19)	**(1,042,687)**	(909,960)
Retained earnings	**3,478,650**	3,004,018
Total shareholders' equity	**2,585,906**	2,240,993
Total liabilities and shareholders' equity	$ **7,468,709**	6,331,689

See accompanying Notes to Consolidated Financial Statements.

TOTAL SYSTEM SERVICES, INC.
CONSOLIDATED STATEMENTS OF INCOME

(in thousands, except per share data)	Years Ended December 31,		
	2018	2017	2016
Total revenues (Notes 1, 2 and 21)	**$4,028,211**	4,927,965	4,170,077
Cost of services (Note 1)	**2,492,482**	3,577,320	2,993,062
Selling, general and administrative expenses	**712,991**	616,601	603,633
Total operating expenses	**3,205,473**	4,193,921	3,596,695
Operating income	**822,738**	734,044	573,382
Nonoperating expenses, net	**(162,974)**	(116,482)	(112,350)
Income before income taxes and equity in income of equity investments	**659,764**	617,562	461,032
Income taxes (Note 14)	**127,003**	65,878	161,175
Income before equity in income of equity investments	**532,761**	551,684	299,857
Equity in income of equity investments, net of tax	**45,156**	40,532	26,115
Net income	**$ 577,917**	592,216	325,972
Net income attributable to noncontrolling interests	**(1,261)**	(6,031)	(6,334)
Net income attributable to Total System Services, Inc. (TSYS) common shareholders	**$ 576,656**	586,185	319,638
Basic earnings per share (EPS) attributable to TSYS common shareholders (Note 25)	**$ 3.17**	3.19	1.74
Diluted EPS attributable to TSYS common shareholders (Note 25)	**$ 3.14**	3.16	1.73

See accompanying Notes to Consolidated Financial Statements.

TOTAL SYSTEM SERVICES, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(in thousands)	Years Ended December 31, 2018	2017	2016
Net income	**$577,917**	592,216	325,972
Other comprehensive (loss) income, net of tax:			
Foreign currency translation adjustments	**(20,326)**	22,018	(30,801)
Postretirement healthcare plan adjustments	**(716)**	(592)	496
Unrealized (loss) gain on available-for-sale securities	**(5,362)**	(1,416)	7,359
Other comprehensive (loss) income	**(26,404)**	20,010	(22,946)
Comprehensive income	**551,513**	612,226	303,026
Comprehensive income attributable to noncontrolling interests	**(1,261)**	(6,031)	(6,002)
Comprehensive income attributable to TSYS common shareholders	**$550,252**	606,195	297,024

See accompanying Notes to Consolidated Financial Statements.

TOTAL SYSTEM SERVICES, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)	Years Ended December 31, 2018	2017	2016
Cash flows from operating activities:			
Net income	**$ 577,917**	592,216	325,972
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	**408,573**	405,906	373,546
Provisions for cardholder losses	**65,108**	51,194	49,363
Share-based compensation	**48,758**	42,409	43,728
Provisions for bad debt expenses and billing adjustments	**10,313**	10,169	7,584
Charges for transaction processing provisions	**7,163**	11,716	5,351
Amortization of debt issuance costs	**4,982**	4,307	13,570
Dividends received from equity investments	**24,921**	20,589	15,246
(Gain) loss on foreign currency	**(109)**	907	(1,748)
Amortization of bond discount	**1,027**	907	750
Loss on disposal of equipment, net	**84**	3,605	774
Excess tax benefit from share-based payment arrangements	**—**	—	(9,905)
Deferred income tax expense (benefit)	**21,400**	(172,488)	7,435
Equity in income of equity investments, net of tax	**(45,156)**	(40,532)	(26,115)
Changes in operating assets and liabilities, net of effects of acquisitions:			
Accounts receivable	**(34,834)**	(29,729)	(73,235)
Contract assets and contract liabilities	**(2,771)**	6,184	(2,262)
Contract cost assets	**3,316**	—	—
Prepaid expenses, other current assets and other long-term assets	**16,402**	3,089	(58,345)
Accounts payable	**2,718**	17,653	(12,562)
Accrued salaries and employee benefits	**(12,543)**	13,538	(2,597)
Other current liabilities and other long-term liabilities	**(55,602)**	(84,591)	61,734
Net cash provided by operating activities	**1,041,667**	857,049	718,284
Cash flows from investing activities:			
Purchases of property and equipment	**(113,266)**	(70,039)	(51,132)
Additions to contract acquisition costs	—	(69,806)	(45,847)
Additions to internally developed computer software	**(39,162)**	(30,265)	(34,043)
Additions to licensed computer software from vendors	**(89,756)**	(25,916)	(11,551)
Cash used in acquisitions, net of cash acquired	**(1,051,629)**	—	(2,345,493)
Proceeds from sale of acquisition intangibles	**3,847**	—	—
Other investing activities	**(4,183)**	(2,718)	(4,930)
Net cash used in investing activities	**(1,294,149)**	(198,744)	(2,492,996)
Cash flows from financing activities:			
Principal payments on long-term borrowings, capital lease obligations and license agreements	**(2,812,366)**	(421,306)	(724,084)
Purchase of noncontrolling interest	**(126,000)**	(70,000)	(5,878)
Dividends paid on common stock	**(94,557)**	(79,017)	(73,378)
Subsidiary dividends paid to noncontrolling shareholders	**(3,777)**	(5,997)	(5,548)
Repurchase of common stock under plans and tax withholding	**(172,966)**	(284,237)	(30,275)
Debt issuance costs	**(16,004)**	—	(26,555)
Excess tax benefit from share-based payment arrangements	**—**	—	9,905
Proceeds from borrowings of long-term debt	**3,477,000**	200,000	2,666,295
Proceeds from exercise of stock options	**31,177**	21,832	11,708
Net cash provided by (used in) financing activities	**282,507**	(638,725)	1,822,190
Cash, cash equivalents and restricted cash:			
Effect of exchange rate changes on cash, cash equivalents and restricted cash	**(7,116)**	5,980	(11,197)
Net increase in cash, cash equivalents and restricted cash	**22,909**	25,560	36,281
Cash, cash equivalents and restricted cash at beginning of period	**451,370**	425,810	389,529
Cash, cash equivalents and restricted cash at end of period	**$ 474,279**	451,370	425,810
Supplemental cash flow information:			
Interest paid	**$ 154,487**	112,705	84,420
Income taxes paid, net	**$ 78,546**	269,113	87,428

See accompanying Notes to Consolidated Financial Statements.

TOTAL SYSTEM SERVICES, INC.
CONSOLIDATED STATEMENTS OF EQUITY

		TSYS Shareholders							
		Common Stock							
(in thousands, except per share data)	Redeemable Noncontrolling Interests	Shares	Dollars	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss), Net of Tax	Treasury Stock	Retained Earnings	Noncontrolling Interests	Total Equity
Balance as of December 31, 2015	$ 23,410	202,769	$20,277	241,891	(33,544)	(641,664)	2,256,058	5,664	$ 1,848,682
Net income	6,231	—	—	—	—	—	319,638	103	319,741
Other comprehensive loss (Note 20)	—	—	—	—	(22,614)	—	—	(332)	(22,946)
Common stock issued from treasury shares for exercise of stock options (Note 18)	—	—	—	1,824	—	9,884	—	—	11,708
Common stock unissued due to forfeiture of nonvested awards	—	(4)	(1)	1,197	—	(1,196)	—	—	—
Common stock issued from treasury shares for nonvested awards (Note 18)	—	—	—	(17,204)	—	17,204	—	—	—
Share-based compensation (Note 18)	—	—	—	42,457	—	—	—	—	42,457
Cash dividends declared ($0.40 per share)	—	—	—	—	—	—	(73,474)	—	(73,474)
Purchase of treasury shares (Note 19)	—	—	—	—	—	(30,275)	—	—	(30,275)
Subsidiary repurchase of noncontrolling interests	—	—	—	(443)	—	—	—	(5,435)	(5,878)
Subsidiary dividends paid to noncontrolling interests	(5,548)	—	—	—	—	—	—	—	—
Tax benefits associated with share-based compensation	—	—	—	9,905	—	—	—	—	9,905
Balance as of December 31, 2016	24,093	202,765	20,276	279,627	(56,158)	(646,047)	2,502,222	—	2,099,920
Net income	6,031						586,185		586,185
Other comprehensive income (Note 20)	—	—	—	—	20,010	—	—	—	20,010
Common stock issued from treasury shares for exercise of stock options (Note 18)	—	—	—	10,474	—	11,358	—	—	21,832
Common stock unissued due to forfeiture of nonvested awards	—	—	1	1,230	—	(1,231)	—	—	—
Common stock issued from treasury shares for nonvested awards (Note 18)	—	—	—	(10,197)	—	—	—	—	—
Share-based compensation (Note 18)	—	—	—	43,234	—	—			43,234
Cash dividends declared ($0.46 per share)	—	—	—	—	—		(84,389)	—	(84,389)
Purchase of treasury shares (Note 19)	—	—	—	—	—	(284,237)	—	—	(284,237)
Adjustments to redemption value of redeemable noncontrolling interest	101,405	—	—	(101,405)	—	—	—	—	(101,405)
Subsidiary repurchase of noncontrolling interests	(9,843)	—	—	(60,157)	—	—	—	—	(60,157)
Subsidiary dividends paid to noncontrolling interests	(5,997)	—	—	—	—	—	—	—	—
Balance as of December 31, 2017	115,689	202,765	20,277	162,806	(36,148)	(909,960)	3,004,018	—	2,240,993
Cumulative effect adjustment from adoption of ASU 2014-09 (Note 1)	—	—	—	—	—	—	(4,445)	—	(4,445)
Reclassification from adoption of ASU 2018-02 (Notes 1 and 20)		—	—	—	2,329	—	(2,329)	—	—
Net income	1,261	—	—	—	—	—	576,656	—	576,656
Other comprehensive loss (Note 20)	—	—	—	—	(26,404)	—	—	—	(26,404)
Common stock issued from treasury shares for exercise of stock options (Note 18)	—	—	—	7,089	—	24,083	—	—	31,172
Common stock unissued due to forfeiture of nonvested awards	—	—	—	692	—	(692)	—	—	—
Common stock issued from treasury shares for nonvested awards (Note 18)	—	—	—	(16,839)	—	16,839	—	—	—
Common stock issued from treasury shares for dividend equivalents	—	—	—	925	—	9	—	—	934
Share-based compensation (Note 18)	—	—	—	48,044	—	—		—	48,044
Cash dividends declared ($0.52 per share)	—	—	—	—	—	—	(95,250)	—	(95,250)
Purchase of treasury shares (Note 19)	—	—	—	—	—	(172,966)	—	—	(172,966)
Adjustments to redemption value of redeemable noncontrolling interest	12,828	—	—	(12,828)	—	—	—	—	(12,828)
Subsidiary dividends paid to noncontrolling interest	(3,778)	—	—	—	—	—	—	—	—
Repurchase of noncontrolling interest	(126,000)	—	—	—	—	—	—	—	—
Balance as of December 31, 2018	$ —	202,765	$20,277	189,889	(60,223)	(1,042,687)	3,478,650	—	$ 2,585,906

See accompanying Notes to the Consolidated Financial Statements.

Note 1: Basis of Presentation and Summary of Significant Accounting Policies

BUSINESS: Total System Services, Inc.'s ("TSYS'" or "the Company's") revenues are derived from providing payment processing, merchant services and related payment services to financial and nonfinancial institutions, generally under long-term processing contracts. The Company also derives revenues by providing general-purpose reloadable ("GPR") prepaid debit and payroll cards, demand deposit accounts and other financial services to underbanked and other consumers and businesses. The Company's services are provided through three operating segments: Issuer Solutions, Merchant Solutions and Consumer Solutions.

Through the Company's Issuer Solutions segment, TSYS processes information through its cardholder systems to financial and nonfinancial institutions throughout the United States and internationally. The Company's Merchant Solutions segment provides merchant services to merchant acquirers and merchants mainly in the United States. The Company's Consumer Solutions segment provides financial service solutions to consumers and businesses in the United States.

PRINCIPLES OF CONSOLIDATION AND BASIS OF PRESENTATION: The accompanying Consolidated Financial Statements, which are prepared in accordance with U.S. generally accepted accounting principles ("GAAP") include the accounts of TSYS and its wholly- and majority-owned subsidiaries. All significant intercompany accounts and transactions have been eliminated in consolidation. In addition, the Company evaluates its relationships with other entities to identify whether they are variable interest entities and to assess whether it is the primary beneficiary of such entities. If the determination is made that the Company is the primary beneficiary, then that entity is included in the consolidated financial statements.

RISKS AND UNCERTAINTIES AND USE OF ESTIMATES: Factors that could affect the Company's future operating results and cause actual results to vary materially from expectations include, but are not limited to, lower than anticipated growth from existing clients, an inability to attract new clients and grow internationally, loss of a major customer or other significant client, loss of a major supplier, an inability to grow through acquisitions or successfully integrate acquisitions, an inability to control expenses, technology changes, the impact of the application of and/or changes in accounting principles, financial services consolidation, changes in regulatory requirements, a decline in the use of cards as a payment mechanism, disruption of the Company's international operations, breach of the Company's security systems, a decline in the financial stability of the Company's clients and uncertain economic conditions. Negative developments in these or other risk factors could have a material adverse effect on the Company's financial position, results of operations and cash flows.

The Company has prepared the accompanying consolidated financial statements in conformity with U.S. GAAP. The preparation of the consolidated financial statements requires management of the Company to make a number of estimates and assumptions relating to the reported amounts of assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the period. These estimates and assumptions are developed based upon all information available. Actual results could differ from estimated amounts.

ACQUISITIONS — PURCHASE PRICE ALLOCATION: TSYS' purchase price allocation methodology requires the Company to make assumptions and to apply judgment to estimate the fair value of acquired assets and liabilities. TSYS estimates the fair value of assets and liabilities based upon appraised market values, the carrying value of the acquired assets and widely accepted valuation techniques, including the cost approach, discounted cash flows and market multiple analyses. Management determines the fair value of fixed assets and identifiable intangible assets such as developed technology or customer relationships, and any other significant assets or liabilities. TSYS adjusts the purchase price allocation, as necessary, until the end of the measurement period, which is no longer than one year after the acquisition closing date as TSYS obtains more information regarding asset valuations and liabilities assumed. Unanticipated events or circumstances may occur which could affect the accuracy of the Company's fair value estimates, including assumptions regarding industry economic factors and business strategies, and may result in an impairment or a new allocation of purchase price.

CASH AND CASH EQUIVALENTS: Cash on hand and investments with a maturity of three months or less when purchased are considered to be cash equivalents.

ACCOUNTS RECEIVABLE: Accounts receivable balances are stated net of allowances for doubtful accounts and billing adjustments.

TSYS records an allowance for doubtful accounts when it is probable that the accounts receivable balance will not be collected. When estimating the allowance for doubtful accounts, the Company takes into consideration such factors as its day-to-day knowledge of the financial position of specific clients, the industry and size of its clients, the overall composition of its accounts receivable aging, prior history with specific customers of accounts receivable write-offs and prior experience of allowances in proportion to the overall receivable balance. This analysis includes an ongoing and continuous communication with its largest clients and those clients with past due balances. A financial decline of any one of the Company's large clients could have a material adverse effect on collectability of receivables and thus the adequacy of the allowance for doubtful accounts.

Increases in the allowance for doubtful accounts are recorded as charges to bad debt expense and are reflected in selling, general and administrative expenses in the Company's Consolidated Statements of Income. Write-offs of uncollectible accounts are charged against the allowance for doubtful accounts.

TSYS records an allowance for billing adjustments for actual and potential billing discrepancies. When estimating the allowance for billing adjustments, the Company considers its overall history of billing adjustments, as well as its history with specific clients and known disputes. Increases in the allowance for billing adjustments are recorded as a reduction of revenues in the Company's Consolidated Statements of Income and actual adjustments to invoices are charged against the allowance for billing adjustments.

GOODWILL: Goodwill results from the excess of cost over the fair value of net assets of businesses acquired. Goodwill is tested for impairment at least annually. Equity investment goodwill, which is not reported as goodwill in the Company's Consolidated Balance Sheet, but is reported as a component of the equity investment, was $46.6 million and $48.8 million as of December 31, 2018 and 2017, respectively.

OTHER INTANGIBLE ASSETS: Identifiable intangible assets relate primarily to merchant relationships, customer relationships, databases, channel relationships, covenants-not-to-compete, trade names and trade associations resulting from acquisitions. These identifiable intangible assets are amortized using the straight-line method over periods not exceeding the estimated useful lives, which range from one to twelve years. Intangible assets with estimable useful lives are amortized over their respective estimated useful lives to their estimated residual values, and reviewed for impairment in accordance with GAAP. Amortization expenses are charged to selling, general and administrative expenses in the Company's Consolidated Statements of Income.

INTANGIBLE ASSETS – COMPUTER SOFTWARE, NET: Licensed computer software includes software the Company licenses from third parties that is for internal use and providing services to clients. Licensed software is obtained through perpetual licenses, term licenses, site licenses and through agreements based on processing capacity. Perpetual and site licenses are amortized using the straight-line method over their estimated useful lives which range from one to ten years. Term licenses are amortized over the term of the agreement. Mainframe software that is licensed based on processing capacity is amortized using either a straight-line or a units-of-production basis over the estimated useful life of the software, generally not to exceed ten years. At each balance sheet date, the Company evaluates impairment losses on long-lived assets used in operations in accordance with GAAP.

Acquisition technology intangibles are software technology assets resulting from acquisitions. These assets are amortized using the straight-line method over periods not exceeding their estimated useful lives, which range from three to eight years. GAAP requires that intangible assets with estimated useful lives be amortized over their respective estimated useful lives to their residual values, and reviewed for impairment. Acquisition technology intangibles' net book values are included in computer software, net in the accompanying Consolidated Balance Sheets. Amortization expenses are charged to cost of services in the Company's Consolidated Statements of Income.

Software development costs are costs of computer software to be sold, leased or otherwise marketed are capitalized once technological feasibility of the software product has been established. Costs incurred prior to establishing technological feasibility are expensed as incurred. Technological feasibility is established when the Company has completed a detailed program design and has determined that a product can be produced to meet its design specifications, including functions, features and technical performance requirements. Capitalization of costs ceases when the product is generally available to clients. In evaluating software development costs for recoverability, expected cash flows are estimated by management should events indicate a loss may have been triggered. Software development costs are amortized using the straight-line method over its estimated useful life, which ranges from one to ten years.

The Company also develops software that is used internally. Internal-use software development costs are capitalized once: (1) the preliminary project stage is completed, (2) management authorizes and commits to funding a computer software project, and (3) it is probable that the project will be completed and the software will be used to perform the function intended. Costs incurred prior to meeting the qualifications are expensed as incurred. Capitalization of costs ceases when the project is substantially complete and ready for its intended use. Internal-use software development costs are amortized using the straight-line method over its estimated useful life which ranges from three to ten years. Software development costs may become impaired in situations where development efforts are abandoned due to the viability of the planned project becoming doubtful or due to technological obsolescence of the planned software product.

Based upon management's review for potential impairment, no material impairment losses related to intangible assets – computer software were recorded in 2018, 2017 or 2016.

PROPERTY AND EQUIPMENT: Property and equipment are stated at cost less accumulated depreciation and amortization. Depreciation and amortization are computed using the straight-line method over the estimated useful lives of the assets. Buildings and improvements are depreciated over estimated useful lives of 5-40 years, computer and other equipment over estimated useful lives of 2-5 years, and furniture and other equipment over estimated useful lives of 3-15 years. The Company evaluates impairment losses on long-lived assets used in operations in accordance with the provisions of GAAP. All ordinary repairs and maintenance costs are expensed as incurred. Maintenance costs that extend the asset life are capitalized and amortized over the remaining estimated life of the asset.

EQUITY METHOD INVESTMENTS: TSYS' 49% investment in Total System Services de Mexico, S.A. de C.V. ("TSYS de Mexico"), an electronic payment processing support operation located in Toluca, Mexico, is accounted for using the equity method of accounting, as is TSYS' 44.56% investment in China UnionPay Data Co., Ltd. ("CUP Data") headquartered in Shanghai, China. The Company has entered into limited partnership agreements in connection with investing in two Atlanta-based venture capital funds focused exclusively on investing in technology-enabled financial services companies. TSYS' equity investments are recorded initially at cost and subsequently adjusted for equity in earnings, cash contributions and distributions, and foreign currency translation adjustments.

INCOME TAXES: Income taxes reflected in TSYS' consolidated financial statements are computed based on the taxable income of TSYS and its affiliated subsidiaries. A consolidated U.S. federal income tax return is filed for TSYS and its majority-owned U.S. subsidiaries. Additionally, income tax returns are also filed in states where TSYS and its subsidiaries have filing obligations and in foreign jurisdictions where TSYS has a foreign affiliate.

The Company accounts for income taxes in accordance with the asset and liability method. Deferred income tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Reserves against the carrying value of a deferred tax asset are established when necessary to reflect the decreased likelihood of realization of a deferred asset in the future. The effect on deferred income tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

Income tax provisions require the use of management judgments, which are subject to challenge by various taxing authorities. Contingency reserves are periodically established where the amount of the contingency can be reasonably determined and is likely to occur. Reductions in contingency reserves are recognized when tax disputes are settled or examination periods lapse.

Significant estimates used in accounting for income taxes relate to the determination of taxable income, the determination of temporary differences between book and tax basis, as well as estimates on the realizability of tax credits and net operating losses.

TSYS recognizes potential interest and penalties related to the underpayment of income taxes as income tax expense in the Consolidated Statements of Income.

UP-FRONT DISTRIBUTOR AND PARTNER PAYMENTS: The Company makes up-front contractual payments to third-party distributors and partners. The Company assesses each up-front payment to determine whether it meets the criteria of an asset as defined by U.S. GAAP. If these criteria are met, the Company capitalizes the up-front payment and recognizes the capitalized amount as expense ratably over the benefit period, which is generally the contract period. If the contract requires the distributor or partner to perform specific acts (i.e., achieve a sales goal) and no other conditions exist for the distributor or partner to earn or retain the up-front payment, then the Company capitalizes the payment and recognizes it as an expense when the performance conditions have been met. Up-front distributor and partner payments are classified on the Consolidated Balance Sheets as other current and non-current assets and recorded as a cost of services in the Consolidated Statements of Income.

IMPAIRMENT OF LONG-LIVED ASSETS: The Company reviews long-lived assets, such as property and equipment and intangibles subject to amortization, including contract assets, contract cost assets and certain computer software, for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to estimated undiscounted future cash flows expected to be generated by the asset. If upon a triggering event the Company determines that the carrying amount of an asset exceeds its estimated undiscounted future cash flows, an impairment charge is recognized by the amount by which the carrying amount of the asset exceeds the fair value of the asset. Assets to be disposed of would be separately presented in the Consolidated Balance Sheets and reported at the lower of the carrying amount or fair value less costs to sell, and would no longer be depreciated. The assets and liabilities of a disposed group classified as held for sale would be presented separately in the appropriate asset and liability sections of the consolidated balance sheet.

TRANSACTION PROCESSING PROVISIONS: The Company has recorded an accrual for contract contingencies (performance penalties) and processing errors. A significant number of the Company’s contracts with large clients contain service level agreements which can result in TSYS incurring performance penalties if contractually required service levels are not met. When providing for these accruals, the Company takes into consideration such factors as the prior history of performance penalties and processing errors incurred, actual contractual penalty charge rates in the Company’s contracts, progress towards milestones and known processing errors. As of December 31, 2018 and 2017, the Company had transaction processing provisions of $3.6 million and $2.2 million, respectively. These accruals are included in other current liabilities in the accompanying Consolidated Balance Sheets. Increases and decreases in transaction processing provisions are charged to cost of services in the Company’s Consolidated Statements of Income, and payments or credits for performance penalties and processing errors are charged against the accrual.

PROVISION FOR CARDHOLDER LOSSES: The Company is exposed to losses due to cardholder fraud, payment defaults and other forms of cardholder activity as well as losses due to non-performance of third parties who receive cardholder funds for transmittal to the issuing banks (banks that issue Mastercard International or Visa USA, Inc. branded cards to customers). The Company establishes a reserve for the losses it estimates will arise from processing customer transactions, debit card overdrafts, chargebacks for unauthorized card use and merchant-related chargebacks due to non-delivery of goods and services. These reserves are established based upon historical loss and recovery rates and cardholder activity for which specific losses can be identified. The provision for cardholder losses was approximately $13.1 million and $9.5 million as of December 31, 2018 and 2017, respectively. The charges to provisions for cardholder losses are included in cost of services in the Consolidated Statements of Income and other current liabilities in the Consolidated Balance Sheets. The Company regularly updates its reserve estimate as new facts become known and events occur that may impact the settlement or recovery of losses.

PROVISION FOR MERCHANT LOSSES: The Company has potential liability for losses resulting from disputes between a cardholder and a merchant that arise as a result of, among other things, the cardholder's dissatisfaction with merchandise quality or merchant services. Such disputes may not be resolved in the merchant's favor. In these cases, the transaction is "charged back" to the merchant, which means the purchase price is refunded to the customer by the card-issuing bank and charged to the merchant. If the merchant is unable to fund the refund, TSYS must do so. TSYS also bears the risk of reject losses arising from the fact that TSYS collects fees from its merchants after the monthly billing period. If the merchant has gone out of business during such period, TSYS may be unable to collect such fees. TSYS maintains cash deposits or requires the pledge of a letter of credit from certain merchants, generally those with higher average transaction size where the card is not present when the charge is made or the product or service is delivered after the charge is made, in order to offset potential contingent liabilities such as chargebacks and reject losses that would arise if the merchant went out of business. Most chargeback and reject losses are charged to cost of services as they are incurred. However, the Company also maintains a provision against losses, including major fraud losses, which are both less predictable and involve larger amounts. The loss provision was established using historical loss rates, applied to recent bankcard processing volume. The Company had a merchant loss provision in the amount $4.3 million for the years ended December 31, 2018 and 2017.

LEASES: The Company is obligated under noncancelable leases for computer equipment and facilities. As these leases expire, they will be evaluated and renewed or replaced by similar leases based on need. For purposes of applying the accounting and reporting standards, leases are classified from the standpoint of the lessee as capital or operating leases.

Rental payments on operating leases are charged to expense over the lease term. If rental payments are not made on a straight-line basis, rental expense nevertheless shall be recognized on a straight-line basis unless another systematic and rational basis is more representative of the time pattern in which use benefit is derived from the leased property, in which case that basis shall be used.

Certain of the Company's operating leases are for office space. The Company will make various alterations (leasehold improvements) to the office space and capitalize these costs as part of property and equipment. Leasehold improvements are amortized on a straight-line basis over the useful life of the improvement or the term of the lease, whichever is shorter.

TREASURY STOCK: The Company uses the cost method when it purchases its own common stock as treasury shares or issues treasury stock upon option exercises and displays treasury stock as a reduction of shareholders' equity.

FAIR VALUES OF FINANCIAL INSTRUMENTS: The Company uses financial instruments in the normal course of its business. The carrying values of cash equivalents, accounts receivable, accounts payable and employee benefits, and other current liabilities approximate their fair value due to the short-term maturities of these assets and liabilities. The fair values of the Company's unsecured revolving loan and notes payable are considered to be level 2 measurements which are based on inputs other than quoted prices included within Level 1 that are observable for the liability, either directly or indirectly. Level 2 inputs may include quoted prices for similar liabilities in active or inactive markets, or other inputs that can be corroborated by observable market data. The carrying value of the Company's unsecured revolving loan approximates fair value since the interest rate resets monthly and the balances are pre-payable at any time. With respect to the Company's notes payable due March and December 2020, the carrying values approximate fair value due to their relatively short maturities. Refer to Note 12 for the estimated fair values of the Company's Senior Notes.

Investments in equity method investments are accounted for using the equity method of accounting and pertain to privately held companies. The Company believes the fair values of its investments in equity method investments exceed their respective carrying values.

FOREIGN CURRENCY TRANSLATION: The Company maintains several different foreign operations whose functional currency is their local currency. Foreign currency financial statements of the Company's Mexican and Chinese equity investments, the Company's wholly-owned subsidiaries and the Company's majority-owned subsidiaries, as well as the Company's division and branches in the United Kingdom and China, are translated into

U.S. dollars at current exchange rates, except for revenues, costs and expenses, and net income which are translated at the average exchange rates for each reporting period. Net gains or losses resulting from the currency translation of assets and liabilities of the Company's foreign operations, net of tax when applicable, are accumulated in a separate section of shareholders' equity titled accumulated other comprehensive income (loss). Gains and losses on transactions denominated in currencies other than the functional currencies are included in determining non-operating income (expense).

REVENUE RECOGNITION:

Revenue recognition for periods after the Company's adoption of ASC 606 as of January 1, 2018

The Company adopted Accounting Standards Update ("ASU") 2014-09 and related ASUs ("ASC 606") as of January 1, 2018 using the modified retrospective method for all contracts not completed as of the date of adoption. For contracts that were modified before the effective date, the Company considered the effect of all modifications when identifying performance obligations and allocating transaction price, which did not have a material effect on the adjustment to retained earnings. The reported results for 2018 reflect the application of ASC 606 guidance while the reported results for 2017 were prepared under the guidance of ASC 605, *Revenue Recognition* ("ASC 605"), which is also referred to herein as "legacy GAAP" or the "previous guidance." In accordance with ASC 606, revenue is recognized when a customer obtains control of promised goods or services. The amount of revenue recognized reflects the consideration to which the Company expects to be entitled to receive in exchange for these services. To achieve this core principle, the Company applies the following five steps:

1. **Identify the contract with a customer.** A contract with a customer exists when (i) the Company enters into an enforceable contract with a customer that defines each party's rights regarding the services to be transferred and identifies the payment terms related to these services, (ii) the contract has commercial substance and, (iii) the Company determines that collection of substantially all consideration for services that are transferred is probable based on the customer's intent and ability to pay the promised consideration. The Company applies judgment in determining the customer's ability and intention to pay, which is based on a variety of factors including the customer's historical payment experience or, in the case of a new customer, published credit and financial information pertaining to the customer.

2. **Identify the performance obligations in the contract.** Performance obligations promised in a contract are identified based on the goods or services that will be transferred to the customer that are both capable of being distinct, whereby the customer can benefit from the service either on its own or together with other resources that are readily available from third parties or from the Company, and are distinct in the context of the contract, whereby the transfer of the services is separately identifiable from other promises in the contract. To the extent a contract includes multiple promised services, the Company must apply judgment to determine whether promised services are capable of being distinct and are distinct in the context of the contract. If these criteria are not met, the promised services are accounted for as a combined performance obligation.

3. **Determine the transaction price.** The transaction price is determined based on the consideration to which the Company will be entitled in exchange for transferring goods and services to the customer. To the extent the transaction price includes variable consideration, the Company estimates the amount of variable consideration that should be included in the transaction price utilizing either the expected value method or the most likely amount method depending on the nature of the variable consideration. Variable consideration is included in the transaction price if, in the Company's judgment, it is probable that a significant future reversal of cumulative revenue under the contract will not occur.

4. **Allocate the transaction price to performance obligations in the contract** If the contract contains a single performance obligation, the entire transaction price is allocated to the single performance obligation. However, if a series of distinct services that are substantially the same qualifies as a single performance obligation in a contract with variable consideration, the Company must determine if the variable consideration is attributable to the entire contract or to a specific part of the contract. Contracts that contain multiple performance obligations require an allocation of the transaction price to each performance obligation based on a relative standalone selling price basis unless the transaction price is variable and meets the criteria to be allocated entirely to a performance obligation or to a distinct service that forms part of a single performance obligation. The Company determines standalone selling prices based on the price at which the performance obligation is sold separately. If the standalone selling price is not observable through past transactions, the Company estimates the standalone selling price taking into account available information such as market conditions and internally approved pricing guidelines related to the performance obligations.

5. **Recognize revenue when or as the Company satisfies a performance obligation** The Company satisfies performance obligations either over time or at a point in time as discussed in further detail below. Revenue is recognized at the time the related performance obligation is satisfied by transferring a promised good or service to a customer.

Description of revenue recognition policies

Issuer Solutions

Issuer Solutions revenues typically include a performance obligation to provide processing services to financial andnon-financial institutions. The Company has determined that these processing services represent a stand-ready series of distinct daily services that are substantially the same, with the same pattern of transfer to the customer. In many cases, Issuer Solutions arrangements may include additional performance obligations relating to loyalty redemption services and other professional services. Similar to processing services, the Company has determined that loyalty redemption services represent a stand-ready series of distinct daily services that are substantially the same, with the same pattern of transfer to the customer. Professional services represent performance obligations that are satisfied over time.

The Company has determined that the vast majority of performance obligations to provide processing services and loyalty redemption services meet the allocation of variable consideration exception criteria ("direct allocation") in that (a) the terms of a variable payment relate specifically to the entity's efforts to satisfy the performance obligation or transfer the distinct service and (b) allocating the variable amount of consideration entirely to the performance obligation or the distinct good or service is consistent with the allocation objective when considering all of the performance obligations and payment terms in the contract. As a result, for those performance obligations qualifying for direct allocation, the Company allocates and recognizes variable consideration in the period in which it has the contractual right to invoice the customer. In certain instances when a performance obligation does not meet the criteria for direct allocation, the Company recognizes revenue on either a straight-line basis or a blended rate method (i.e., an output method using the estimated per transaction fee based on estimated total contract consideration and volumes, multiplied by the actual monthly transaction volumes) over the term of the contract. A blended rate method is utilized for contracts that have estimates of significant growth over the contract term. The Company determined that straight-line or blended rate are the most appropriate methods of measuring progress toward completion for performance obligations that do not meet the criteria for direct allocation.

For professional services, the Company recognizes revenue based on the labor hours incurred for time and materials projects or on a straight-line basis for fixed fee projects.

For Issuer Solutions contracts that contain multiple performance obligations, the transaction price is allocated to each performance obligation based on a relative standalone selling price basis unless the transaction price is variable and meets the criteria to be allocated entirely to a performance obligation or to a distinct service that forms part of a single performance obligation.

The Issuer Solutions segment also enters into licensing arrangements with customers. Under these arrangements, the Company provides the customer with a term license ("functional IP"), implementation services and annual support, which includes unspecified upgrades and enhancements. The Company has determined that these promised goods and services represent one combined performance obligation since the individual promised goods or services are not distinct in the context of the contract. The Company recognizes revenue over the remaining contract period beginning at go-live, on a straight-line basis, for this performance obligation. Revenues related to this combined performance obligation are immaterial. For separate performance obligations relating to professional services, revenue is recognized using an input method based on labor hours expended.

Merchant Solutions

Merchant Solutions revenues typically include one performance obligation to provide processing services to individual merchants, large financial institutions, other merchant acquirers or merchant organizations. The Company has determined that merchant processing services represent a stand-ready series of distinct daily services that are substantially the same, with the same pattern of transfer to the customer. Merchant Solutions arrangements also include other promised goods or services (such as point-of-sale terminals and merchant statement services) that are immaterial in the context of the contract. As a result, the Company has determined that Merchant Solutions arrangements represent one performance obligation.

The Company has determined that the performance obligation to provide merchant processing services meets the allocation of variable consideration exception criteria ("direct allocation") in that (a) the terms of a variable payment relate specifically to the entity's efforts to satisfy the performance obligation or transfer the distinct service and (b) allocating the variable amount of consideration entirely to the performance obligation or the distinct good or service is consistent with the allocation objective when considering all of the performance obligations and payment terms in the contract. As a result, the Company allocates and recognizes variable consideration in the period it has the contractual right to invoice the customer.

Interchange and payment network fees

Interchange and payment network fees are charged by the card associations or payment networks and relate primarily to the Company's Merchant Solutions segment. With respect to interchange and payment network fees, the Company evaluated whether it is the principal or the agent in the arrangement. With the adoption of ASC 606, the Company determined that interchange and payment network fees are not provided in return or exchange for services that the Company controls or acts as the principal, and, therefore, are not part of the consideration paid for its services. Accordingly, the Company is acting as an agent and presents the fees collected from merchants on behalf of the payment networks and card issuers net of the amounts paid to them. In reaching this determination, the Company considered a number of factors including indicators of control such as the party primarily responsible and the party who has discretion in establishing prices.

Consumer Solutions

Consumer Solutions revenues include one performance obligation to provide account access and facilitate purchase transactions, as well as interchange fees. The Company has determined that Consumer Solutions services represent a stand-ready series of distinct daily services that are substantially the same, with the same pattern of transfer to the customer. Further, the Company has determined that the performance obligation to provide account access and facilitate purchase transactions meets the criteria for the "as invoiced" practical expedient in that the Company has a right to consideration from a customer in an amount that corresponds directly with the value to the customer of the Company's performance completed to date. As a result, the Company recognizes revenue in the amount to which the Company has a right to invoice.

Reimbursable Items

Reimbursable items consist of out-of-pocket expenses which are reimbursed by the Company's clients. These expenses consist primarily of postage, gift cards and third-party software. Reimbursable items are recorded on a gross basis in total revenues and cost of services.

Costs to obtain or fulfill a contract

The Company capitalizes the incremental costs of obtaining a contract with a customer if the Company expects to recover those costs. The incremental costs of obtaining a contract are those that the Company incurs to obtain a contract with a customer that it would not have incurred if the contract had not been obtained (for example, a sales commission). The Company also makes commission payments to third parties such as agents and partners. To date, costs to obtain a contract that qualify for capitalization are immaterial.

The Company capitalizes the costs incurred to fulfill a contract only if those costs meet all of the following criteria:

a. The costs relate directly to a contract or to an anticipated contract that the Company can specifically identify.

b. The costs generate or enhance resources of the Company that will be used in satisfying (or in continuing to satisfy) performance obligations in the future.

c. The costs are expected to be recovered.

See related discussion of contract cost assets in Note 10.

Contract acquisition and fulfillment costs are amortized using the straight-line method over the expected period of benefit (ranging from 20 months to seven years or the longer of the contract term) beginning when the client's cardholder accounts are converted or activated and producing revenues. The amortization of contract fulfillment costs associated with conversion activity is recorded as cost of services in the Company's Consolidated Statements of Income. The amortization of contract acquisition costs associated with sales commissions that qualify for capitalization is recorded as selling, general and administrative expense in the Company's Consolidated Statements of Income. Costs to obtain or fulfill a contract are classified as contract cost assets in the Company's Consolidated Balance Sheets.

In evaluating contract acquisition and fulfillment costs for recoverability, expected cash flows are estimated by management should events indicate a loss may have been triggered. The Company evaluates the carrying value of contract cost assets associated with each customer for impairment on the basis of whether these costs are fully recoverable from either contractual minimum fees or from expected undiscounted net operating cash flows of the related contract. The determination of expected undiscounted net operating cash flows requires management to make estimates. If the actual cash flows are not consistent with the Company's estimates, a material impairment charge may result and net income may be materially different than was initially recorded. These costs may become impaired with the loss of a contract, the financial decline of a client, termination of conversion efforts after a contract is signed, diminished prospects for current clients or if the Company's actual results differ from its estimates of future cash flows. The amount of the impairment is written off in the period that such a determination is made.

Optional exemptions, practical expedients and policy elections

The Company has elected to treat shipping and handling activities as a cost of fulfillment rather than a separate performance obligation.

The Company has elected to exclude all sales and other similar taxes from the transaction price. Accordingly, the Company presents all collections from customers for these taxes on a net basis, rather than having to assess whether the Company is acting as an agent or a principal in each taxing jurisdiction.

The Company utilizes a portfolio approach in order to estimate amounts for service level agreement penalties and similar items for portfolios of contracts with similar characteristics, using estimates and assumptions that reflect the size and composition of the portfolio.

As a practical expedient, the Company is not required to adjust the promised amount of consideration for the effects of a significant financing component if the Company expects, at contract inception, that the period between when the Company transfers a promised good or service to a customer and when the customer pays for that good or service will be one year or less. None of the Company's contracts as of December 31, 2018 contained a significant financing component.

The Company has elected to use the"as-invoiced" practical expedient for its performance obligations to provide account access and facilitate purchase transactions related to the Consumer Solutions segment.

The Company does not disclose the value of unsatisfied performance obligations (except for contractual minimums) for which revenue is recognized using (i) the "as-invoiced" practical expedient and (ii) the "direct allocation" method.

The Company adopted ASC 606 as of January 1, 2018 using the modified retrospective method for all contracts not completed as of the date of adoption.

Revenue recognition for periods prior to the Company's adoption of ASC 606 as of January 1, 2018

Revenue was recognized when it was realized or realizable and earned, which was deemed to occur when all of the following criteria were met: (1) persuasive evidence of an arrangement existed; (2) delivery had occurred or services had been performed; (3) the seller's price to the buyer was fixed or determinable; and (4) collectability was reasonably assured. The Company accrued for rights of refund, processing errors or penalties, or other related allowances based on historical experience.

Issuer Solutions

Revenue was recognized as the services were performed, primarily on a per unit basis. Processing contracts generally ranged from three to ten years in length. When providing payment processing services, the Company frequently entered into customer arrangements to provide multiple services that may have also included conversion or implementation services, business process outsourcing services such as call center services, web-based services, and other payment processing-related services. The revenue contracts can be highly complex and customized between customers. Revenue for these services was generally recognized as they were performed on a per unit basis each month or ratably over the term of the contract.

Merchant Solutions

Revenue was recognized for merchant services as those services were performed, primarily measured on a per unit basis. When providing merchant processing services, the Company frequently entered into customer arrangements to provide multiple services that may have also included conversion or implementation services, business process outsourcing services such as call center services, terminal services, and other merchant processing-related services. Revenue for these services was generally recognized as they were performed on a per unit basis each month or ratably over the term of the contract. Revenues on point-of-sale ("POS") terminal equipment were recognized upon the transfer of ownership and shipment of product.

With the acquisition of TransFirst Holdings Corp. ("TransFirst") on April 1, 2016, TSYS included TransFirst's results as part of the Merchant Solutions segment. TransFirst's revenues were reported gross, which includes amounts paid for interchange and assessments, as TransFirst is the principal in the contractual relationship with its customers. Expenses covering interchange and payment network fees were included in TransFirst's cost of services and were directly attributable to processing fee revenues and were recognized in the same period as the related revenue.

Consumer Solutions

Revenue resulting from the service fees charged to the cardholders was recognized when the fees were charged because the earnings process was substantially complete, except for revenue resulting from the initial activation of cards and annual subscription fees. Revenue resulting from the initial activation of cards was recognized ratably, net of commissions paid to distributors, over the average account life. Revenue resulting from annual subscription fees was recognized ratably over the annual period to which the fees related.

Revenues also included fees charged in connection with program management and processing services the Company provided for private-label programs. Revenue resulting from these fees was recognized when the Company had fulfilled its obligations under the underlying service agreements.

The Company derives revenue from a portion of the interchange fees remitted by merchants when cardholders make purchases using their cards. Subject to applicable law, interchange fees are fixed by the card associations and network organizations ("Networks"). Interchange revenue was recognized net of sponsorship, licensing and processing fees charged by the Networks for services they provided in processing purchase transactions routed through them. Interchange revenue was recognized during the period that the purchase transactions occurred. Revenues also included fees earned from branding agreements with the Networks.

Multiple Element Arrangements

When a sale involved multiple deliverables, revenue recognition was affected by the determination of the number of deliverables in an arrangement, whether those deliverables may be separated into multiple units of accounting, and the standalone selling price of each unit of accounting which affected the amount of revenue allocated to each unit. Pursuant to ASC 605, the Company used vendor-specific objective evidence (“VSOE”) of the standalone selling price of its services when it existed to determine the amount of revenue to allocate to each unit of accounting. The Company established VSOE using the price charged when the same service was sold separately (on a standalone basis). In most situations, the Company did not have sufficient VSOE. In these situations, TSYS considered whether sufficient third party evidence (“TPE”) of standalone selling price existed for the Company’s services. However, the Company typically was not able to determine TPE and had not used this measure of selling price due to the unique and proprietary nature of some of its services and the inability to reliably verify relevant standalone third party prices. When there was insufficient evidence of VSOE and TPE, the Company made its best estimate of the standalone selling price (“ESSP”) of that service for purposes of allocating revenue to each unit of accounting. When determining ESSP, TSYS used limited standalone sales data that met the Company’s criteria to establish VSOE, management pricing strategies, residual selling price data when VSOE exists for a group of elements, the cost of providing the services and the related margin objectives. Consideration was also given to geographies in which the services were sold or delivered, customer classifications, and market conditions including competitor pricing strategies and benchmarking studies. Revenue was recognized when the revenue recognition criteria for each unit of accounting had been met.

There were no material changes or impact to revenue for current contractual arrangements during the years ended December 31, 2017 and 2016 due to any changes in the determination of the number of deliverables in an arrangement, units of accounting, or estimates of VSOE or ESSP.

In many situations, the Company entered into arrangements with customers to provide conversion or implementation services in addition to processing services where the conversion or implementation services did not have standalone value. For these arrangements, conversion or implementation services that did not have standalone value, were recognized over the expected customer relationship (contract term) as the related processing services were performed.

The Company’s multiple element arrangements may have included one or more elements that were subject to other topics including software revenue recognition and leasing guidance. The consideration for these multiple element arrangements was allocated to each group of deliverables – those subject to ASC 605-25 *Revenue Recognition – Multiple-Element Arrangements* and those subject to other topics based on the revised guidance in ASU 2009-13 *Revenue Recognition (Topic 605)*. Arrangement revenue for each group of deliverables was then further separated, allocated, and recognized based on applicable guidance.

In regards to taxes assessed by a governmental authority imposed directly on a revenue producing transaction, the Company reports its revenues on a net basis.

Reimbursable Items

Reimbursable items consisted of out-of-pocket expenses which were reimbursed by the Company’s clients. These expenses consisted primarily of postage, access fees and third-party software. Reimbursable items were recorded on a gross basis in total revenues and cost of services.

SHARE-BASED COMPENSATION: GAAP establishes standards for the accounting for transactions in which an entity exchanges its equity instruments for goods or services. It also addresses transactions in which an entity incurs liabilities in exchange for goods or services that are based on the fair value of the entity’s equity instruments or that may be settled by the issuance of those equity instruments. A public entity must measure the cost of employee services received in exchange for an award of equity instruments based on the grant-date fair value of the award (with limited exceptions). That cost will be recognized over the period during which an employee is required to provide service in exchange for the award.

The Company estimates forfeitures when recognizing compensation cost. The estimate of forfeitures will be adjusted by the Company as actual forfeitures differ from its estimates, resulting in compensation cost only for those awards that actually vest. The effect of the change in estimated forfeitures is recognized as compensation costs in the period the change in estimate occurred. In estimating its forfeiture rate, the Company stratified its data based upon historical experience to determine separate forfeiture rates for the different award grants.

The Company currently estimates a forfeiture rate for existing stock option grants to TSYS non-executive employees, and other TSYS share-based awards. Currently, TSYS estimates a forfeiture rate in the range of 0% to 3% for executive level employees and up to 8% for other employees. The Company has issued its vested awards to directors and nonvested awards to certain employees. The market value of the common stock at the date of issuance is recognized as compensation expense immediately for vested awards and over the vesting period of the nonvested awards. For nonvested award grants that have pro rata vesting, the Company recognizes compensation expense using the straight-line method over the vesting period of the award.

ADVERTISING: Advertising costs are expensed as incurred or the first time the advertising takes place except for direct-response advertising and television advertising production costs. Direct-response advertising consists of commissions paid to affiliate marketers for the new funded customer accounts generated by them. Direct-response advertising costs are capitalized and amortized over the average life of the new accounts, which is approximately one year. Television advertising production costs consist of the costs of developing and filming television ads. Television advertising production costs are capitalized when the production services are received and expensed in the period when the advertising first takes place. Advertising expense for 2018, 2017 and 2016 was $12.4 million, $13.2 million and $11.5 million, respectively.

NONCONTROLLING INTEREST: Noncontrolling interest in earnings of subsidiaries represents the minority shareholders' share of the net income of Central Payment Co., LLC ("CPAY"). Refer to Note 23 for more information on acquisitions.

EARNINGS PER SHARE: Basic EPS is calculated by dividing net income by the weighted average number of common shares outstanding during the period. Diluted EPS is calculated to reflect the potential dilution that would occur if stock options or other contracts to issue common stock were exercised. Diluted EPS is calculated by dividing net income by weighted average common and common equivalent shares outstanding. Common equivalent shares are calculated using the treasury stock method.

Unvested share-based payment awards that contain nonforfeitable rights to dividends or dividend equivalents are "participating securities" as defined by GAAP, and therefore should be included in EPS using the two-class method. The two-class method is an earnings allocation method for computing EPS when an entity's capital structure includes two or more classes of common stock or common stock and participating securities. It determines EPS based on dividends declared on common stock and participating securities and participation rights of participating securities in any undistributed earnings.

RECLASSIFICATIONS: The Company had restricted cash of $1.0 million and $0.5 million as of December 31, 2017 and 2016. Upon the Company's adoption of ASU 2016-18 on January 1, 2018, the Company reclassified the change in its restricted cash to cash, cash equivalents and restricted cash on the Consolidated Statements of Cash Flows for all periods presented.

Recently Adopted Accounting Pronouncements

The Company adopted the following ASUs:

In March 2018, the FASB issued ASU 2018-05 *Income Taxes (Topic 740) - Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin No. 118*. This ASU adds SEC paragraphs pursuant to the SEC Staff Accounting Bulletin No. 118, which expresses the view of the staff regarding application of Topic 740, *Income Taxes*, in the reporting period that includes December 22, 2017 - the date on which the Tax Cuts and Jobs Act was signed into law. The Company adopted the provisions of SEC Staff Accounting Bulletin No. 118 as of December 22, 2017. See Note 14 for further discussion regarding income taxes.

In February 2018, the FASB issued ASU2018-02 *Income Statement – Reporting Comprehensive Income (Topic 220) Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*. ASU 2018-02 allows a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act. Consequently, the amendments in this ASU eliminate the stranded tax effects resulting from the Tax Cuts and Jobs Act and will improve the usefulness of information reported to financial statement users. The amendments in this ASU are effective for all entities for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. Early adoption of the amendments in this ASU is permitted. The amendments in this ASU should be applied either in the period of adoption or retrospectively to each period (or periods) in which the effect of the change in the U.S. federal corporate income tax rate in the Tax Cuts and Jobs Act is recognized. The ASU was early adopted by the Company as of July 1, 2018 and the Company recorded a balance sheet reclassification of $2.3 million between accumulated other comprehensive loss and retained earnings.

In May 2017, the Financial Accounting Standards Board ("FASB") issued ASU2017-09 *Compensation – Stock Compensation (Topic 718), Scope of Modification Accounting*, to provide guidance about which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting in Topic 718. An entity should account for the effects of a modification unless all the following are met:

1. The fair value (or calculated value or intrinsic value, if such an alternative measurement method is used) of the modified award is the same as the fair value (or calculated value or intrinsic value, if such an alternative measurement method is used) of the original award immediately before the original award is modified. If the modification does not affect any of the inputs to the valuation technique that the entity uses to value the award, the entity is not required to estimate the value immediately before and after the modification.
2. The vesting conditions of the modified award are the same as the vesting conditions of the original award immediately before the original award is modified.
3. The classification of the modified award as an equity instrument or a liability instrument is the same as the classification of the original award immediately before the original award is modified.

The ASU was adopted by the Company on January 1, 2018. The adoption of this ASU did not have a material impact on the Company's financial position, results of operations or cash flows.

In January 2017, the FASB issued ASU2017-01 *Business Combinations (Topic 805)*, *Clarifying the Definition of a Business*, which provides a more robust framework to use in determining when a set of assets and activities is a business. The framework assists entities in evaluating whether both an input and a substantive process are present. The framework includes two sets of criteria to consider that depend on whether a set of assets and activities has outputs. Although outputs are not required for a set to be a business, outputs generally are a key element of a business; therefore, the FASB has developed more stringent criteria for sets without outputs. The ASU was adopted by the Company on January 1, 2018. The adoption of this ASU did not have a material impact on the Company's financial position, results of operations or cash flows.

In November 2016, the FASB issued ASU2016-18 *Statement of Cash Flows (Topic 230): Restricted Cash*, which requires that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. The Company adopted this guidance on January 1, 2018 and has applied the guidance using a retrospective transition method for all periods presented.

In October 2016, the FASB issued ASU2016-16 *Income Taxes (Topic 740): Intra-Equity Transfers of Assets Other Than Inventory*, which requires that an entity should recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs and eliminates the exception for an intra-entity transfer of an asset other than inventory. The ASU was adopted by the Company on January 1, 2018. The adoption of this ASU did not have a material impact on the Company's financial position, results of operations or cash flows.

In August 2016, the FASB issued ASU2016-15 *Statement of Cash Flows (Topic 230): Classification of Certain Receipts and Cash Payments*, which clarifies how entities should classify certain cash receipts and cash payments on the statement of cash flows. The guidance also clarifies how the predominance principle should be applied when cash receipts and cash payments have aspects of more than one class of cash flow. The ASU was adopted by the Company on January 1, 2018. The adoption of this ASU did not have a material impact on the Company's financial position, results of operations or cash flows.

In January 2016, the FASB issued ASU2016-01 *Recognition and Measurement of Financial Assets and Financial Liabilities*, which amends the guidance in U.S. GAAP on the classification and measurement of financial instruments. The ASU significantly revises an entity's accounting related to (1) the classification and measurement of investments in equity securities and (2) the presentation of certain fair value changes for financial liabilities measured at fair value. The ASU also amends certain disclosure requirements associated with the fair value of financial instruments. The ASU was adopted by the Company on January 1, 2018. The adoption of this ASU did not have a material impact on the Company's financial position, results of operations or cash flows.

In May 2014, the FASB issued ASU2014-09 *Revenue from Contracts with Customers (Topic 606)*, which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. The ASU replaces most existing revenue recognition guidance in U.S. GAAP when it becomes effective. The FASB has issued several additional ASUs since this time that add additional clarification to certain issues existing after the original ASU was released. All of the new standards were effective for the Company on January 1, 2018. The standards permit the use of either the full retrospective or modified retrospective transition method. TSYS adopted the new revenue standard as of January 1, 2018 using the modified retrospective transition method. See Notes 1 and 2 for further discussion of the Company's adoption of this new standard.

New Accounting Pronouncements

In November 2018, the FASB issued ASU2018-18 *Collaborative Arrangements (Topic 808), Clarifying the Interaction between Topic 808 and Topic 606*. The amendments in this update make targeted improvements to GAAP for collaborative arrangements as follows:

1. Clarify that certain transactions between collaborative arrangement participants should be accounted for as revenue under Topic 606 when the collaborative arrangement participant is a customer in the context of a unit of account. In those situations, all the guidance in Topic 606 should be applied, including recognition, measurement, presentation, and disclosure requirements.
2. Add unit of account guidance in Topic 808 to align with the guidance in Topic 606 (that is, a distinct good or service) when an entity is assessing whether the collaborative arrangement or a part of the arrangement is within the scope of Topic 606.
3. Require that in a transaction with a collaborative arrangement participant that is not directly related to sales to third parties, presenting the transaction together with revenue recognized under Topic 606 is precluded if the collaborative arrangement participant is not a customer.

The ASU is effective for the Company on January 1, 2020. Early adoption of the ASU is permitted. The Company is evaluating the effects of ASU 2018-18 on its consolidated financial statements.

In August 2018, the FASB issued ASU2018-15 *Intangibles-Goodwill and Other-Internal-Use Software (Subtopic 350-40), Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract*. The amendments in this update align the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software (and hosting arrangements that include aninternal-use software license). The ASU is effective for the Company on January 1, 2020. Early adoption of the ASU is permitted. The Company is evaluating the effects of ASU 2018-15 on its consolidated financial statements.

In August 2018, the FASB issued ASU 2018-13 *Fair Value Measurement (Topic 820), Disclosure Framework-Changes to the Disclosure Requirements for Fair Value Measurement*. The FASB is issuing the amendments in this update in connection with the FASB Statement of Financial Accounting Concepts No. 8, *Conceptual Framework for Financial Reporting-Chapter 8: Notes to Financial Statements*, which was finalized in August 2018. The amendments in this update modify the disclosure requirements on fair value measurement in Topic 820, *Fair Value Measurement*, by removing, modifying or adding disclosures. The ASU is effective for the Company on January 1, 2020. Early adoption of the ASU is permitted. The Company is evaluating the effects of ASU 2018-13 on its consolidated financial statements.

In September 2017, the FASB issued ASU 2017-13 *Revenue Recognition (Topic 605), Revenues from Customers (Topic 606), Leases (Topic 840) and Leases (Topic 842)*, which made amendments to SEC paragraphs pursuant to the Staff Announcement at the July 20, 2017 Emerging Issues Task Force ("EITF") Meeting and rescission of prior SEC Staff Announcements and Observer comments. This guidance, which is effective immediately, generally relates to the adoption of ASC 606 and 842. The adoption of the amendments in this ASU relating to ASC 606 did not have a material impact on the Company's financial position, results of operations or cash flows. The Company does not expect the adoption of the amendments in this ASU relating to ASC 842 to have a material impact on the Company's financial position, results of operations or cash flows.

In June 2016, the FASB issued ASU 2016-13 *Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*. The amendments in this update change how companies measure and recognize credit impairment for many financial assets. The new expected credit loss model will require companies to immediately recognize an estimate of credit losses expected to occur over the remaining life of the financial assets (including trade receivables) that are in the scope of the update. The update also made amendments to the current impairment model for held-to-maturity and available-for-sale debt securities and certain guarantees. The ASU is effective for the Company on January 1, 2020. Early adoption is permitted for periods beginning on or after January 1, 2019. The Company is evaluating the effect of ASU 2016-13 on its consolidated financial statements.

Recent Accounting Pronouncements Related to Leases

In February 2016, the FASB issued ASU 2016-02 Leases (Topic 842), which introduces a lessee model that brings most operating leases on the balance sheet and aligns many of the underlying principles of the new lessor model with those in the FASB's new revenue recognition standard. The new guidance will be effective for fiscal years and interim periods within those years beginning after December 15, 2018. Early adoption is permitted for all entities.

The FASB has issued several additional ASUs that provide additional clarification to certain issues existing after ASU 2016-02 was released. In December 2018, the FASB issued ASU 2018-20 Leases *(Topic 842)*, *Narrow-Scope Improvements for Lessors*. The amendments in this update create a lessor practical expedient applicable to sales and other similar taxes incurred in connection with a lease, and simplify lessor accounting for lessor costs paid by the lessee. In July 2018, the FASB issued ASU 2018-11 Leases *(Topic 842): Targeted Improvements* to provide entities with an additional (and optional) transition method to adopt the new leases standard and provide lessors with a practical expedient, by class of underlying asset, to not separate non-lease components from the associated lease component and, instead, to account for those components as a single component if certain criteria are met. Also in July 2018, the FASB issued ASU 2018-10 *Codification Improvements to Topic 842* to make amendments addressing sixteen issues related to various aspects of ASU 2016-02. The effective date and transition requirements for the amendments in ASU 2018-20, ASU 2018-11 and ASU 2018-10 are the same as the effective date and transition requirements in ASU 2016-02.

The Company adopted ASU 2016-02 on January 1, 2019 using the additional transition method (cumulative effect method) provided by ASU 2018-11. The Company has elected to utilize the following practical expedients and accounting policy elections:

- The Company, electing as a package, will not reassess: (a) whether expired or existing contracts contain leases under the new definition of a lease, (b) lease classification for expired or existing leases, and (c) whether previously capitalized initial direct costs would qualify for capitalization under ASU 2016-02.

- The Company will not evaluate land easements that exist or expired before the Company's adoption of ASU 2016-02 and that were not previously accounted for as leases.
- From a lessee perspective, the Company has elected to combine lease and non-lease components for all classes of assets except for computer equipment. Accordingly, for all asset classes excluding computer equipment, the Company will account for the combined lease and non-lease components as a single lease component. For computer equipment, the Company will account for lease and non-lease components, such as maintenance, separately.
- From a lessee perspective, the Company has elected, as an accounting policy election by class of underlying asset, not to recognize Right-of-Use ("ROU") assets and lease liabilities for short-term leases.
- From a lessor perspective, the Company has elected to utilize the practical expedient in ASU 2018-11 to not separate non-lease components from the associated lease component for arrangements including point-of-sale ("POS") terminals. Since the predominant component in these arrangements is service revenue and not the POS terminal, the combined components in these arrangements will be accounted for under ASC 606 and not ASC 842.
- The Company will utilize incremental borrowing rates in transition (as of January 1, 2019) based on the remaining lease payments and remaining lease term.

The Company decided not to elect the use of hindsight in determining the lease term and in assessing impairment of the Company's ROU assets.

The Company formed a cross-functional project team to evaluate the requirements of the new leases standard from both a lessee and lessor perspective, and to monitor ongoing standard setting activities of the FASB. The Company is reviewing its lease contracts under the new standard to identify and evaluate differences from current guidance. From a lessee standpoint, the Company's leases primarily involve computer equipment and facilities. From a lessor perspective, the Company's leases primarily involve POS terminals.

While the Company is continuing to evaluate the effects of this ASU, the Company expects to record material ROU assets and lease liabilities on its consolidated balance sheet upon adoption as of January 1, 2019. Upon adoption, the Company expects to record ROU assets of approximately $195 million and additional operating liabilities of approximately $190 million for existing operating leases. Also as part of the initial adoption, the Company wrote off the carrying value of favorable lease intangible assets of $2.1 million and increased the ROU assets by the same amount. The cumulative effect adjustment expected to be recorded to opening retained earnings is not material. The Company does not expect the adoption of this ASU to have a material impact on its results of operations or cash flows. The adoption of this guidance will require the implementation of new or updated accounting processes, procedures and internal controls over financial reporting. The Company implemented a new lease accounting software solution in 2019 to facilitate compliance with the requirements of the new standard. The new standard also requires expanded qualitative and quantitative disclosures regarding the Company's leases.

Note 2: Revenue from Contracts with Customers

Description of service offerings

Issuer Solutions

The Company's Issuer Solutions revenues are derived from long-term processing contracts with financial and nonfinancial institutions. Payment processing services revenues are generated primarily from charges based on:

- The number of accounts on file;
- Transactions and authorizations processed;

- Statements generated and/or mailed;
- Managed services; and
- Cards embossed and mailed and other processing services for cardholder accounts on file.

Most of these contracts have prescribed annual revenue minimums, penalties for early termination, and service level agreements which may impact contractual fees if certain service levels are not achieved.

Issuer Solutions revenues also include loyalty redemption services and professional services.

Merchant Solutions

The Company's Merchant Solutions revenues are partially derived from relationships with thousands of individual merchants whose contracts range from thirty days to five years. Additionally, part of the revenues are derived from long-term processing contracts with large financial institutions, other merchant acquirers and merchant organizations which generally range from three to eight years. Merchant services revenue is generated primarily from processing all payment forms including credit, debit and electronic benefits transfer for merchants of all sizes across a wide array of retail market segments.

The products and services offered include:

- Authorizations and capture of electronic transactions;
- Clearing and settlement of electronic transactions;
- Information reporting services related to electronic transactions;
- Merchant billing services; and
- Point-of-sale equipment and services.

Most of these contracts have prescribed revenue minimums, penalties for early termination, and service level agreements which may impact contractual fees if certain service levels are not achieved.

Consumer Solutions

The Company's Consumer Solutions revenues principally consist of a portion of the service fees collected from cardholders and interchange revenues received by the issuing banks in connection with the programs that the Consumer Solutions segment manages.

Customers are charged fees in connection with the Consumer Solutions segment's products and services as follows:

- Transactions – Customers are typically charged a fee for each Personal Identification Number ("PIN") and signature-based purchase transaction made using their cards, unless the customer is on a monthly or annual service plan, in which case the customer is instead charged a monthly or annual subscription fee, as applicable. Customers are also charged fees for Automated Teller Machine ("ATM") withdrawals and other transactions conducted at ATMs.
- Customer Service and Maintenance – Customers are typically charged fees for balance inquiries made through Consumer Solutions call centers. Customers are also charged a monthly maintenance fee after a specified period of inactivity.

- Additional Products and Services – Customers are charged fees associated with additional products and services offered in connection with certain cards, including the use of overdraft features, a variety of bill payment options, card replacement, foreign exchange and card-to-card transfers of funds initiated through the call centers.
- Other – Customers are charged fees in connection with the acquisition and reloading of the cards at retailers and the Company receives a portion of these amounts in some cases.

Disaggregation of revenue

The following table summarizes volume-based and non-volume related revenue from contracts with external customers for the year ended December 31, 2018:

	Year Ended December 31, 2018			
(in thousands)	**Issuer Solutions**	**Merchant Solutions**	**Consumer Solutions**	**Total**
Volume-based revenues	$ 903,831	1,268,151	804,231	$ 2,976,213
Non-volume related revenues	964,474	85,468	2,056	1,051,998
Total revenues	$ 1,868,305	1,353,619	806,287	$ 4,028,211

Issuer Solutions

Volume-based revenues are generated from charges based on the number of Accounts on File (“AOF”), transactions and authorizations processed, statements generated, and other processing services for cardholder AOF. Cardholder AOF includes active and inactive consumer credit, retail, prepaid, stored value, government services and commercial card accounts. TSYS’ clients also have the option to use fraud and portfolio management services which are based on authorizations processed and AOF, respectively. Collectively, these services are considered volume-based revenues. Non-volume related revenues include processing fees which are not directly associated with AOF and transactional activity, such as value-added products and services, custom programming and certain other services, which are only offered to TSYS’ processing clients. Additionally, non-volume based revenues include licensing, managed services and output services such as card and document production.

Merchant Solutions

The Merchant Solutions segment’s revenues primarily consist of volume-based revenues generated from charges based on sales volume processed, and authorized transactions and settled transactions processed. Non-volume related revenues include chargeback and retrieval services, data transmissions, value-added products and managed services which are not directly associated with transactional activity.

Consumer Solutions

The Consumer Solutions segment’s revenues primarily consist of volume-based revenues generated from a portion of the service fees collected from cardholders and interchange revenues. Non-volume related revenues include value-added products and services which are not directly associated with transactional activity.

The following table summarizes revenue from contracts with customers, by currency, for the year ended December 31, 2018:

	Year Ended December 31, 2018			
(in thousands)	**Issuer Solutions**	**Merchant Solutions**	**Consumer Solutions**	**Total**
U.S. Dollar	$ 1,482,772	1,352,852	806,287	$ 3,641,911
British Pound Sterling	253,185	—	—	253,185
Euro	103,785	—	—	103,785
Other	28,563	767	—	29,330
Total revenues	$ 1,868,305	1,353,619	806,287	$ 4,028,211

See Note 21 for disclosure of revenues by geography.

Performance obligations

The following table includes estimated revenue expected to be recognized in the future related to performance obligations that are unsatisfied or partially unsatisfied at the end of the reporting period. The purpose of this disclosure is to provide additional information about the amounts and expected timing of revenue to be recognized from the remaining performance obligations in the Company's existing contracts. For revenue which is recognized using (i) the "as-invoiced" practical expedient and (ii) the "direct allocation" method, the Company is required to disclose the value of unsatisfied performance obligations for contractual minimums only. Accordingly, the total unsatisfied or partially unsatisfied performance obligations related to processing services are materially higher than the amounts disclosed in the below table.

(in thousands)	2019	2020	2021	2022 - 2029	Total
Unsatisfied or partially unsatisfied performance obligations	$693,978	602,463	505,287	799,026	$2,600,754

Contract balances

The following table provides information about accounts receivable, contract assets and contract liabilities from contracts with customers:

(in thousands)	As of December 31, 2018	As of January 1, 2018
Accounts receivable	$ 450,322	$ 412,322
Contract assets (short-term and long-term)	78,789	87,812
Contract liabilities (short-term and long-term)	68,716	76,541

Contract assets are defined as an entity's right to consideration in exchange for goods or services that the entity has transferred to a customer when that right is conditioned on something other than the passage of time (for example, the entity's future performance).

Contract liabilities are defined as an entity's obligation to transfer goods or services to a customer for which the entity has received consideration (or the amount is due) from the customer. Contract liabilities as of December 31, 2017 were previously described as deferred revenues.

Net contract assets and liabilities may include amounts related to signing incentives for signing or renewing long-term contracts. Capitalized signing incentives are amortized over the contract term and the amortization is included as a reduction of revenues in the Company's Consolidated Statements of Income.

ASC 606 requires an entity to present in its consolidated balance sheets the net position in a customer contract on acontract-by-contract basis. The net position in a customer contract is presented as either contract assets or contract liabilities. Excluding the impact of the initial adoption of ASC 606 as of January 1, 2018, significant changes in the contract assets and liabilities balances during the year ended December 31, 2018 are as follows:

	Year Ended December 31, 2018	
(in thousands)	Contract Assets Increase/(Decrease)	Contract Liabilities (Increase)/Decrease
Signing incentive additions	$ 24,837	$ 55
Signing incentive amortization	(29,244)	(7,330)
Revenue recognized in advance of billings	4,956	2,099
Billed amounts transferred to receivables	(4,772)	(2,668)
Cash received from customers	(7,531)	(136,295)
Deferred revenue that was recognized as revenue	9,110	140,558

Other changes in contract assets and contract liabilities primarily relate to movements in net contract position (between contract assets and contract liabilities) each period and foreign currency translation.

Impact of New Revenue Guidance on Financial Statement Line Items

The disclosure of the impact of adoption of ASC 606 on the Company's consolidated balance sheets, statements of income, and statements of cash flows was as follows:

	As of December 31, 2018		
(in thousands)	As Reported	Balances without Adoption of ASC 606	Effect of Change Higher/(Lower)
Assets			
Prepaid expenses and other current assets	$ 188,355	$ 190,417	$ (2,062)
Contract assets (short-term and long-term)	78,789	—	78,789
Contract cost assets	145,598	252,550	(106,952)
Deferred income tax assets	7,773	6,896	877
Other assets	116,905	122,323	(5,418)
Liabilities:			
Contract liabilities (short-term and long-term)	68,716	91,678	(22,962)
Other liabilities (short-term and long-term)	344,044	345,625	(1,581)
Shareholders' equity:			
Accumulated other comprehensive loss, net	(60,223)	(59,842)	(381)
Retained earnings	3,478,650	3,488,492	(9,842)

	Year Ended December 31, 2018		
(in thousands, except per share data)	As Reported	Balances without Adoption of ASC 606	Effect of Change Higher/(Lower)
Total revenues	$4,028,211	$ 5,716,741	$ (1,688,530)
Total operating expenses	3,205,473	4,887,026	(1,681,553)
Operating income	822,738	829,715	(6,977)
Income taxes	127,003	128,585	(1,582)
Net income	577,917	583,314	(5,397)
Net income attributable to TSYS common shareholders	576,656	582,053	(5,397)
Basic earnings per share (EPS) attributable to TSYS common shareholders[1]	3.17	3.20	(0.03)
Diluted EPS attributable to TSYS common shareholders[1]	3.14	3.16	(0.03)

1 *EPS Amounts may not total due to rounding.*

	Year Ended December 31, 2018		
(in thousands)	As Reported	Balances without Adoption of ASC 606	Effect of Change Higher/(Lower)
Cash flows from operating activities:			
Net income	$ 577,917	$ 583,314	$ (5,397)
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	408,573	470,804	(62,231)
Changes in contract assets and contract liabilities	(2,771)	(35,754)	32,983
Changes in contract cost assets	3,316	—	3,316
Changes in other current and other long-term liabilities	(55,602)	(54,524)	(1,078)
Cash flows from investing activities:			
Additions to contract cost assets	—	(32,407)	32,407

Note 3: Fair Value Measurements

GAAP requires disclosure about how fair value is determined for assets and liabilities and establishes a hierarchy for which these assets and liabilities must be grouped, based on significant level of inputs. The three-tier fair value hierarchy, which prioritizes the inputs used in the valuation methodologies, is as follows:

Level 1 — Quoted prices for identical assets and liabilities in active markets.

Level 2 — Observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets, quoted prices for identical or similar assets and liabilities in markets that are not active, or other inputs that are observable or can be corroborated by observable market data.

Level 3 — Unobservable inputs for the asset or liability.

The Company had no transfers between Level 1, Level 2, or Level 3 during the years ended December 31, 2018, 2017 or 2016. Goodwill is assessed annually for impairment in the second quarter of each year using fair value measurement techniques. Specifically, goodwill impairment is determined using a two-step test. Step 0 is a qualitative analysis of relevant events or circumstances to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. The first step of the goodwill impairment test is used to identify potential impairment by comparing the fair value of a reporting unit ("RU") with its book value, including goodwill. If the fair value of the RU exceeds its book value, goodwill is considered not impaired. If the book value of the RU exceeds its fair value, an impairment charge is recognized for the amount by which the carrying amount exceeds the fair value of identifiable assets and liabilities of the RU.

The estimate of fair value of the Company's RUs is determined using various valuation techniques, including using an equally weighted combination of the market approach and the income approach. The market approach, which contains Level 2 inputs, utilizes readily available market valuation multiples to estimate fair value. The income approach is a valuation technique that utilizes the discounted cash flow ("DCF") method, which includes Level 3 inputs. Under the DCF method, the fair value of the RU reflects the present value of the projected earnings that will be generated by each RU after taking into account the revenues and expenses associated with the asset, the relative risk that the cash flows will occur, the contribution of other assets, and an appropriate discount rate to reflect the value of the invested capital. Cash flows are estimated for future periods based upon historical data and projections by management.

As of December 31, 2018, the Company had recorded goodwill in the amount of $4.1 billion. The Company performed its annual impairment test of its goodwill balances as of May 31, 2018, and this test did not indicate any impairment. The fair value of the RUs substantially exceeds the carrying value. Refer to Note 6 for more information regarding goodwill.

The fair values of the Company's unsecured revolving loan and notes payable are considered to be level 2 measurements which are based on inputs other than quoted prices included within Level 1 that are observable for the liability, either directly or indirectly. Level 2 inputs may include quoted prices for similar liabilities in active or inactive markets, or other inputs that can be corroborated by observable market data. The carrying value of the Company's unsecured revolving loan approximates fair value since the interest rate resets monthly and the balances are pre-payable at any time. With respect to the Company's notes payable due March and December 2020, the carrying values approximate fair value due to their relatively short maturities. Refer to Note 12 for the estimated fair values of the Company's Senior Notes.

Note 4: Cash, Cash Equivalents and Restricted Cash

Cash, cash equivalents and restricted cash balances as of December 31, 2018 and 2017 are summarized as follows:

(in thousands)	December 31, 2018	December 31, 2017
Cash and cash equivalents in domestic accounts	$ **405,535**	396,577
Cash and cash equivalents in foreign accounts	**65,621**	53,780
Total cash and cash equivalents	**471,156**	450,357
Restricted cash included in other assets	**3,123**	1,013
Total cash, cash equivalents and restricted cash shown in the statement of cash flows	$ **474,279**	451,370

The Company maintains operating accounts outside the United States denominated in currencies other than the U.S. dollar. All amounts in domestic accounts are denominated in U.S. dollars. Restricted cash included in other assets in the consolidated balance sheets represents immaterial amounts required across the Company's segments for operational purposes.

Note 5: Prepaid Expenses and Other Current Assets

Significant components of prepaid expenses and other current assets as of December 31, 2018 and 2017 are summarized as follows:

(in thousands)	December 31, 2018	December 31, 2017
Prepaid expenses	**$ 48,058**	65,159
R&D state tax credit	**26,541**	22,642
Income taxes receivable	**19,362**	41,400
Supplies inventory	**18,089**	17,072
Other	**76,305**	70,292
Total	**$ 188,355**	216,565

Note 6: Goodwill

In 2018, the Company completed the acquisition of Cayan Holdings LLC ("Cayan") resulting in an additional $0.8 billion of goodwill being recorded. Also in 2018, the Company acquired substantially all of the assets of iMobile3 resulting in an additional $5.3 million of goodwill being recorded.

The gross amount and accumulated impairment losses of goodwill as of December 31, 2018 and 2017 are as follows:

	2018			
(in thousands)	Issuer Solutions	Merchant Solutions	Consumer Solutions	Consolidated
Gross amount	**$98,276**	**2,984,609**	**1,035,965**	**$ 4,118,850**
Accumulated impairment losses	**(1,787)**	**(2,225)**	**—**	**(4,012)**
Goodwill, net	**$96,489**	**2,982,384**	**1,035,965**	**$ 4,114,838**

	2017			
	Issuer Solutions	Merchant Solutions	Consumer Solutions	Consolidated
Gross amount	$99,465	2,132,653	1,035,965	$ 3,268,083
Accumulated impairment losses	(1,787)	(2,225)	—	(4,012)
Goodwill, net	$97,678	2,130,428	1,035,965	$ 3,264,071

Below are the balances of goodwill as of December 31, 2018 and 2017 along with the related changes in carrying value.

(in thousands)	Issuer Solutions	Merchant Solutions	Consumer Solutions	Consolidated
Balance as of December 31, 2016	$94,946	2,141,836	1,034,170	$ 3,270,952
Tax adjustment	—	—	1,795	1,795
Acquisition	—	(11,408)	—	(11,408)
Currency translation adjustments	2,732	—	—	2,732
Balance as of December 31, 2017	97,678	2,130,428	1,035,965	3,264,071
Acquisition	**—**	**851,956**	**—**	**851,956**
Currency translation adjustments	**(1,189)**	**—**	**—**	**(1,189)**
Balance as of December 31, 2018	**$96,489**	**2,982,384**	**1,035,965**	**$ 4,114,838**

In 2017, the Company adjusted the Netspend goodwill due to a tax adjustment of $1.8 million relating to uncertain tax positions. In 2017, the Company decreased the Merchant Solutions goodwill due to deferred tax adjustments of $12.1 million and the write-off of a note receivable of $727,000 on the opening balance sheet of TransFirst. Refer to Note 23 for more information on acquisitions.

Note 7: Other Intangible Assets, Net

Significant components of other intangible assets as of December 31, 2018 and 2017 are summarized as follows:

	2018		
(in thousands)	**Gross**	**Accumulated Amortization**	**Net**
Merchant relationships	**$ 756,400**	**(252,050)**	**$ 504,350**
Channel relationships	**520,000**	**(260,461)**	**259,539**
Customer relationships	**166,811**	**(150,509)**	**16,302**
Trade name	**79,546**	**(70,906)**	**8,640**
Covenants-not-to-compete	**34,040**	**(29,507)**	**4,533**
Database	**28,000**	**(28,000)**	**—**
Trade association	**10,000**	**(8,750)**	**1,250**
Favorable lease	**3,929**	**(1,841)**	**2,088**
Total	**$ 1,598,726**	**(802,024)**	**$ 796,702**

	2017		
(in thousands)	Gross	Accumulated Amortization	Net
Merchant relationships	$ 588,000	(147,000)	$ 441,000
Channel relationships	439,398	(200,540)	238,858
Customer relationships	167,222	(139,969)	27,253
Trade name	62,468	(58,068)	4,400
Covenants-not-to-compete	29,940	(20,815)	9,125
Database	28,000	(25,200)	2,800
Trade association	10,000	(7,750)	2,250
Favorable lease	3,006	(1,546)	1,460
Total	$ 1,328,034	(600,888)	$ 727,146

Other intangible assets increased in 2018 due to the acquisition of Cayan in January 2018 and acquiring substantially all of the assets of iMobile3 in June 2018. Refer to Note 23 for more information regarding the Company’s acquisitions. In connection with the sale of a merchant portfolio in December 2018, the Company wrote off $2.8 million of merchant relationship intangible assets. In connection with the early termination of a facilities lease in December 2018, the Company wrote off a favorable lease intangible asset of $0.3 million. Upon the Company’s adoption of ASC 842, Leases, as of January 1, 2019, the Company wrote-off the carrying value of favorable lease intangible assets of $2.1 million and increasedright-of-use assets by the same amount.

Amortization related to other intangible assets, which is recorded in selling, general and administrative expenses, was $202.1 million, $179.5 million and $163.8 million for 2018, 2017 and 2016, respectively.

The weighted average useful life for each component of other intangible assets, and in total, as of December 31, 2018 is as follows:

	Weighted Average Amortization Period (Years)
Merchant relationships	7.2
Channel relationships	8.8
Customer relationships	6.9
Trade name	3.8
Covenants-not-to-compete	4.0
Database	5.0
Trade association	10.0
Favorable lease	5.6
Total	7.4

Estimated future amortization expense of other intangible assets as of December 31, 2018 for the next five years is:

(in thousands)	
2019	$ 178,740
2020	171,876
2021	151,180
2022	130,930
2023	62,326

Note 8: Intangible Assets – Computer Software, Net

Computer software as of December 31, 2018 and 2017 is summarized as follows:

(in thousands)	**2018**	2017
Licensed computer software	**$ 656,704**	543,198
Software development costs	**485,047**	450,789
Acquisition technology intangibles	**286,206**	239,011
Total computer software	**1,427,957**	1,232,998
Less accumulated amortization:		
Licensed computer software	**347,641**	360,160
Software development costs	**347,847**	325,443
Acquisition technology intangibles	**197,933**	163,680
Total accumulated amortization	**893,421**	849,283
Computer software, net	**$ 534,536**	383,715

Licensed computer software includes the following computer software acquired under license agreements as of December 31, 2018 and 2017:

(in thousands)	**2018**	2017
Licensed computer software (acquired under license agreements)	**$ 20,524**	24,421
Accumulated amortization	**(3,228)**	(15,918)
Licensed computer software, net	**$ 17,296**	8,503

Amortization expense includes amounts for computer software acquired under license agreements. The Company had the following amortization expense related to computer software for the years ended December 31, 2018, 2017 and 2016:

(in thousands)	**2018**	2017	2016
Amortization expense related to:			
Licensed computer software	**$ 63,370**	51,247	45,655
Software development costs	**26,701**	27,461	26,478
Acquisition technology intangibles	**34,758**	28,267	26,217

The weighted average useful life for each component of computer software, and in total, as of December 31, 2018, is as follows:

	Weighted Average Amortization Period (Years)
Licensed computer software	6.2
Software development costs	6.0
Acquisition technology intangibles	5.8
Total	6.0

Estimated future amortization expense of licensed computer software, software development costs and acquisition technology intangibles as of December 31, 2018 for the next five years is:

(in thousands)	Licensed Computer Software	Software Development Costs	Acquisition Technology Intangibles
2019	$ 71,418	23,345	35,333
2020	61,558	19,125	29,674
2021	50,675	14,078	13,140
2022	40,318	8,959	9,540
2023	32,819	6,292	575

Note 9: Property and Equipment, Net

Property and equipment balances as of December 31, 2018 and 2017 are as follows:

(in thousands)	**2018**	2017
Computer and other equipment	**$ 446,000**	424,957
Buildings and improvements	**275,396**	262,499
Furniture and other equipment	**167,578**	141,927
Land	**15,677**	16,195
Other	**1,171**	724
Total property and equipment	**905,822**	846,302
Less accumulated depreciation and amortization	**(522,748)**	(521,084)
Property and equipment, net	**$ 383,074**	325,218

Property and equipment includes various types of equipment under capital lease arrangements. The Company has the following amounts of equipment under capital lease obligations as of December 31, 2018 and 2017:

(in thousands)	**2018**	2017
Computer and other equipment (acquired under capital lease arrangements)	**$ 91,526**	92,553
Furniture and other equipment (acquired under capital lease arrangements)	**6,104**	5,451
Total equipment	**97,630**	98,004
Less accumulated depreciation:		
Computer and other equipment	**(47,903)**	(44,327)
Furniture and other equipment	**(4,859)**	(4,520)
Total accumulated depreciation	**(52,762)**	(48,847)
Total equipment, net	**$ 44,868**	49,157

Depreciation and amortization expense includes amounts for computer equipment, furniture and other equipment acquired under capital lease. Depreciation and amortization expense related to property and equipment was $81.1 million, $68.0 million and $62.5 million for the years ended December 31, 2018, 2017 and 2016, respectively.

Note 10: Contract Cost Assets, Net

Upon the Company's adoption of ASC 606, costs to obtain or fulfill a contract are classified as contract cost assets. As of December 31, 2018, contract cost assets primarily relate to conversion costs. Also, with the adoption of ASC 606, payments for processing rights (signing incentives) are classified as contract assets in the Company's consolidated balance sheets. See further discussion in Notes 1 and 2.

Prior to the Company's adoption of ASC 606, contract cost assets were referred to as contract acquisition costs and included both conversion costs and payments for processing rights (signing incentives).

Significant components of contract cost assets as of December 31, 2018 and 2017 are summarized as follows:

(in thousands)	December 31, 2018	December 31, 2017
Contract cost assets, net	**$ 145,598**	139,249
Payments for processing rights, net	—	119,416
Total	**$ 145,598**	258,665

Amortization expense related to contract cost assets for the years ended December 31, 2018, 2017 and 2016 is as follows:

(in thousands)	2018	2017	2016
Amortization expense related to:			
Contract cost assets	**$ 35,729**	29,625	28,811
Payments for processing rights	—	21,357	19,804

The weighted average useful life for contract cost assets as of December 31, 2018 is 7.7 years.

Estimated future amortization expense of contract cost assets as of December 31, 2018 for the next five years is:

(in thousands)	Contract Cost Assets
2019	$ 31,565
2020	29,231
2021	27,426
2022	22,404
2023	13,576

Note 11: Equity Investments

The Company has an equity investment in CUP Data and records its 44.56% ownership using the equity method of accounting. CUP Data is sanctioned by the People's Bank of China, China's central bank. CUP Data currently provides transaction processing, disaster recovery and other services for banks and bankcard issuers in China.

The Company also has an equity investment in TSYS de Mexico and records its 49% ownership using the equity method of accounting. The electronic payment processing support operation prints statements and provides card-issuing support services to its clients.

The Company invests in limited partnership agreements with two Atlanta-based venture capital funds focused exclusively on investing in technology-enabled financial services companies. Pursuant to each limited partnership agreement, the Company has committed to invest up to $20.0 million in each fund so long as its ownership interest in each fund does not exceed 50%. As of December 31, 2018 and 2017, the Company had made contributions to the funds of $29.5 million and $22.8 million, respectively.

TSYS believes the carrying value approximates the underlying net assets of the equity investments.

TSYS' equity in income of equity investments (net of tax) for the years ended December 31, 2018, 2017 and 2016 was $45.2 million, $40.5 million and $26.1 million, respectively.

A summary of TSYS' equity investments as of December 31, 2018 and 2017 is as follows:

(in thousands)	2018	2017
CUP Data	$ **138,791**	127,367
Other	**41,870**	36,151
Total	$ **180,661**	163,518

Note 12: Long-term Borrowings, Capital Lease Obligations and License Agreements

Long-term debt as of December 31, 2018 and 2017 consists of:

(in thousands)	December 31, 2018	December 31, 2017
3.800% Senior Notes due April 1, 2021 (5 year tranche), net of discount and debt issuance costs	$ **746,430**	745,000
4.800% Senior Notes due April 1, 2026 (10 year tranche), net of discount and debt issuance costs	**743,734**	743,042
3.750% Senior Notes due June 1, 2023 (10 year tranche), net of discount and debt issuance costs	**545,647**	544,780
4.000% Senior Notes due June 1, 2023 (5 year tranche), net of discount and debt issuance costs	**545,801**	—
4.450% Senior Notes due June 1, 2028 (10 year tranche), net of discount and debt issuance costs	**445,439**	—
LIBOR + 1.300%, unsecured revolving loan, due April 23, 2023, with monthly interest payments on outstanding balances	**805,000**	—
3.760% note payable due March 20, 2020, with monthly interest and principal payments	**16,450**	—
3.600% note payable due December 20, 2020, with monthly interest and principal payments	**15,700**	—
2.375% Senior Notes due June 1, 2018 (5 year tranche), net of discount and debt issuance costs	**—**	549,532
LIBOR + 1.500%, unsecured term facility, due February 23, 2021, with quarterly principal and interest payments, net of debt issuance costs	**—**	368,645
LIBOR + 1.300%, unsecured revolving loan, due February 23, 2021, with monthly interest payments on outstanding balances	**—**	200,000
Total debt	**3,864,201**	3,150,999
Less current portion	**(20,807)**	(559,050)
Noncurrent portion of long-term debt	$ **3,843,394**	2,591,949

1 As of December 31, 2018 and 2017, the estimated fair values of the Company's Senior Notes totaled $3.0 billion and $2.7 billion, respectively. The estimated fair values of the Company's Senior Notes were based on quoted prices in an active market and are considered to be Level 1 measurements.

Interest expense for the years ended December 31, 2018, 2017 and 2016 was $163.4 million, $118.2 million and $115.4 million, respectively.

Senior Notes

On May 11, 2018, TSYS closed its sale (the "Transaction") of $550 million aggregate principal amount of 4.000% Senior Notes due 2023 and $450 million aggregate principal amount of 4.450% Senior Notes due 2028 (collectively, the "Notes") pursuant to an underwriting agreement, dated May 9, 2018 (the "Underwriting Agreement"), with Merrill Lynch, Pierce, Fenner & Smith Incorporated and J.P. Morgan Securities LLC (the "Underwriters"). The Company used the net proceeds of the Transaction to repay (i) all of its outstanding 2.375% Senior Notes due June 1, 2018 at maturity, (ii) all of its remaining outstanding indebtedness under that certain credit agreement dated January 10, 2018, (iii) with any remaining amounts, a portion of the $1.34 billion outstanding under that certain Credit Agreement dated April 23, 2018, among the Company and Bank of America, N.A. The Notes were issued pursuant to a Senior Indenture, dated as of March 17, 2016, between the Company and Regions Bank, as trustee. The balance as of December 31, 2018 was $545.8 million net of discount and debt issuance costs for the Senior Notes due June 1, 2023 and $445.4 million net of discount and debt issuance costs for the Senior Notes due June 1, 2028.

On March 17, 2016, the Company closed its sale of $750 million aggregate principal amount of 3.800% Senior Notes due 2021 and $750 million aggregate principal amount of 4.800% Senior Notes due 2026 (collectively, the “2016 Notes”). The Company used the net proceeds of the transaction to pay a portion of the approximately $2.35 billion purchase price of the Company’s acquisition of TransFirst and related fees and expenses. The 2016 Notes were issued pursuant to a Senior Indenture, dated as of March 17, 2016, between the Company and Regions Bank, as trustee. The balance as of December 31, 2018 was $746.4 million net of discount and debt issuance costs for the Senior Notes due April 1, 2021 and $743.7 million net of discount and debt issuance costs for the Senior Notes due April 1, 2026.

In May 2013, the Company closed its issuance of $550.0 million aggregate principal amount of 2.375% Senior Notes due 2018 and $550.0 million aggregate principal amount of 3.750% Senior Notes due 2023 (collectively, the “2013 Notes”) pursuant to an Underwriting Agreement with J.P. Morgan Securities LLC. The Company used the net proceeds of the transaction to pay a portion of the $1.4 billion purchase price of the Company’s acquisition of Netspend and related fees and expenses. The 2013 Notes were issued pursuant to an Indenture dated as of May 22, 2013 between the Company and Wells Fargo Bank, National Association, as trustee. As of December 31, 2018 there was no outstanding balance for the Senior Notes due June 1, 2018 and a balance of $545.6 million net of discount and debt issuance costs for the Senior Notes due June 1, 2023.

Senior Credit Facility and Other Borrowings

On April 23, 2018, TSYS entered into a Credit Agreement with Bank of America, N.A. The Credit Agreement provides the Company with a $1.75 billion five-year revolving senior credit facility, which includes a $50 million sub-facility for the issuance of standby letters of credit.

The Credit Agreement was used to repay (i) in full, borrowings under that certain Credit Agreement dated February 23, 2016, among the Company, JPMorgan Chase Bank, N.A. and (ii) in part, borrowings under that certain Credit Agreement dated January 10, 2018, among the Company and Bank of America as administrative agent and the lenders party thereto, as amended.

Borrowings under the Credit Agreement will accrue interest at either the base rate (as defined in the Credit Agreement) or the London Interbank Offered Rate (“LIBOR”), in each case plus a margin based on the Company’s corporate credit ratings. Additionally, a facility fee of 0.2% is assessed on the entire revolver.

The Credit Agreement contains customary covenants regarding, among other matters, the maintenance of insurance, the preservation and maintenance of the Company’s corporate existence, material compliance with laws and the payment of taxes and other material obligations. The Credit Agreement also contains financial covenants including (i) a minimum consolidated fixed charge coverage ratio (the “Minimum Fixed Charge Coverage Ratio”) of 2.5 to 1.0 and (ii) a maximum consolidated leverage ratio (“Maximum Leverage Ratio”) (x) of 4.00 to 1.0, for the fiscal quarter ending June 30, 2018, (y) of 3.75 to 1.0, for each of the fiscal quarters ending September 30, 2018, December 31, 2018 and March 31, 2019, and (z) of 3.50 to 1.0, for any fiscal quarter ending thereafter. The Company was in compliance with all applicable financial covenants as of December 31, 2018. As of December 31, 2018, the outstanding balance on the Company’s revolving credit facility was $805.0 million.

On January 10, 2018, TSYS entered into a credit agreement with Bank of America, N.A. The credit agreement provides the Company with a $450 million two-year term loan facility (“Term Loan Facility”). The Term Loan Facility was used to finance, in part, the Company’s acquisition of Cayan.

Borrowings under the credit agreement will accrue interest at the base rate (as defined in the Credit Agreement) or LIBOR, in each case plus a margin based on the Company's corporate credit ratings. The applicable margin for loans bearing interest based on LIBOR ranges from 1.000% to 1.750%. The applicable margin for loans bearing interest based on the base rate ranges from 0.000% to 0.750%.

The credit agreement contains customary covenants regarding, among other matters, the maintenance of insurance, the preservation and maintenance of the Company's corporate existence, material compliance with laws and the payment of taxes and other material obligations. The credit agreement also contains financial covenants requiring the maintenance as of the end of each fiscal quarter of (i) a minimum fixed charge coverage ratio of 2.5 to 1.0 and (ii) a maximum consolidated leverage ratio of 3.5 to 1.0, which may be increased upon the occurrence of certain events. As discussed above, the remaining balance of the Term Loan Facility was paid off in May 2018.

On February 23, 2016, the Company entered into the 2016 Credit Agreement with JPMorgan Chase Bank, N.A. The 2016 Credit Agreement provided the Company with a $700 million five-year term loan facility (the "Term Loan Facility") consisting of (i) a $300 million term loan (the "Refinancing Term Loan") funded upon entry into the 2016 Credit Agreement and (ii) the Delayed Draw Term Loan. The 2016 Credit Agreement also provided the Company with the Revolving Loan Facility, which includes a $50 million sub-facility for the issuance of standby letters of credit. As of December 31, 2018, there was no remaining balance on the Term Loan Facility.

Borrowings under the 2016 Credit Agreement will accrue interest at the base rate (as defined in the 2016 Credit Agreement) or LIBOR, in each case plus a margin that is set based on the Company's corporate credit ratings. The applicable margin for loans bearing interest based on LIBOR ranges from 0.900% to 1.500% for revolving loans and 1.000% to 1.750% for term loans. The applicable margin for loans bearing interest based on the base rate ranges from 0.000% to 0.500% for revolving loans and 0.000% to 0.750% for term loans. In addition, the Company will pay the lenders a facility fee ranging from 0.100% to 0.250% per annum, depending on the Company's corporate credit ratings, on the commitments under the Revolving Loan Facility (regardless of usages) and the undrawn commitment amount in respect of the Delayed Draw Term Loan. Based on the Company's current corporate credit ratings, (i) the applicable margin for loans accruing interest at the base rate is 0.500% for term loans and 0.300% for revolving loans and (ii) the applicable margin for loans accruing interest at LIBOR is 1.500% for term loans and 1.300% for revolving loans. The 2016 Credit Agreement contains customary covenants regarding, among other matters, the maintenance of insurance, the preservation and maintenance of the Company's corporate existence, material compliance with laws and the payment of taxes and other material obligations. As of December 31, 2018, the 2016 Credit Agreement no longer exists as it was replaced by the April 23, 2018 Credit Agreement.

The Refinancing Term Loan was used to repay in full the Company's outstanding loans and other obligations under that certain credit agreement, dated as of September 10, 2012. The Delayed Draw Term Loan was used to finance, in part, the TransFirst acquisition and related transactions. The Revolving Loan Facility is available for draws for purposes of working capital and other general corporate purposes, including to finance, in part, the acquisition and related transactions. The creditor group of the modified debt remained consistent before and after the debt was amended.

Debt Covenants

The 2018 Credit Agreement also contains various affirmative and negative covenants, including those that create limitations on the Company's:

- creation of liens;
- merging or selling assets unless certain conditions are met; and
- entering into sale/leaseback transactions.

The 2013, 2016 and 2018 Notes also contain a provision that requires the Company to repurchase all or any portion of a holder's notes, at the holder's option, if a Change in Control Repurchase Event occurs, as defined in the Prospectus Supplements for the 2013, 2016, and 2018 Notes offerings.

Annual Principal Payments on Long-term Debt

Required annual principal payments on long-term debt for the five years subsequent to December 31, 2018 are summarized as follows:

(in thousands)	
2019	$ 20,807
2020	11,342
2021	750,000
2022	—
2023	1,905,000

Capital Lease Obligations and License Agreements

Capital lease obligations and license agreements as of December 31, 2018 and 2017 consist of:

(in thousands)	**2018**	2017
Capital lease obligations	**$ 37,177**	37,950
License agreements	**17,288**	4,865
Total capital lease obligations and license agreements	**54,465**	42,815
Less current portion	**(8,318)**	(6,762)
Noncurrent portion of capital leases and license agreements	**$ 46,147**	36,053

The Company acquires various computer equipment, software, machinery and equipment and furniture and fixtures under capital lease obligations and license agreements. Refer to Notes 7, 8 and 22 for more information. The capital lease and license agreements obligations have various payment terms for each capital lease obligation, including single payment leases, monthly, quarterly and annually. The lease terms for the equipment and software range from one to six years. The future minimum lease payments under capital leases and license agreements as of December 31, 2018 are summarized as follows:

(in thousands)	Capital Leases	License Agreements
2019	$ 7,393	2,939
2020	7,319	13,778
2021	7,085	1,390
2022	7,051	39
2023	6,658	—
Thereafter	6,868	—
Total minimum lease payments	42,374	18,146
Less amount representing interest	(5,197)	(858)
Principal minimum lease payments	$37,177	17,288

Note 13: Other Current Liabilities

Significant components of other current liabilities as of December 31, 2018 and 2017 are summarized as follows:

(in thousands)	**December 31, 2018**	December 31, 2017
Accrued card brand fees	**$ 55,991**	43,814
Accrued third-party commissions	**46,977**	34,276
Accrued expenses	**25,178**	34,260
Dividends payable	**24,645**	24,886
Accrued interest	**22,191**	19,330
Other	**93,168**	69,356
Total	**$ 268,150**	225,922

Note 14: Income Taxes

The provision for income taxes includes income taxes currently payable and those deferred because of temporary differences between the financial statement carrying amounts and tax bases of assets and liabilities.

The components of income tax expense included in the Consolidated Statements of Income are as follows:

(in thousands)	Years Ended December 31, 2018	2017	2016
Current income tax expense:			
Federal	**$ 75,273**	210,550	140,079
State	**18,000**	20,316	9,218
Foreign	**12,330**	7,500	4,443
Total current income tax expense	**105,603**	238,366	153,740
Deferred income tax (benefit) expense:			
Federal	**18,200**	(178,879)	8,393
State	**3,891**	5,093	(65)
Foreign	**(691)**	1,298	(893)
Total deferred income tax (benefit) expense	**21,400**	(172,488)	7,435
Total income tax expense	**$ 127,003**	65,878	161,175

(in thousands)	Years Ended December 31, 2018	2017	2016
Components of income before income taxes and equity in income of equity investments:			
Domestic	**$ 634,433**	603,260	454,628
Foreign	**25,331**	14,302	6,404
Total income before income tax expense	**$ 659,764**	617,562	461,032

Income tax expense differs from the amounts computed by applying the statutory U.S. federal income tax rate of 21% to income before income taxes, noncontrolling interest and equity in income of equity investments as a result of the following:

(in thousands)	Years Ended December 31, 2018	2017	2016
Computed "expected" income tax expense	**$ 138,551**	216,147	161,425
Increase (decrease) in income tax expense resulting from:			
International tax rate differential and equity income	**14,683**	11,953	8,715
State income tax expense, net of federal income tax effect	**19,220**	12,470	9,127
(Decrease) increase in valuation allowance	**(1,714)**	8,230	2,855
Tax credits	**(22,963)**	(20,998)	(15,695)
Share-based compensation	**(20,309**	(14,310)	—
Foreign-derived intangible income deduction	**(7,283)**	—	—
Deduction for domestic production activities	—	(17,150)	(12,950)
Re-measurement of deferred tax asset / deferred tax liability	—	(146,093)	—
Permanent differences and other, net	**6,818**	15,629	7,698
Total income tax expense	**$ 127,003**	65,878	161,175

Temporary differences between the financial statement carrying amounts and tax bases of assets and liabilities that give rise to significant portions of the net deferred tax liability as of December 31, 2018 and 2017 relate to the following:

(in thousands)	As of December 31, 2018	2017
Deferred income tax assets:		
Net operating loss and income tax credit carryforwards	**$ 32,767**	35,089
Allowances for doubtful accounts and billing adjustments	**1,132**	852
Contract liabilities	**8,611**	17,813
Share-based compensation	**11,735**	15,170
Foreign currency translation	**1,938**	—
Postretirement benefits	**5,349**	4,679
Employee compensation and benefits	**7,126**	2,790
Foreign timing differences	**5,737**	2,924
Other, net	**8,767**	4,522
Total deferred income tax assets	**83,162**	83,839
Less valuation allowance for deferred income tax assets	**(27,817)**	(29,531)
Net deferred income tax assets	**55,345**	54,308
Deferred income tax liabilities:		
Excess tax over financial statement depreciation	**(75,222)**	(43,056)
Computer software development costs	**(56,250)**	(48,244)
Purchased intangibles	**(32,363)**	(42,467)
Foreign currency translation	—	(942)
Partnership interests	**(258,007)**	(143,908)
Other, net	**(6,008)**	(7,917)
Total deferred income tax liabilities	**(427,850)**	(286,534)
Net deferred income tax liabilities	**$ (372,505)**	(232,226)
Total net deferred tax assets (liabilities):		
Noncurrent deferred tax asset	**$ 7,773**	6,091
Noncurrent deferred tax liability	**(380,278)**	(238,317)
Net deferred tax liability	**$ (372,505)**	(232,226)

As of December 31, 2018, TSYS had recognized deferred tax assets from net operating losses, capital losses and federal and state income tax credit carryforwards of $5.9 million, $0.3 million and $26.5 million, respectively. As of December 31, 2017, TSYS had recognized deferred tax assets from net operating losses, capital losses, and federal and state income tax credit carryforwards of $6.6 million, $0.3 million, and $28.2 million, respectively. Additionally, net deferred income tax liabilities were increased by $124.2 million as a result of the acquisition of Cayan.

In assessing the realizability of deferred income tax assets, management considers whether it is more likely than not that some portion or all of the deferred income tax assets will not be realized. The ultimate realization of deferred income tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Management considers the scheduled reversal of deferred tax liabilities, projected future taxable income and tax planning strategies in making this assessment.

Management believes it is more likely than not that TSYS will realize the benefits of these deductible differences, net of existing valuation allowances. The valuation allowance for deferred tax assets was $27.8 million and $29.5 million at December 31, 2018 and 2017, respectively. The decrease in the valuation allowance for deferred income tax assets was $1.7 million primarily as a result of utilization of income tax credit carryforwards against the one-time transition tax that was enacted as part of the Tax Cuts and Jobs Act of 2017 (the "Tax Act").

TSYS' effective tax rate was 19.3% and 10.7% for the years ended December 31, 2018 and 2017, respectively. The primary reasons for the higher effective income tax rate for the year ended December 31, 2018 as compared to the same period last year is that the prior year reflected a significant one-time benefit, the elimination of the domestic production activities deduction for 2018 and limitations on executive compensation for 2018 as provided by the Tax Act. This was somewhat offset by favorable variances in discrete items related to excess tax benefits from share-based compensation and the lower 2018 statutory Federal income tax rate and a deduction for foreign-derived intangible income as enacted by the Tax Act. On December 22, 2017, the President signed into law the Tax Act. Some key provisions of this law impacted the Company during this reporting period. One such provision was the reduction of the Federal corporate income tax rate from 35.0% to 21.0%. The Company's consolidated financial statements reflect the impact of this rate reduction.

Additionally, the Tax Act provides for two U.S. tax base erosion provisions which began in 2018. They are the base-erosion and anti-abuse tax ("BEAT") and the global intangible low-taxed income ("GILTI"). While TSYS' calculations indicate no impact related to BEAT in 2018, the Company's GILTI calculations did indicate an insignificant impact, which has been reflected in the Company's consolidated financial statements. TSYS will continue to perform all necessary calculations, make any needed elections and report any future impacts of GILTI and BEAT as appropriate. The Company has made the policy election to record any liabilities associated with GILTI in the period in which it is incurred.

The Tax Act provides the Company with a new deduction for Foreign-Derived Intangible Income (FDII). The deduction effectively results in a preferential tax rate on eligible income generated from TSYS' non US-based clients located primarily in Europe and Canada. TSYS recorded a FDII tax benefit of $7.3 million in 2018.

Although the Tax Act allows repatriation of foreign earnings without incurring U.S. income taxes, TSYS has maintained the previously adopted permanent reinvestment exception under GAAP, with respect to earnings of certain foreign subsidiaries. As a result, TSYS considers foreign earnings related to these foreign operations to be permanently reinvested. Pursuant to U.S. tax requirements, no provision for U.S. federal and state incomes taxes has been made in the consolidated financial statements for those non-U.S. subsidiaries whose earnings were deemed to be permanently reinvested. The amount of undistributed earnings considered to be "reinvested" which may be subject to tax upon distribution was approximately $115.3 million as of December 31, 2018. Although TSYS does not intend to repatriate these earnings, a distribution of these non-U.S. earnings in the form of dividends, or otherwise, may subject the Company to withholding taxes payable to the various non-U.S. countries.

Pursuant to the Tax Act, some amounts related to repatriation of foreign accumulated earnings and related to executive compensation may be considered provisional amounts pursuant to Securities and Exchange Commission ("SEC") Staff Accounting Bulletin No. 118. As such, these amounts were subject to adjustment during the measurement period ended December 22, 2018.

TSYS is the parent of an affiliated group that files a consolidated U.S. federal income tax return and most state and foreign income tax returns on a separate entity basis. In the normal course of business, the Company is subject to examinations by these taxing authorities unless statutory examination periods lapse. TSYS is no longer subject to U.S. federal income tax examinations for years before 2011 and with few exceptions, the Company is no longer subject to income tax examinations from state and local or foreign tax authorities for years before 2011. There are currently federal income tax examinations in progress for the years 2011 through 2013. Additionally, a number of tax examinations are in progress by the relevant state tax authorities. Although TSYS is unable to determine the ultimate outcome of these examinations, TSYS believes that its liability for uncertain tax positions relating to these jurisdictions for such years is adequate.

GAAP prescribes a recognition threshold and measurement attribute for the financial statement recognition, measurement and disclosure of a tax position taken or expected to be taken in a tax return. During the year ended December 31, 2018, TSYS decreased its liability for uncertain income tax positions by a net amount of approximately $1.5 million.

The Company is not able to reasonably estimate the amount by which the liability will increase or decrease over time; however, at this time, the Company does not expect any significant changes related to these obligations within the next twelve months. A reconciliation of the beginning and ending amount of unrecognized tax liabilities is as follows:

(in millions)	Years Ended December 31		
	2018	2017	2016
Beginning balance	**$ 23.8**	16.5	13.1
Current activity:			
Additions based on tax positions related to current year	**2.4**	4.9	3.4
Additions for tax positions of prior years	**3.2**	4.6	3.0
Reductions for tax positions of prior years	**(6.5)**	—	—
Decreases resulting from settlements with tax authorities	**(0.6)**	(2.2)	(3.0)
Net current activity	**(1.5)**	7.3	3.4
Ending balance	**$ 22.3**	23.8	16.5

1 Unrecognized state tax liabilities are not adjusted for the federal tax impact.

TSYS recognizes potential interest and penalties related to the underpayment of income taxes as income tax expense in the Consolidated Statements of Income. Gross accrued interest and penalties on unrecognized tax benefits totaled $2.5 million and $2.0 million as of December 31, 2018 and 2017, respectively. The total amounts of unrecognized income tax benefits as of December 31, 2018 and 2017 that, if recognized, would affect the effective tax rates are $23.5 million and $24.5 million (net of the federal benefit on state tax issues), respectively, which includes interest and penalties of $1.7 million and $1.3 million, respectively. TSYS does not expect any significant changes to its calculation of uncertain tax positions during the next twelve months.

Note 15: Commitments and Contingencies

LEASE AND PURCHASE COMMITMENTS: TSYS is obligated under noncancelable operating leases for computer equipment and facilities. Additionally, the Company has long-term obligations which consist of required minimum future payments under contracts with the Company's distributors and other service providers.

The future minimum lease payments under noncancelable operating leases and purchase commitments with remaining terms greater than one year for the next five years and thereafter and in the aggregate as of December 31, 2018, are as follows:

(in thousands)	Operating Leases	Other Purchase Commitments
2019	$ 54,818	59,182
2020	54,738	29,036
2021	50,794	10,427
2022	42,048	6,892
2023	19,089	5,438
Thereafter	32,894	20,813
Total future minimum commitment payments	$ 254,381	131,788

The majority of computer equipment lease commitments come with a renewal option or an option to terminate the lease. These lease commitments may be replaced with new leases which allow the Company to continually update its computer equipment. The operating lease commitments for 2019, 2020, 2021 and 2022 include amounts relating to a hardware lease that commenced on January 1, 2019.

Total rental expense under all operating leases in 2018, 2017 and 2016 was $128.6 million, $134.0 million and $122.9 million, respectively.

CONTRACTUAL COMMITMENTS: In the normal course of its business, the Company maintains long-term processing contracts with its clients. These processing contracts contain commitments, including, but not limited to, minimum standards and time frames against which the Company's performance is measured. In the event the Company does not meet its contractual commitments with its clients, the Company may incur penalties and certain clients may have the right to terminate their contracts with the Company. The Company does not believe that it will fail to meet its contractual commitments to an extent that will result in a material adverse effect on its financial position, results of operations or cash flows.

CONTINGENCIES:

Legal Proceedings – General

The Company is subject to various legal proceedings and claims and is also subject to information requests, inquiries and investigations arising out of the ordinary conduct of its business. The Company establishes accruals for litigation and similar matters when those matters present loss contingencies that TSYS determines to be both probable and reasonably estimable in accordance with GAAP. Legal costs are expensed as incurred. In the opinion of management, based on current knowledge and in part upon the advice of legal counsel, all matters not specifically discussed below are believed to be adequately covered by insurance, or, if not covered, the possibility of losses from such matters are believed to be remote or such matters are of such kind or involve such amounts that would not have a material adverse effect on the financial position, results of operations or cash flows of the Company if disposed of unfavorably.

TelexFree Matter

ProPay, Inc. (ProPay), a subsidiary of the Company, has been named as one of a number of defendants (including other merchant processors) in several purported class action lawsuits relating to the activities of TelexFree, Inc. and its affiliates and principals. TelexFree is a former merchant customer of ProPay. With regard to TelexFree, each purported class action lawsuit generally alleges that TelexFree engaged in an improper multi-tier marketing scheme involving voice-over Internet protocol telephone services. The plaintiffs in each of the purported class action complaints generally allege that the various merchant processor defendants, including ProPay, aided and abetted the improper activities of TelexFree. TelexFree filed for bankruptcy protection in Nevada. The bankruptcy proceeding was subsequently transferred to the Massachusetts Bankruptcy Court.

Specifically, ProPay has been named as one of a number of defendants (including other merchant processors) in each of the following purported class action complaints relating to TelexFree: (i) Waldermara Martin, et al. v. TelexFree, Inc., et al. (Case No. BK-S-14-12524-ABL) (Bankr. D. Nev.); (ii) Anthony Cellucci, et al. v. TelexFree, Inc., et. al. (Case No. 4:14-BK-40987) (Bankr. D. Mass.); (iii) Maduako C. Ferguson Sr., et al. v. Telexelectric, LLP, et. al (Case No. 5:14-CV-00316-D) (E.D.N.C.); (iv) Todd Cook v. TelexElectric LLP et al. (Case No. 2:14-CV-00134) (N.D. Ga.); (v) Felicia Guevara v. James M. Merrill et al., CA No. 1:14-cv-22405-DPG) (S.D. Fla.); (vi) Reverend Jeremiah Githere, et al. v. TelexElectric LLP et al. (Case No. 1:14-CV-12825-GAO) (D. Mass.); (vii) Paulo Eduardo Ferrari et al. v. TelexFree, Inc. et al. (CaseNo. 14-04080) (Bankr. D. Mass); (viii) Magalhaes v. TelexFree, Inc., et al., No. 14-cv-12437 (D. Mass.); (ix) Griffith v. Merrill et al., No. 14-CV-12058 (D. Mass.); (x) Abelgadir v. Telexelectric, LLP, No. 14-09857 (S.D.N.Y.); and (xi) Rita Dos Santos, v. TelexElectric, LLP et al., 2:15-cv-01906-NVW (D. Ariz.) (together, the “Actions”).

On October 21, 2014, the Judicial Panel on Multidistrict Litigation (“JPML”) transferred and consolidated the Actions filed before that date to the United States District Court for the District of Massachusetts (the “Consolidated Action”). The JPML subsequently transferred the remaining Actions to the Consolidated Action. The Consolidated Action is styled In Re: TelexFree Securities Litigation (4:14-md-02566-TSH) (D. Mass.).

The plaintiffs in the Consolidated Action filed a First Consolidated Amended Complaint on March 31, 2015 and filed a Second Consolidated Amended Complaint (the “Second Amended Complaint”) on April 30, 2015. The Second Amended Complaint, which supersedes the complaints filed prior to consolidation of the Actions, purports to bring claims on behalf of all persons who purchased certain TelexFree “memberships” and suffered a “net loss” between January 1, 2012 and April 16, 2014. With respect to ProPay, the Second Amended Complaint alleges that ProPay aided and abetted tortious acts committed by TelexFree, and that ProPay was unjustly enriched in the course of providing payment processing services to TelexFree. Several defendants, including ProPay, moved to dismiss the Second Amended Complaint on June 2, 2015. The court held a hearing on the motions to dismiss on November 2, 2015.

On January 29, 2019, the court granted in part and denied in part ProPay’s motion to dismiss the Second Amended Complaint. The court dismissed plaintiffs’ claim that ProPay was unjustly enriched by the alleged TelexFree fraud, but denied ProPay’s motion to dismiss the plaintiffs’ claim that ProPay allegedly aided and abetted TelexFree’s purported scheme. The court’s ruling does not reflect any determination of the merits of the plaintiffs’ aiding and abetting claim against ProPay, but instead is merely a ruling that the plaintiffs have alleged facts that could potentially entitle them to relief from ProPay if those facts were true. ProPay denies that it had any knowledge of TelexFree’s alleged fraud or that it aided and abetted that fraud in any way.

After deciding the motions to dismiss filed by ProPay and some of the other defendants in the litigation, the court lifted the stay on discovery that had been in place since the outset of the Consolidated Action proceeding. Approximately 50 defendants remain in the litigation, and the Court will hold a scheduling conference on March 20, 2019 to set a case schedule.

ProPay has also received various subpoenas, a seizure warrant and other inquiries requesting information regarding TelexFree from (i) the Commonwealth of Massachusetts, Securities Division, (ii) United States Securities and Exchange Commission, (iii) US Immigration and Customs Enforcement, and (iv) the bankruptcy Trustee of the Chapter 11 entities of TelexFree, Inc., TelexFree, LLC and TelexFree Financial, Inc. Pursuant to the seizure warrant served by the United States Attorney's Office for the District of Massachusetts, ProPay delivered all funds associated with TelexFree held for chargeback and other purposes by ProPay to US Immigration and Customs Enforcement. In addition, ProPay received a notice of potential claim from the bankruptcy Trustee as a result of the relationship of ProPay with TelexFree and its affiliates.

While the Company and ProPay intend to vigorously defend the Consolidated Action proceeding and other matters arising out of the relationship of ProPay with TelexFree and believe ProPay has substantial defenses related to these purported claims, the Company currently cannot reasonably estimate losses attributable to these matters.

GUARANTEES AND INDEMNIFICATIONS: The Company has entered into processing and licensing agreements with its clients that include intellectual property indemnification clauses. Under these clauses, the Company generally agrees to indemnify its clients, subject to certain exceptions, against legal claims that TSYS' services or systems infringe on certain third party patents, copyrights or other proprietary rights. In the event of such a claim, the Company is generally obligated to hold the client harmless and pay for related losses, liabilities, costs and expenses, including, without limitation, court costs and reasonable attorney's fees. The Company has not made any indemnification payments pursuant to these indemnification clauses.

A portion of the Company's business is conducted through distributors that provide load and reload services to cardholders at their locations. Members of the Company's distribution and reload network collect cardholder funds and remit them by electronic transfer to the issuing banks for deposit in the cardholder accounts. The Company's issuing banks typically receive cardholders' funds no earlier than two business days after they are collected by the distributor. If any distributor fails to remit cardholders' funds to the Company's issuing banks, the Company typically reimburses the issuing banks for the shortfall created thereby. The Company manages the risk associated with this process through a formalized set of credit standards, volume limits and deposit requirements for certain distributors and by typically maintaining the right to offset any settlement shortfall against the commissions payable to the relevant distributor. To date, the Company has not experienced any significant losses associated with settlement failures and the Company had not recorded a settlement guarantee liability as of December 31, 2018. As of December 31, 2018 and 2017, the Company's estimated gross settlement exposure was $17.2 million and $16.7 million, respectively.

Cardholders of the products managed by the Company's Consumer Solutions segment can incur charges in excess of the funds available in their accounts and are liable for the resulting overdrawn account balance. Although the Company generally declines authorization attempts for amounts that exceed the available balance in a cardholder's account, the application of the Networks' rules and regulations, the timing of the settlement of transactions and the assessment of subscription, maintenance or other fees can, among other things, result in overdrawn card accounts. The Company also provides, as a courtesy and in its discretion, certain cardholders with a "cushion" that allows them to overdraw their card accounts by a nominal amount. In addition, eligible cardholders may enroll in the issuing banks' overdraft protection programs and fund transactions that exceed the available balance in their accounts. The Company generally provides the funds used as part of these overdraft programs (one of the Company's issuing banks will advance the first $1.0 million on behalf of its cardholders) and is responsible to the issuing banks for any losses associated with any overdrawn account balances. As of December 31, 2018 and 2017, cardholders' overdrawn account balances totaled $29.1 million and $25.5 million, respectively. As of December 31, 2018 and 2017, the Company's reserves for the losses it estimates will arise from processing customer transactions, debit card overdrafts, chargebacks for unauthorized card use and merchant-related chargebacks due to non-delivery of goods or services was $13.1 million and $9.5 million, respectively.

The Company has not recorded a liability for guarantees or indemnities in the accompanying consolidated balance sheet since the maximum amount of potential future payments under such guarantees and indemnities is not determinable.

PRIVATE EQUITY INVESTMENTS: The Company has limited partnership agreements with two Atlanta-based venture capital funds focused exclusively on investing in technology-enabled financial services companies. Pursuant to each limited partnership agreement, the Company has committed to invest up to $20.0 million in each fund so long as its ownership interest in each fund does not exceed 50%. As of December 31, 2018 and 2017, the Company had made contributions to the funds of $29.5 million and $22.8 million, respectively. The Company had investments, including equity in income, totaling $34.3 million and $26.1 million, respectively, as of December 31, 2018 and 2017.

Note 16: Employee Benefit Plans

The Company provides benefits to its employees by offering employees participation in certain defined contribution plans. The employee benefit plans through which TSYS provided benefits to its employees during 2018 are described as follows:

RETIREMENT SAVINGS AND STOCK PURCHASE PLANS: TSYS maintains a single plan, the TSYS Retirement Savings Plan, which is designed to reward all team members of TSYS U.S.-based companies with a uniform employer contribution. Until June 30, 2018, the terms of the plan provided for the Company to match 100% of the employee contribution up to 4% of eligible compensation. Beginning July 1, 2018, the terms of the plan were amended to provide for the Company to match 100% of the employee contributions up to 5% of eligible compensation. The Company can make discretionary contributions up to another 4% based upon business conditions.

The Company also maintains a stock purchase plan for employees. The Company contributes 15% of employee contributions up to certain limits. The funds are used to purchase presently issued and outstanding shares of TSYS common stock on the open market at fair market value for the benefit of participants. The Company's contributions to the plans charged to expense for the years ended December 31, 2018, 2017 and 2016 are as follows:

(in thousands)	2018	2017	2016
TSYS Retirement Savings Plan	**$ 28,196**	23,113	21,077
TSYS Stock Purchase Plan	**1,793**	1,600	1,514

POSTRETIREMENT MEDICAL BENEFITS PLAN: TSYS provides certain medical benefits to qualified retirees through a postretirement medical benefits plan, which is immaterial to the Company's consolidated financial statements. The measurement of the benefit expense and accrual of benefit costs associated with the plan do not reflect the effects of the 2003 Medicare Act. Additionally, the benefit expense and accrued benefit cost associated with the plan, as well as any potential impact of the effects of the 2003 Medicare Act, are not significant to the Company's consolidated financial statements.

Note 17: Equity

DIVIDENDS: Dividends on common stock of $94.6 million were paid in 2018, compared to $79.0 million and $73.4 million in 2017 and 2016, respectively.

EQUITY COMPENSATION PLANS: The following table summarizes TSYS' equity compensation plans by category as of December 31, 2018:

(in thousands, except per share data) Plan Category	(a) Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights	(b) Weighted Average Exercise Price of Outstanding Options, Warrants and Rights	(c) Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a))
Equity compensation plans approved by security holders	3,585	$ 49.27[1]	13,964[2]

The Company does not have any equity compensation plans that were not approved by security holders.

1 *Weighted-average exercise price represents 2.0 million options only and does not include restricted share units that have no exercise price.*
2 *Shares available for future grants under the Total System Services, Inc. 2017 Omnibus Plan, which could be in the form of options, nonvested awards and performance shares.*

Note 18: Share-Based Compensation

TSYS has various long-term incentive plans under which the Compensation Committee of the Board of Directors has the authority to grant share-based compensation to TSYS employees.

Share-Based Compensation and Long-Term Incentive Plans

TSYS maintains the Total System Services, Inc. 2017 Omnibus Plan, Total System Services, Inc. 2012 Omnibus Plan, Total System Services, Inc. 2007 Omnibus Plan, Total System Services, Inc. 2002 Long-Term Incentive Plan, Total System Services, Inc. 2000 Long-Term Incentive Plan and the Amended and Restated Netspend Holdings, Inc. 2004 Equity Incentive Plan for Options and Restricted Shares Assumed by Total System Services, Inc. to advance the interests of TSYS and its shareholders through awards that give employees and directors a personal stake in TSYS' growth, development and financial success. Awards under these plans are designed to motivate employees and directors to devote their best efforts to the business of TSYS. Awards will also help TSYS attract and retain the services of employees and directors who are in a position to make significant contributions to TSYS' success.

The plans are administered by the Compensation Committee of the Company's Board of Directors and enable the Company to grant nonqualified and incentive stock options, stock appreciation rights, restricted stock and restricted stock units, performance units or performance shares, cash-based awards and other stock-based awards.

All stock options must have a maximum life of no more than ten years from the date of grant. The exercise price will not be less than 100% of the fair market value of TSYS' common stock at the time of grant. Any shares related to awards which terminate by expiration, forfeiture, cancellation or otherwise without the issuance of shares, are settled in shares, or are exchanged with the Committee's permission, prior to the issuance of shares, for awards not involving shares, shall be available again for grant under the Total System Services, Inc. 2017 Omnibus Plan. Effective as of, or prior to, April 27, 2017, no additional awards may be made from any of the other plans.

The aggregate number of shares of TSYS stock which may be granted, or could have been granted, to participants pursuant to awards granted under the various plans may not exceed the following:

(in thousands) Plan	**Shares**
Total System Services, Inc. 2017 Omnibus Plan	15,000
Total System Services, Inc. 2012 Omnibus Plan	17,000
Total System Services, Inc. 2007 Omnibus Plan	5,000
Total System Services, Inc. 2002 Long-term Incentive Plan	9,400
Total System Services, Inc. 2000 Long-term Incentive Plan	2,400

Share-based compensation costs are classified as selling, general and administrative expenses on the Company's consolidated statements of income and corporate administration and other expenses for segment reporting purposes. TSYS' share-based compensation costs are expensed, rather than capitalized, as these awards are typically granted to individuals not involved in capitalizable activities. For the year ended December 31, 2018, share-based compensation was $48.8 million compared to $42.4 million and $43.7 million for the same periods in 2017 and 2016, respectively.

Nonvested Awards

The Company granted shares of TSYS common stock to certain key employees andnon-management members of its Board of Directors. The grants to certain key employees were issued under nonvested stock bonus awards and are typically for services to be provided in the future and vest over a period of up to four years. The grants to non-management members of the Board of Directors were fully vested on the date of grant. The market value of the TSYS common stock at the date of issuance is charged as compensation expense over the vesting periods or derived service periods.

The following table summarizes the number of shares granted each year:

	2018	2017	2016
Number of shares granted	**326,968**	329,051	362,804
Market value *(in millions)*	**$ 29.1**	18.1	16.8

A summary of the status of TSYS' nonvested shares as of December 31, 2018, 2017 and 2016 and the changes during the periods are presented below:

	2018		2017		2016	
(in thousands, except per share data)	**Shares**	**Weighted Average Grant date Fair Value**	Shares	Weighted Average Grant date Fair Value	Shares	Weighted Average Grant date Fair Value
Outstanding at beginning of year	**634**	**$ 47.19**	863	$ 37.78	1,146	$ 31.11
Granted	**327**	**89.13**	329	55.06	363	46.23
Vested	**(336)**	**46.10**	(458)	36.01	(563)	29.95
Forfeited/canceled/adjusted	**(85)**	**54.30**	(100)	43.82	(84)	36.79
Outstanding at end of year	**540**	**$ 72.08**	634	$ 47.19	863	$ 37.78

As of December 31, 2018, there was approximately $21.6 million of total unrecognized compensation cost related to nonvested share-based compensation arrangements. That cost is expected to be recognized over a remaining weighted average period of 1.8 years.

Performance- and Market-Based Awards

The Company granted performance- and market-based shares to certain key executives and granted performance-based shares to certain key employees. The performance- and market-based goals are established by the Compensation Committee of the Board of Directors and will vest up to a maximum of 200% of target. During 2018, 2017 and 2016, the Compensation Committee established performance goals based on various financial and market-based measures. Compensation expense for performance-based shares is measured on the grant date based on the quoted market price of TSYS common stock.

The Company estimates the probability of achieving the goals through the performance period and expenses the awards on a straight-line basis over the derived service period. The fair value of market-based awards is estimated on the grant date using a Monte Carlo simulation model. The Company expenses market-based awards on a straight-line basis. Compensation costs related to performance- and market-based shares are recognized through the longer of the performance period, the vesting period, or the derived service period. As of December 31, 2018, there was approximately $19.7 million of unrecognized compensation cost related to TSYS performance-based awards that is expected to be recognized through December 2020. As of December 31, 2018, there was approximately $2.0 million of unrecognized compensation cost related to TSYS market-based awards that is expected to be recognized through December 2020.

The number of market-based awards granted during 2018, 2017 and 2016 were 33,940, 44,275, and 58,807, respectively. The performance measure for the market-based awards is the Company's Total Shareholder Return ("TSR") as compared to the TSR of the companies in the S&P 500 at the end of the performance period.

During the years ended December 31, 2018, 2017 and 2016, the Company granted performance-based awards based onnon-financial operational metrics and the following financial performance measures:

Performance Measure	Definition of Measure
Adjusted diluted EPS	Adjusted earnings divided by weighted average diluted shares outstanding used for diluted EPS calculations. Adjusted earnings is net income excluding the after-tax impact of share-based compensation expense, amortization of acquisition intangibles, merger and acquisition expenses for completed acquisitions and litigation claims, judgments or settlement expenses and related legal expenses.
Net revenue	Net revenue is total revenue less reimbursable items, as well as merchant acquiring interchange and payment network fees charged by card associations or payment networks that are recorded by TSYS as expense.
Adjusted EPS	Adjusted EPS is adjusted earnings divided by weighted average shares outstanding used for basic EPS.
Revenues before reimbursable items	Revenues before reimbursable items is total revenue less reimbursable items which consist ofout-of-pocket expenses which are reimbursed by the Company's clients. These expenses consist primarily of postage, access fees and third-party software.

The number of performance-based shares with a one-year performance period granted during the years ended December 31, 2018, 2017 and 2016 totaled 84,600, 146,094, and 160,600, respectively. The number of performance-based shares with a three-year performance period granted during the years ended December 31, 2018, 2017 and 2016 totaled 130,840, 129,442, and 312,293, respectively. The grants awarded with a three-year performance period during 2018, 2017 and 2016 will be expensed through December 31, 2020, 2019 and 2018, respectively.

A summary of the awards authorized in each year is below:

	Total Number of Shares Awarded[1]	Potential Number of Performance- and Market-Based Shares to be Vested[2]	Year Potential Performance-and Market-Based Shares Will Fully Vest[3]
2018	**249,380**	**426,963**	**2021**
2017	319,811	903,364	2020
2016	531,700	687,015	2019

1 *Shares awarded does not include dividend equivalents.*

2 *Includes dividend equivalents.*

3 *Represents year in which authorized performance and market-based shares will fully vest if they had been granted during 2018, 2017, and 2016, respectively.*

A summary of the status of TSYS' performance- and market-based nonvested shares as of December 31, 2018, 2017 and 2016 and changes during those periods are presented below:

	2018		2017		2016	
(in thousands, except per share data)	**Shares[1]**	**Weighted Average Grant Date Fair Value**	**Shares[1]**	**Weighted Average Grant Date Fair Value**	**Shares[1]**	**Weighted Average Grant Date Fair Value**
Outstanding at beginning of year	**805**	**$ 45.41**	982	$ 33.43	918	$ 31.19
Granted	**521**	**93.28**	618	52.48	540	45.91
Vested	**(569)**	**40.69**	(621)	14.85	(140)	37.91
Forfeited/canceled/adjusted	**(112)**	**59.50**	(174)	46.98	(336)	37.70
Outstanding at end of year	**645**	**$ 67.44**	805	$ 45.41	982	$ 33.43

1 Includes dividend equivalents.

Stock Option Awards

Stock options generally become exercisable in three equal annual installments on the anniversaries of the date of grant and expire ten years from the date of grant. The required service period for retirement eligible employees is typically 12 or 18 months. For retirement eligible employees who retire prior to completing this required service period, the options vest on a pro-rata basis based upon the number of months employed during the full service period. For retirement eligible employees who retire after the required 18-month service period, the options become fully vested upon retirement. For retirement eligible employees who retire after the required 12-month service period, the option holder is deemed to have continued employment through the end of the vesting period and the options continue to vest in accordance with their terms. During 2018, 2017 and 2016, the Company granted stock options to key TSYS executive officers and non-management members of its Board of Directors. The grants to key TSYS executive officers were issued for services to be provided in the future and vest over a period of three years. The grants to the Board of Directors were fully vested on the date of grant. The weighted average fair value of the options granted was estimated on the date of grant using the Black-Scholes-Merton option-pricing model.

In December 2018, the Company modified the exercise provisions for stock option awards granted tonon-management members of its Board of Directors. The modification permits non-management directors to exercise the option for the remainder of the option's term if the director's service ceases for any reason. Previously, the non-management members of the Board of Directors had one year from the time they retire from the Board of Directors to exercise their options. The total incremental compensation cost resulting from the modification is immaterial.

The following table summarizes the weighted average assumptions, and the weighted average fair value of the options:

	2018	**2017**	**2016**
Number of options granted	**362,525**	550,527	687,685
Weighted average exercise price	**$ 86.91**	54.97	47.01
Risk-free interest rate	**2.55%**	1.78	1.24%
Expected volatility	**21.80%**	21.72	21.53%
Expected term (years)	**4.9**	4.6	4.5
Dividend yield	**0.63%**	0.73	0.86%
Weighted average fair value	**$ 19.44**	10.85	8.50

A summary of TSYS' stock option activity as of December 31, 2018, 2017 and 2016, and changes during the years ended on those dates is presented below:

	2018		2017		2016	
(in thousands, except per share data)	Options	Weighted Average Exercise Price	Options	Weighted Average Exercise Price	Options	Weighted Average Exercise Price
Outstanding at beginning of year	**2,695**	**$ 37.15**	2,996	$ 32.78	2,887	$ 28.07
Granted	**362**	**86.91**	551	54.97	688	47.01
Exercised	**(1,020)**	**30.55**	(730)	30.05	(500)	23.43
Forfeited/canceled	**(45)**	**51.72**	(122)	52.76	(79)	43.49
Outstanding at end of year	**1,992**	**$ 49.27**	2,695	$ 37.15	2,996	$ 32.78
Options exercisable at year-end	**1,234**	**$ 38.08**	1,758	$ 31.00	1,877	$ 28.45
Weighted average fair value of options granted during the year		**$ 19.44**		$ 10.85		$ 8.50

As of December 31, 2018, the average remaining contractual life and intrinsic value of TSYS' outstanding and exercisable stock options were as follows:

	Outstanding	Exercisable
Average remaining contractual life (in years)	8.4	6.0
Aggregate intrinsic value (in thousands)	$ 12,437	53,366

Shares Issued for Options Exercised

During 2018, 2017 and 2016, employees of the Company exercised options for shares of TSYS common stock that were issued from treasury. The table below summarizes these stock option exercises by year:

(in thousands)	Options Exercised and Issued from Treasury	Intrinsic Value
2018	**1,020**	**$ 57,868**
2017	730	23,629
2016	500	12,984

For awards granted before January 1, 2006, that were not fully vested on January 1, 2006, the Company recorded the tax benefits from the exercise of stock options as increases to the "Additional paid-in capital" line item of the Consolidated Balance Sheets. Through December 31, 2016, if the Company recognized tax benefits, the Company recorded these tax benefits from share-based compensation costs as cash inflows in the financing section and cash outflows in the operating section in the Consolidated Statement of Cash Flows. The Company elected to use the short-cut method to calculate its historical pool of windfall tax benefits. As previously disclosed, the Company adopted ASU 2016-09 *Compensation- Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting* effective January 1, 2017 on a prospective basis.

As of December 31, 2018, there was approximately $3.6 million of total unrecognized compensation cost related to TSYS stock options that is expected to be recognized over a remaining weighted average period of 1.7 years.

Note 19: Treasury Stock

The following table summarizes shares held as treasury stock and their related carrying value as of December 31:

(in thousands)	Number of Treasury Shares	Treasury Shares Cost
2018	**22,179**	**$ 1,042,687**
2017	21,862	909,960
2016	19,314	646,047

Stock Repurchase Plan

In January 2015, TSYS announced that its Board had approved a stock repurchase plan to purchase up to 20 million shares of TSYS stock. The shares may be purchased from time to time at prices considered appropriate. There is no expiration date for the plan.

The table below summarizes these repurchases under the plan by year:

(in thousands, except per share data)	Total Number of Shares Purchased	Average Price Paid per Share	Repurchased Shares Cost
2018	**2,000**	**$ 85.95**	**$ 171,898**
2017	3,850	73.41	282,645
2016	500	48.57	24,287

The following table sets forth information regarding the Company's purchases of its common stock on a monthly basis during the three months ended December 31, 2018:

(in thousands, except per share data)	Total Number of Shares Purchased	Average Price Paid per Share[1]	Total Number of Cumulative shares Purchased as Part of Publicly Announced Plans or Programs[2]	Maximum Number of Shares That May yet be Purchased Under the Plans or Programs[2]
October 2018	—	$ —	9,500	10,500
November 2018	740	85.77	10,240	9,760
December 2018	1,268	86.00	11,500	8,500
Total	2,008[3]	$ 85.92		

1 *Includes a total of 7,681 shares (not rounded) in December withheld for payment of taxes.*

2 *In January 2015, TSYS' Board of Directors approved a stock repurchase plan to repurchase up to 20 million shares of TSYS stock. The shares may be purchased from time to time at prices considered appropriate. There is no expiration date for the plan.*

3 *Total number of shares purchased amounts may not total due to rounding.*

Treasury Shares

In 2008, the Compensation Committee approved "share withholding for taxes" for all employee nonvested awards, and also for employee stock options under specified circumstances. The dollar amount of the income tax liability from each exercise is converted into TSYS shares and withheld at the statutory minimum. The shares are added to the treasury account and TSYS remits funds to the Internal Revenue Service to settle the tax liability. During 2018 and 2017, the Company acquired 12,518 shares for approximately $1.1 million, and acquired 20,875 shares for approximately $1.6 million, respectively, as a result of share withholding for taxes.

Note 20: Accumulated Other Comprehensive Loss (AOCL)

Comprehensive income (loss) for TSYS consists of net income, cumulative foreign currency translation adjustments, unrealized gains on available for sale securities and the recognition of an overfunded or underfunded status of a defined benefit postretirement plan recorded as a component of shareholders' equity.

The income tax effects allocated to and the cumulative balance of each component of accumulated other comprehensive income ("AOCI") (loss) are as follows:

(in thousands)	Foreign Currency Translation Adjustments	Gain on Available-For-Sale Securities	Change in Postretirement Healthcare Plans	Total Accumulated Other Comprehensive Loss, Net of Tax
Balance as of December 31, 2015	$ (35,013)	2,503	(1,034)	$ (33,544)
Pretax amount	(36,341)	11,394	775	(24,172)
Tax effect	(5,872)	4,035	279	(1,558)
Net-of-tax amount	(30,469)	7,359	496	(22,614)
Balance as of December 31, 2016	(65,482)	9,862	(538)	(56,158)
Pretax amount	24,794	(2,050)	(682)	22,062
Tax effect	2,776	(634)	(90)	2,052
Net-of-tax amount	22,018	(1,416)	(592)	20,010
Balance as of December 31, 2017	(43,464)	8,446	(1,130)	(36,148)
Pretax amount	**(21,495)**	**(6,896)**	**(682)**	**(29,073)**
Tax effect	**(1,169)**	**(1,534)**	**34**	**(2,669)**
Net-of-tax amount	**(20,326)**	**(5,362)**	**(716)**	**(26,404)**
Reclassification for adoption of ASU 2018-02 (Note 1)	**604**	**1,968**	**(243)**	**2,329**
Balance as of December 31, 2018	**$ (63,186)**	**5,052**	**(2,089)**	**$ (60,223)**

As discussed in Note 1, the Company early adopted ASU2018-02 as of July 1, 2018 and recorded a balance sheet reclassification of $2.3 million between accumulated other comprehensive loss and retained earnings.

Consistent with its overall strategy of pursuing international investment opportunities, TSYS adopted the permanent reinvestment exception under GAAP, with respect to future earnings of certain foreign subsidiaries. Its decision to permanently reinvest foreign earnings offshore means TSYS will no longer allocate taxes to foreign currency translation adjustments associated with these foreign subsidiaries accumulated in other comprehensive income.

Note 21: Segment Reporting, including Geographic Area Data and Major Customers

TSYS provides global payment processing and other services to card-issuing and merchant acquiring institutions in the United States and internationally through online accounting and electronic payment processing systems. The Company also provides financial service solutions to consumers and businesses in the United States. Corporate expenses, such as finance, legal, human resources, mergers and acquisitions and investor relations are categorized as Corporate Administration and Other.

At TSYS, the chief operating decision maker ("CODM") is a group consisting of Senior Executive Management. The information utilized by the CODM consists of the financial statements and the main metrics monitored are revenue growth and growth in profitability. During the second quarter of 2018, the CODM renamed the Netspend segment to the Consumer Solutions segment as a part of the rebranding of the segment. There has been no change to the composition of the Consumer Solutions segment. Therefore, no prior periods were restated.

The Company acquired Cayan in January 2018 and substantially all of the assets of iMobile3, LLC in June 2018. In April 2016, the Company completed the acquisition of all of the outstanding stock of TransFirst. These acquisitions are part of the Merchant Solutions segment. Refer to Note 23 for more information regarding the Company's acquisitions.

Issuer Solutions includes electronic payment processing services and other services provided from within the North America region and internationally. Merchant Solutions includes electronic processing and other services provided to merchants and merchant acquirers. The Consumer Solutions segment provides GPR prepaid debit and payroll cards, demand deposit accounts and other financial service solutions to the underbanked and other consumers and businesses in the United States.

TSYS' operating segments share certain resources, such as information technology support, that TSYS allocates based on various metrics depending on the nature of the service.

Operating Segments (in thousands)	**Years Ended December 31,**		
	2018	2017	2016
Adjusted operating income by segment:			
Issuer Solutions (a)	**$ 608,392**	574,580	525,025
Merchant Solutions (b)	**484,197**	391,466	307,595
Consumer Solutions (c)	**193,472**	182,082	160,371
Corporate Administration and Other	**(151,167)**	(148,564)	(135,996)
Adjusted segment operating income[1] (d)	**1,134,894**	999,564	856,995
Less:			
Share-based compensation	**48,758**	42,409	43,728
Cayan and TransFirst merger & acquisition (M&A) and integration expenses[2]	**26,550**	13,367	28,176
Litigation, claims, judgments or settlements	**—**	1,947	21,719
Acquisition intangible amortization	**236,848**	207,797	189,990
Operating income	**822,738**	734,044	573,382
Nonoperating expenses, net	**(162,974)**	(116,482)	(112,350)
Income before income taxes and equity in income of equity investments	**$ 659,764**	617,562	461,032
Net revenue by segment:			
Issuer Solutions (e)	**$1,718,177**	1,594,959	1,515,462
Merchant Solutions (f)	**1,344,718**	1,103,682	898,533
Consumer Solutions (g)	**806,430**	746,870	663,579
Segment net revenue	**3,869,325**	3,445,511	3,077,574
Less: intersegment revenues	**53,425**	45,179	35,698
Net revenue[3] (h)	**3,815,900**	3,400,332	3,041,876
Add: reimbursable items, interchange and payment network fees[4]	**212,311**	1,527,633	1,128,201
Total revenues	**$4,028,211**	4,927,965	4,170,077
Adjusted segment operating margin on net revenue:			
Issuer Solutions (a)/(e)	**35.4%**	36.0%	34.6%
Merchant Solutions (b)/(f)	**36.0%**	35.5%	34.2%
Consumer Solutions (c)/(g)	**24.0%**	24.4%	24.2%
Adjusted segment operating margin on net revenue (d)/(h)	**29.7%**	29.4%	28.2%

1 *Adjusted segment operating income excludes acquisition intangible amortization, TransFirst and Cayan M&A and integration expenses, share-based compensation and expenses associated with Corporate Administration and Other.*

2 *Excludes share-based compensation.*

3 *Net revenue is total revenues less reimbursable items (such as postage), as well as, merchant acquiring interchange and payment network fees charged by the card associations or payment networks that are recorded by TSYS as expense.*

4 *As discussed in Note 1, the most significant impact of the Company's adoption of ASC 606 as of January 1, 2018 is the result of gross versus net presentation of interchange and payment network fees. In 2018, these fees collected on behalf of the payment networks and card issuers are presented "net" of the amounts paid to them, as opposed to the "gross" presentation for certain of these fees in 2017 and 2016.*

The following table presents the Company's depreciation and amortization expense by segment:

(in thousands)	Years Ended December 31, 2018	2017	2016
Depreciation and amortization by segment:			
Issuer Solutions	**$ 119,402**	147,914	141,309
Merchant Solutions	**30,713**	29,477	25,553
Consumer Solutions	**17,424**	15,838	13,133
Segment depreciation and amortization	**167,539**	193,229	179,995
Acquisition intangible amortization	**236,848**	207,797	189,990
Corporate administration and other	**4,186**	4,880	3,561
Total depreciation and amortization[1]	**$ 408,573**	405,906	373,546

1 *Client incentive/contract asset amortization is no longer included in depreciation and amortization due to the adoption of ASC 606 on January 1, 2018.*

The following table presents the Company's total assets by segment:

(in thousands)	As of December 31, 2018	2017
Issuer Solutions	**$ 6,843,451**	5,735,195
Merchant Solutions	**4,248,183**	3,136,395
Consumer Solutions	**1,374,667**	1,418,644
Intersegment assets	**(4,997,592)**	(3,958,545)
Total assets	**$ 7,468,709**	6,331,689

The Company maintains property and equipment, net of accumulated depreciation and amortization, in the following geographic areas:

(in thousands)	As of December 31, 2018	2017
United States	**$ 321,119**	273,690
Europe	**45,872**	43,586
Other	**16,083**	7,942
Total	**$ 383,074**	325,218

The following tables reconcile geographic revenues to external revenues by operating segment based on the domicile of the Company's customers for the years ended December 31:

	2018[2]				
(in thousands)	Issuer Solutions	Merchant Solutions	Consumer Solutions	Total	Percentage of Revenues
United States	**$1,079,461**	**1,350,671**	**806,287**	**$3,236,419**	**80.4%**
Europe[1]	**375,793**	**625**	—	**376,418**	**9.3**
Canada[1]	**324,937**	**1,148**	—	**326,085**	**8.1**
Other[1]	**88,114**	**1,175**	—	**89,289**	**2.2**
Total	**$1,868,305**	**1,353,619**	**806,287**	**$4,028,211**	**100.0%**

(in thousands)	2017 Issuer Solutions	Merchant Solutions	Consumer Solutions	Total	Percentage of Revenues
United States	$1,051,292	2,428,327	745,235	$4,224,854	85.7%
Europe[1]	320,400	284	—	320,684	6.5
Canada[1]	313,674	1,496	—	315,170	6.4
Other[1]	66,102	1,155	—	67,257	1.4
Total	$1,751,468	2,431,262	745,235	$4,927,965	100.0%

(in thousands)	2016 Issuer Solutions	Merchant Solutions	Consumer Solutions	Total Consumer	Percentage of Revenues
United States	$1,032,381	1,826,775	660,845	$3,520,001	84.4%
Europe[1]	306,894	227	—	307,121	7.4
Canada[1]	284,028	705	—	284,733	6.8
Other[1]	57,460	762	—	58,222	1.4
Total	$1,680,763	1,828,469	660,845	$4,170,077	100.0%

1 *Certain of these revenues are impacted by movements in foreign currency exchange rates.*

2 *Includes the impact of adopting ASC 606.*

MAJOR CUSTOMER: For the years ended December 31, 2018, 2017 and 2016, the Company had no major customers.

Note 22: Supplemental Cash Flow Information

Equipment Acquired Under Capital Lease Obligations and Software Acquired Under License Agreements

The Company acquired approximately $8.4 million, $40.8 million and $1.8 million of equipment under capital lease obligations in 2018, 2017 and 2016, respectively. The Company acquired approximately $14.8 million and $8.5 million of software under license agreements in 2018 and 2017, respectively. The amount of software acquired under license agreements in 2016 was insignificant. Additionally, the Company acquired $52.2 million of software through vendor financing and other arrangements in 2018.

Note 23: Acquisitions

The revenue and operating loss of the Company's 2018 acquisitions included in the Company's Consolidated Statements of Income since the acquisitions are $179.0 million and ($5.4) million, respectively, for the year ended December 31, 2018.

iMobile3

On June 1, 2018, TSYS acquired substantially all of the assets of iMobile3, LLC, a leading provider of private-labeled small business solutions within the payments industry, for $13.4 million in cash. The newly acquired business is part of the Company's Merchant Solutions segment. The goodwill amount of $5.3 million arising from the acquisition is primarily attributable to the economies of scale from combining the assets of TSYS and iMobile3. All of the goodwill was assigned to TSYS' Merchant Solutions segment. The goodwill recognized is expected to be deductible for income tax purposes. Identifiable intangible assets acquired in the iMobile3 acquisition include technology of $6.9 million and non-compete agreements of $900,000. The measurement period, during which changes in assets or other items of consideration are subject to adjustment, ends one year following the acquisition date. The intangible assets are being amortized over their estimated useful lives of three to five years based on the pattern of expected future economic benefit, which approximates a straight-line basis over the useful lives of the assets.

Additional disclosures relating to the iMobile3 acquisition, including pro forma financial information, have not been included since the transaction is insignificant.

Redeemable Noncontrolling Interest – CPAY

2018

In April 2018, the Company acquired the remaining 15% equity interest in Central Payment Co., LLC from a privately-owned company for $126.0 million.

2017

On February 3, 2017, the Company acquired an additional 10% equity interest in CPAY from a privately-owned company for $70.0 million. This purchase reduced the remaining redeemable noncontrolling interest in CPAY to 15% of its total outstanding equity and extended the put call arrangement until April 2018. The transaction resulted in a decrease to noncontrolling interest of $9.8 million and a decrease to additional paid-in-capital of $60.2 million.

Cayan

On January 11, 2018, TSYS completed the acquisition of 100 percent ownership of Cayan, a payment technology company focused on integrated payment solutions and merchant acquiring, in an all cash transaction valued at approximately $1.05 billion. In connection with the acquisition, the Company entered into a Loan Facility with Bank of America, N.A. as administrative agent and the other lenders a party thereto from time to time to provide a $450 million two-year bilateral loan (see Note 12). The results of the newly acquired business are being reported by TSYS as part of the Merchant Solutions segment.

The goodwill amount of $0.8 billion arising from the acquisition is primarily attributable to the expansion of the Merchant Solutions segment's customer base, differentiation in market opportunity and economies of scale expected from combining the operations of TSYS and Cayan. All of the goodwill was assigned to TSYS' Merchant Solutions segment. Approximately $0.4 billion of the goodwill recognized is expected to be deductible for income tax purposes.

The following table summarizes the consideration paid for Cayan and the recognized amounts of the identifiable assets acquired and liabilities assumed on January 11, 2018 (the acquisition date).

(in thousands)	
Consideration	
Cash	$ 1,054,931
Fair value of total consideration transferred	$ 1,054,931
Recognized amounts of identifiable assets acquired and liabilities assumed:	
Cash	$ 16,854
Accounts receivable	16,421
Property and equipment	18,037
Deferred tax assets	3,558
Other assets	3,032
Identifiable intangible assets	314,785
Deferred tax liabilities	(127,804)
Other liabilities	(36,600)
Total identifiable net assets	208,283
Goodwill	846,648
Total identifiable assets acquired and liabilities assumed	$ 1,054,931

During 2018, there was an increase of $1.2 million in the purchase price due to the finalization of the working capital adjustment. In addition, there was a $13.3 million decrease in identifiable tangible assets, a $6.8 million decrease in identifiable intangible assets, a $14.0 million increase in deferred tax liabilities and a $3.4 million increase in other liabilities that resulted in a net increase to goodwill of $38.7 million.

Identifiable intangible assets acquired in the Cayan acquisition include merchant relationships, channel relationships, current technology, the Cayan and Genius trade names, non-compete agreements and favorable leases. The identifiable intangible assets had no significant estimated residual value. These intangible assets are being amortized over their estimated useful lives of one to ten years based on the pattern of expected future economic benefit, which approximates a straight-line basis over the useful lives of the assets. The fair value of the acquired identifiable intangible assets of $314.8 million was estimated using the income approach (discounted cash flow and relief from royalty methods) and cost approach. The fair values and useful lives of the identified intangible assets were primarily determined using forecasted cash flows, which included estimates for certain assumptions such as revenues, expenses, attrition rates and royalty rates. The estimated fair value of identifiable intangible assets acquired in the acquisition and the related estimated weighted average useful lives are as follows:

(in millions)	Fair Value	Weighted Average Useful Life *(in years)*
Merchant relationships	$ 171.6	8.0
Channel relationships	80.4	10.0
Technology	40.8	5.0
Trade names	17.1	3.5
Covenants not-to-compete	3.2	2.0
Favorable leases	1.7	6.5
Total acquired identifiable intangible assets	$ 314.8	7.8

The fair value measurement of the identifiable intangible assets represents Level 3 measurements as defined in ASC 820*Fair Value Measurement*. Key assumptions include (a) cash flow projections based on market participant and internal data, (b) a discount rate of 12.0%, (c) a pre-tax royalty rate range of 1.5-8.0%, (d) attrition rate of 12.0%, (e) an effective tax rate of 27%, and (f) a terminal value based on a long-term sustainable growth rate of 3%.

In connection with the acquisition, TSYS incurred $16.3 million in acquisition-related costs primarily related to professional legal, finance, and accounting costs. These costs were expensed as incurred and are included in selling, general and administrative expenses in the Consolidated Statements of Income for the year ended December 31, 2018.

Pro Forma Results of Operations (Unaudited)

The following unaudited pro forma financial information shows the results of operations of the combined entities as if the acquisition of Cayan had occurred on January 1, 2017. The unaudited pro forma information reflects certain pro forma adjustments to the combined financial information of TSYS and Cayan. The pro forma adjustments include incremental depreciation and amortization expense, incremental interest expense associated with new long-term debt and the elimination of non-recurring transaction costs directly related to the acquisition.

(in thousands)	Supplemental Pro Forma Year ended December 31, 2017
Total revenues	$ 5,077,632
Net income attributable to TSYS common shareholders	$ 549,771

The unaudited pro forma financial information presented above does not purport to represent what the actual results of operations would have been if the acquisition of Cayan's operations had occurred prior to January 1, 2017, nor is it indicative of the future operating results of TSYS. The unaudited pro forma financial information does not reflect the impact of future events that may occur after the acquisition, including, but not limited to, anticipated cost savings from operating synergies. As discussed in Notes 1 and 2, the most significant impact of the Company's adoption of ASC 606 as of January 1, 2018 is the result of gross versus net presentation of interchange and payment network fees. In 2018, these fees collected on behalf of the payment networks and card issuers are presented "net" of the amounts paid to them, as opposed to the "gross" presentation for certain of these fees in 2017 and 2016.

The unaudited pro forma financial information presented in the table above has been adjusted to give effect to adjustments that are (1) directly related to the business combination; (2) factually supportable; and (3) expected to have a continuing impact. These adjustments include, but are not limited to, the application of accounting policies; and depreciation and amortization related to fair value adjustments to property, plant and equipment and intangible assets.

The pro forma adjustments do not reflect the following material items that result directly from the acquisition and which impacted statement of operations following the acquisition:

- Acquisition and related financing transaction costs relating to fees to investment bankers, attorneys, accountants, and other professional advisors, and other transaction-related costs that were not capitalized as deferred financing costs; and
- The effect of anticipated cost savings or operating efficiencies expected to be realized and related restructuring charges such as technology and infrastructure integration expenses, and other costs related to the integration of Cayan into TSYS.

TransFirst

2017

In 2017, the Company decreased the Merchant Solutions goodwill due to deferred tax adjustments of $12.1 million and thewrite-off of a note receivable of $727,000 on the opening balance sheet of TransFirst.

2016

On April 1, 2016, the Company acquired all of the outstanding capital stock of TransFirst for an aggregate purchase price of $2.35 billion in cash as of the closing, which was subject to certain working capital and other adjustments, as described in the Purchase Agreement. TransFirst previously operated as a privately held company, under the ownership of Vista Equity Partners. The results of the newly acquired business are being reported by TSYS as part of the Merchant Solutions segment.

The Company funded the cash consideration and the payment of transaction related expenses through a combination ofcash-on-hand and proceeds from debt financings, including proceeds drawn under the Company's 2016 Credit Agreement and the proceeds from the issuance of the 2016 Notes, which together included proceeds of approximately $2.35 billion. The goodwill amount of $1.7 billion arising from the acquisition is primarily attributable to the expansion of the Merchant Solutions segment's customer base, differentiated distribution channels and economies of scale expected from combining the operations of TSYS and TransFirst. All of the goodwill was assigned to TSYS' Merchant Solutions segment. The goodwill recognized is not expected to be deductible for income tax purposes.

Identifiable intangible assets acquired in the TransFirst acquisition include merchant relationships, channel relationships, current technology, the TransFirst trade name, not-to-compete agreements and a favorable lease. The identifiable intangible assets had no significant estimated residual value. These intangible assets are being amortized over their estimated useful lives of one to ten years based on the pattern of expected future economic benefit, which approximates a straight-line basis over the useful lives of the assets. The fair value of the acquired identifiable intangible assets of $814.1 million was estimated using the income approach (discounted cash flow and relief from royalty methods) and cost approach. The fair values and useful lives of the identified intangible assets were primarily determined using forecasted cash flows, which included estimates for certain assumptions such as revenues, expenses, attrition rates and royalty rates.

Note 24: Collaborative Arrangement

Until March 2018, TSYS had a 45% interest in an enterprise jointly owned with two other entities which operates aircraft for the owners' internal use. In March 2018, TSYS and one of the other entities each purchased a 5% ownership from the third entity for an immaterial amount, which effectively removed the third entity from the joint enterprise. This transaction resulted in TSYS and the other entity having a 50% interest in the joint enterprise. The arrangement allows each entity access to the aircraft and each entity pays for its usage of the aircraft. Each quarter, the net operating costs of the enterprise are shared among the owners.

Note 25: Earnings Per Share

The following table illustrates basic and diluted EPS under the guidance of GAAP for the years ended December 31, 2018, 2017 and 2016:

(in thousands, except per share data)	2018 Common Stock	2017 Common Stock	2016 Common Stock
Basic EPS:			
Net income attributable to TSYS common shareholders	**$ 576,656**	586,185	319,638
Less income allocated to nonvested awards	**(350)**	(1,373)	(1,557)
Net income allocated to common stock for EPS calculation (a)	**$ 576,306**	584,812	318,081
Average common shares outstanding (b)	**181,956**	183,309	182,744
Basic EPS (a)/(b)	**$ 3.17**	3.19	1.74
Diluted EPS:			
Net income attributable to TSYS common shareholders	**$ 576,656**	586,185	319,638
Less income allocated to nonvested awards	**(350)**	(1,373)	(1,557)
Add income reallocated to nonvested awards[1]	**350**	1,373	1,557
Net income allocated to common stock for EPS calculation (c)	**$ 576,656**	586,185	319,638
Average common shares outstanding	**181,956**	183,309	182,744
Increase due to assumed issuance of shares related to common equivalent shares outstanding	**976**	1,162	813
Average nonvested awards[1]	**987**	959	891
Average common and common equivalent shares outstanding (d)	**183,919**	185,430	184,448
Diluted EPS (c)/(d)	**$ 3.14**	3.16	1.73

1 In accordance with the diluted EPS guidance under thetwo-class method, the Company uses the approach-either the treasury stock method or the two-class method assuming a participating security is not exercised- that is more dilutive.

The diluted EPS calculation excludes stock options and nonvested awards that are exercisable into 0.3 million, 0.3 million and 0.4 million common shares for the years ended December 31, 2018, 2017 and 2016, respectively, because their inclusion would have been anti-dilutive.

Note 26: Subsequent Events

Management performed an evaluation of the Company’s activity as of the date these audited financial statements were issued and has concluded that there are no significant events requiring disclosure.

TOTAL SYSTEM SERVICES, INC.
Schedule II
Valuation and Qualifying Accounts
(in thousands)

	Balance at beginning of period	Additions Charged to costs and expenses	Deductions Write-offs	Balance at end of period
Year ended December 31, 2016:				
Provision for doubtful accounts	$ 1,757	6,970(1)	(5,245)(3)	$ 3,482
Provision for billing adjustments	$ 926	614(1)	(180)(3)	$ 1,360
Provision for merchant losses	$ 1,366	1,682(1)	(1,009)(3)	$ 2,039
Transaction processing provisions - processing errors	$ 6,457	3,669(2)	(7,275)(3)	$ 2,851
Provision for cardholder losses	$ 9,391	49,362(4)	(48,226)(3)	$ 10,527
Deferred tax valuation allowance	$ 18,446	4,124(5)	(1,269)(6)	$ 21,301
Year ended December 31, 2017:				
Provision for doubtful accounts	$ 3,482	10,796(1)	(8,947)(3)	$ 5,331
Provision for billing adjustments	$ 1,360	(627)(1)	(186)(3)	$ 547
Provision for merchant losses	$ 2,039	5,002(1)	(2,715)(3)	$ 4,326
Transaction processing provisions - processing errors	$ 2,851	6,714(2)	(7,357)(3)	$ 2,208
Provision for cardholder losses	$ 10,527	51,194(4)	(52,202)(3)	$ 9,519
Deferred tax valuation allowance	$ 21,301	8,648(5)	(418)(6)	$ 29,531
Year ended December 31, 2018:				
Provision for doubtful accounts	$ 5,331	9,658(1)	(10,147)(3)	$ 4,842
Provision for billing adjustments	$ 547	655(1)	(61)(3)	$ 1,141
Provision for merchant losses	$ 4,326	2,649(1)	(2,678)(3)	$ 4,297
Transaction processing provisions - processing errors	$ 2,208	4,514(2)	(3,115)(3)	$ 3,607
Provision for cardholder losses	$ 9,519	65,108(4)	(61,574)(3)	$ 13,053
Deferred tax valuation allowance	$ 29,531	996(5)	(2,710)(6)	$ 27,817

(1) Amount reflected includes charges to (recoveries of) bad debt expense which are classified in selling, general and administrative expenses and the charges for billing adjustments which are recorded against revenues.

(2) Amount reflected is the change in transaction processing provisions reflected in cost of services.

(3) Accounts deemed to be uncollectible and written off during the year as it relates to bad debts. Amounts that relate to billing adjustments and transaction processing provisions reflect actual billing adjustments and processing errors charged against the allowances. Amounts that related to cardholder losses reflect write-offs against the provision for cardholder losses.

(4) Amount represents the charges in the provision for cardholder losses reflected in cost of services.

(5) Amount represents an increase in the amount of deferred tax assets, which more likely than not, will not be realized.

(6) Amount represents a decrease in the amount of deferred tax assets, which more likely than not, will not be realized.

EXHIBIT 99.2

Interim unaudited consolidated financial statements of Total System Services, Inc. as of June 30, 2019 and for the three and six months ended June 30, 2019 and 2018.

TOTAL SYSTEM SERVICES, INC.
Consolidated Balance Sheets
(Unaudited)

(in thousands, except per share data)	**June 30, 2019**	December 31, 2018
Assets		
Current assets:		
Cash and cash equivalents (Note 2)	**$ 458,220**	471,156
Accounts receivable, net of allowances for doubtful accounts and billing adjustments of $6.1 million and $6.0 million as of 2019 and 2018, respectively	**513,712**	450,322
Contract assets (Note 3)	**43,847**	30,950
Prepaid expenses and other current assets (Note 2)	**224,048**	188,355
Total current assets	**1,239,827**	1,140,783
Contract assets (Note 3)	**56,925**	47,839
Goodwill	**4,114,851**	4,114,838
Other intangible assets, net of accumulated amortization of $891.1 million and $802.0 million as of 2019 and 2018, respectively	**703,617**	796,702
Intangible assets - computer software, net of accumulated amortization of $955.2 million and $893.4 million as of 2019 and 2018, respectively	**520,494**	534,536
Property and equipment, net of accumulated depreciation and amortization of $530.4 million and $522.7 million as of 2019 and 2018, respectively (Note 4)	**373,868**	383,074
Operating lease right-of-use assets, net (Note 4)	**198,539**	—
Contract cost assets, net of accumulated amortization	**148,938**	145,598
Equity investments, net	**206,504**	180,661
Deferred income tax assets	**7,516**	7,773
Other assets	**135,727**	116,905
Total assets	**$ 7,706,806**	7,468,709
Liabilities		
Current liabilities:		
Accounts payable	**$ 57,911**	97,956
Contract liabilities (Note 3)	**51,553**	47,227
Current portion of operating lease liabilities (Note 4)	**43,346**	—
Accrued salaries and employee benefits	**34,922**	73,143
Current portion of long-term borrowings (Note 5)	**17,811**	20,807
Current portion of obligations under finance leases and license agreements (Note 4)	**17,712**	8,318
Other current liabilities (Note 2)	**278,072**	268,150
Total current liabilities	**501,327**	515,601
Long-term borrowings, excluding current portion (Note 5)	**4,003,248**	3,843,394
Deferred income tax liabilities	**401,486**	380,278
Operating lease liabilities, excluding current portion (Note 4)	**167,102**	—
Obligations under finance leases and license agreements, excluding current portion (Note 4)	**39,490**	46,147
Contract liabilities (Note 3)	**25,281**	21,489
Other long-term liabilities	**74,278**	75,894
Total liabilities	**5,212,212**	4,882,803
Commitments and contingencies (Note 6)		
Shareholders' Equity		
Shareholders' equity:		
Common stock - $0.10 par value. Authorized 600,000 shares; 202,765 issued as of 2019 and 2018; 176,977 and 180,586 outstanding as of 2019 and 2018, respectively	**20,277**	20,277
Additional paid-in capital	**203,098**	189,889
Accumulated other comprehensive loss, net (Notes 1 and 2)	**(64,200)**	(60,223)
Treasury stock, at cost (25,788 and 22,179 shares as of 2019 and 2018, respectively)	**(1,426,177)**	(1,042,687)
Retained earnings	**3,761,596**	3,478,650
Total shareholders' equity	**2,494,594**	2,585,906
Total liabilities and shareholders' equity	**$ 7,706,806**	7,468,709

See accompanying Notes to Unaudited Consolidated Financial Statements

TOTAL SYSTEM SERVICES, INC.
Consolidated Statements of Income
(Unaudited)

(in thousands, except per share data)	Three months ended June 30, 2019	Three months ended June 30, 2018	Six months ended June 30, 2019	Six months ended June 30, 2018
Total revenues (Notes 3 and 11)	**$1,035,485**	1,007,580	**2,070,016**	1,994,750
Cost of services	**630,820**	617,818	**1,263,032**	1,231,183
Selling, general and administrative expenses	**185,578**	181,064	**364,627**	366,598
Total operating expenses	**816,398**	798,882	**1,627,659**	1,597,781
Operating income	**219,087**	208,698	**442,357**	396,969
Nonoperating expenses, net	**(37,416)**	(41,170)	**(80,407)**	(78,812)
Income before income taxes and equity in income of equity investments	**181,671**	167,528	**361,950**	318,157
Income taxes (Note 8)	**31,128**	37,415	**61,027**	55,549
Income before equity in income of equity investments	**150,543**	130,113	**300,923**	262,608
Equity in income of equity investments, net of tax	**12,217**	12,322	**23,444**	22,929
Net income	**162,760**	142,435	**324,367**	285,537
Net income attributable to noncontrolling interests	**—**	—	**—**	(1,261)
Net income attributable to Total System Services, Inc. (TSYS) common shareholders	**$ 162,760**	142,435	**324,367**	284,276
Basic earnings per share (EPS) attributable to TSYS common shareholders (Note 9)	**$ 0.92**	0.78	**1.83**	1.56
Diluted EPS attributable to TSYS common shareholders (Note 9)	**$ 0.91**	0.78	**1.81**	1.55

See accompanying Notes to Unaudited Consolidated Financial Statements

TOTAL SYSTEM SERVICES, INC.
Consolidated Statements of Comprehensive Income
(Unaudited)

(in thousands)	Three months ended June 30, 2019	Three months ended June 30, 2018	Six months ended June 30, 2019	Six months ended June 30, 2018
Net income	**$162,760**	142,435	**324,367**	285,537
Other comprehensive income (loss), net of tax:				
Foreign currency translation adjustments	**(10,009)**	(21,752)	**416**	(9,257)
Postretirement healthcare plan adjustments	**837**	(211)	**659**	(358)
Unrealized (loss) gain on available-for-sale securities (Note 1)	**—**	(1,840)	**—**	741
Other comprehensive (loss) income	**(9,172)**	(23,803)	**1,075**	(8,874)
Comprehensive income	**153,588**	118,632	**325,442**	276,663
Comprehensive income attributable to noncontrolling interests	**—**	—	**—**	(1,261)
Comprehensive income attributable to TSYS common shareholders	**$153,588**	118,632	**325,442**	275,402

See accompanying Notes to Unaudited Consolidated Financial Statements

TOTAL SYSTEM SERVICES, INC.
Consolidated Statements of Cash Flows
(Unaudited)

(in thousands)	Six months ended June 30, 2019	2018
Cash flows from operating activities:		
Net income	**$ 324,367**	285,537
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	**208,483**	208,679
Amortization of operating lease right-of-use assets	**25,555**	—
Provisions for cardholder losses	**25,540**	34,433
Share-based compensation	**22,214**	20,524
Provisions for bad debt expenses and billing adjustments	**5,587**	5,170
Charges for transaction processing provisions	**1,319**	3,177
Amortization of debt issuance costs	**2,652**	2,362
Dividends received from equity investments	—	892
Loss (gain) on foreign currency	**287**	(107)
Amortization of bond discount	**557**	482
(Gain) loss on disposal of equipment, net	**(801)**	32
Deferred income tax expense	**21,258**	18,657
Changes in value of equity investments	**(5,196)**	—
Equity in income of equity investments, net of tax	**(23,444)**	(22,929)
Changes in operating assets and liabilities, net of effects of acquisitions:		
Accounts receivable	**(69,011)**	(17,489)
Contract assets and contract liabilities	**(13,965)**	(8,797)
Contract cost assets	**(3,214)**	2,989
Prepaid expenses, other current assets and other long-term assets	**(52,859)**	5,111
Accounts payable	**(9,156)**	(3,368)
Accrued salaries and employee benefits	**(38,282)**	(38,784)
Other current liabilities and other long-term liabilities	**(26,461)**	(25,978)
Net cash provided by operating activities	**395,430**	470,593
Cash flows from investing activities:		
Additions to licensed computer software from vendors	**(61,209)**	(19,216)
Purchases of property and equipment	**(30,844)**	(48,608)
Additions to internally developed computer software	**(24,817)**	(19,934)
Cash used in acquisitions, net of cash acquired	—	(1,051,629)
Other investing activities	**(2,700)**	(4,119)
Net cash used in investing activities	**(119,570)**	(1,143,506)
Cash flows from financing activities:		
Principal payments on long-term borrowings, finance lease obligations and license agreements	**(299,499)**	(2,626,534)
Purchase of noncontrolling interest	—	(126,000)
Dividends paid on common stock	**(46,534)**	(47,190)
Subsidiary dividends paid to noncontrolling shareholders	—	(3,778)
Repurchase of common stock under plans and tax withholding	**(400,023)**	(82)
Debt issuance costs	—	(15,979)
Proceeds from borrowings of long-term debt	**450,000**	3,477,000
Proceeds from exercise of stock options	**6,911**	29,289
Net cash (used in) provided by financing activities	**(289,145)**	686,726
Cash, cash equivalents and restricted cash:		
Effect of exchange rate changes on cash, cash equivalents and restricted cash	**(332)**	(4,143)
Net (decrease) increase in cash, cash equivalents and restricted cash	**(13,617)**	9,670
Cash, cash equivalents and restricted cash at beginning of period	**474,279**	451,370
Cash, cash equivalents and restricted cash at end of period	**$ 460,662**	461,040
Supplemental cash flow information:		
Interest paid	**$ 85,404**	71,778
Income taxes paid, net	**$ 59,411**	21,475

See accompanying Notes to Unaudited Consolidated Financial Statements

TOTAL SYSTEM SERVICES, INC.
Consolidated Statements of Changes in Equity
(Unaudited)

(in thousands, except per share data)	Redeemable Noncontrolling Interests	TSYS Shareholders Common Stock Shares	Common Stock Dollars	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss), Net of Tax	Treasury Stock	Retained Earnings	Total Equity
Balance as of December 31, 2018	$ —	202,765	$20,277	189,889	(60,223)	(1,042,687)	3,478,650	$2,585,906
Cumulative effect adjustment from adoption of ASU No. 2016-01 (Note 1)	—	—	—	—	(5,052)	—	5,052	—
Cumulative effect adjustment from adoption of ASU No. 2016-02 (Note 1)	—	—	—	—	—	—	(203)	(203)
Net income	—	—	—	—	—	—	161,607	161,607
Other comprehensive income	—	—	—	—	10,247	—	—	10,247
Common stock issued from treasury shares for exercise of stock options	—	—	—	3,485	—	2,981	—	6,466
Common stock unissued due to forfeiture of nonvested awards	—	—	—	77	—	(77)	—	—
Common stock issued from treasury shares for nonvested awards	—	—	—	(12,812)	—	12,812	—	—
Share-based compensation (Note 7)	—	—	—	11,296	—	—	—	11,296
Cash dividends declared ($0.13 per share)	—	—	—	—	—	—	(22,546)	(22,546)
Purchase of treasury shares	—	—	—	—	—	(400,013)	—	(400,013)
Balance as of March 31, 2019	—	202,765	20,277	191,935	(55,028)	(1,426,984)	3,622,560	2,352,760
Net income	—	—	—	—	—	—	162,760	162,760
Other comprehensive loss	—	—	—	—	(9,172)	—	—	(9,172)
Common stock issued from treasury shares for exercise of stock options	—	—	—	30	—	416	—	446
Common stock issued from treasury shares for nonvested awards	—	—	—	(401)	—	401	—	—
Common stock issued from treasury shares for dividend equivalents	—	—	—	602	—	—	—	602
Share-based compensation (Note 7)	—	—	—	10,932	—	—	—	10,932
Cash dividends declared ($0.13 per share)	—	—	—	—	—	—	(23,724)	(23,724)
Purchase of treasury shares	—	—	—	—	—	(10)	—	(10)
Balance as of June 30, 2019	$ —	202,765	$20,277	203,098	(64,200)	(1,426,177)	3,761,596	$2,494,594

See accompanying Notes to Unaudited Consolidated Financial Statements

TOTAL SYSTEM SERVICES, INC.
Consolidated Statements of Changes in Equity
(Unaudited)

(in thousands, except per share data)	Redeemable Noncontrolling Interests	TSYS Shareholders: Common Stock Shares	Common Stock Dollars	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss), Net of Tax	Treasury Stock	Retained Earnings	Total Equity
Balance as of December 31, 2017	$ 115,689	202,765	$20,277	162,806	(36,148)	(909,960)	3,004,018	$2,240,993
Cumulative effect adjustment from adoption of ASU No. 2014-09 (Note 3)	—	—	—	—	—	—	(4,445)	(4,445)
Net income	1,261	—	—	—	—	—	141,841	141,841
Other comprehensive income	—	—	—	—	14,929	—	—	14,929
Common stock issued from treasury shares for exercise of stock options	—	—	—	5,199	—	21,258	—	26,457
Common stock unissued due to forfeiture of nonvested awards	—	—	—	551	—	(551)	—	—
Common stock issued from treasury shares for nonvested awards	—	—	—	(12,368)	—	12,368	—	—
Common stock issued from treasury shares for dividend equivalents	—	—	—	925	—	9	—	934
Share-based compensation (Note 7)	—	—	—	6,835	—	—	—	6,835
Cash dividends declared ($0.13 per share)	—	—	—	—	—	—	(23,895)	(23,895)
Purchase of treasury shares	—	—	—	—	—	(24)	—	(24)
Adjustments to redemption value of redeemable noncontrolling interest	9,051	—	—	(9,051)	—	—	—	(9,051)
Subsidiary dividends paid to noncontrolling interests	(1)	—	—	—	—	—	—	—
Balance as of March 31, 2018	126,000	202,765	20,277	154,897	(21,219)	(876,900)	3,117,519	2,394,574
Net income	—	—	—	—	—	—	142,435	142,435
Other comprehensive loss	—	—	—	—	(23,803)	—	—	(23,803)
Common stock issued from treasury shares for exercise of stock options	—	—	—	1,110	—	1,717	—	2,827
Common stock unissued due to forfeiture of nonvested awards	—	—	—	78	—	(78)	—	—
Common stock issued from treasury shares for nonvested awards	—	—	—	(577)	—	577	—	—
Share-based compensation (Note 7)	—	—	—	13,406	—	—	—	13,406
Cash dividends declared ($0.13 per share)	—	—	—	—	—	—	(23,908)	(23,908)
Purchase of treasury shares	—	—	—	—	—	(58)	—	(58)
Adjustments to redemption value of redeemable noncontrolling interest	3,777	—	—	(3,777)	—	—	—	(3,777)
Subsidiary repurchase of noncontrolling interests	(126,000)	—	—	—	—	—	—	—
Subsidiary dividends paid to noncontrolling interests	(3,777)	—	—	—	—	—	—	—
Balance as of June 30, 2018	$ —	202,765	$20,277	165,137	(45,022)	(874,742)	3,236,046	$2,501,696

See accompanying Notes to Unaudited Consolidated Financial Statements

Note 1 — Summary of Significant Accounting Policies

Business

Total System Services, Inc.'s ("TSYS'" or the "Company's") revenues are derived from providing payment processing, merchant services and related payment services to financial and nonfinancial institutions, generally under long-term processing contracts. The Company also derives revenues by providing general-purpose reloadable ("GPR") prepaid debit and payroll cards, demand deposit accounts and other financial service solutions to the underbanked and other consumers and businesses. The Company's services are provided through three operating segments: Issuer Solutions, Merchant Solutions and Consumer Solutions.

Through the Company's Issuer Solutions segment, TSYS processes information through its cardholder systems for financial and nonfinancial institutions throughout the United States and internationally. The Company's Merchant Solutions segment provides merchant services to merchant acquirers and merchants mainly in the United States. The Company's Consumer Solutions segment provides financial service solutions to consumers and businesses in the United States.

Pending Merger with Global Payments Inc.

On May 27, 2019, TSYS entered into an Agreement and Plan of Merger (the "Merger Agreement") with Global Payments Inc., a Georgia corporation ("Global Payments"). The Merger Agreement provides that, upon the terms and subject to the conditions set forth therein, TSYS will merge with and into Global Payments (the "Merger"), with Global Payments as the surviving entity in the Merger.

Upon the terms and subject to the conditions set forth in the Merger Agreement, at the effective time of the Merger, each share of TSYS common stock outstanding immediately prior to the effective time of the Merger, other than certain shares held by TSYS or Global Payments, will be converted into the right to receive 0.8101 shares of common stock of Global Payments. Holders of common stock of TSYS will receive cash in lieu of fractional shares. Following the completion of the Merger, former holders of TSYS common stock will own approximately forty-eight percent (48%) and former holders of Global Payments common stock will own approximately fifty-two percent (52%) of the fully diluted shares of the combined company.

The transaction, which is expected to close in the fourth quarter of 2019, is subject to the satisfaction or waiver of customary closing conditions for both parties, including receipt of required regulatory approvals, the approval of shareholders of both companies and other customary closing conditions.

Refer to the definitive joint proxy statement/prospectus of TSYS and Global Payments dated July 23, 2019, as filed by TSYS with the U.S. Securities and Exchange Commission (the "SEC") on July 25, 2019 for additional information on the Merger.

Basis of Presentation

The accompanying unaudited consolidated financial statements of TSYS include the accounts of TSYS and its wholly- and majority-owned subsidiaries. All significant intercompany accounts and transactions have been eliminated in consolidation.

These financial statements have been prepared in accordance with U.S. generally accepted accounting principles ("GAAP") for interim financial information and the instructions to Form 10-Q and Rule 10-01 of Regulation S-X and, therefore, do not include all information and footnotes required by U.S. GAAP for complete financial statements. The preparation of the consolidated financial statements requires management of the Company to make estimates and assumptions relating to the reported amounts of assets and liabilities as of the date of the consolidated financial statements and the reported amounts of revenues and expenses during the period. These estimates and assumptions are developed based upon all information available. Actual results could differ from estimated amounts. All adjustments, consisting of normal recurring accruals, which, in the opinion of management, are necessary for a fair presentation of financial position and results of operations for the periods covered by this report, have been included.

The accompanying unaudited consolidated financial statements should be read in conjunction with the Company's summary of significant accounting policies, consolidated financial statements and related notes included in Exhibit 99.1 to this Current Report on Form 8-K. Results of interim periods are not necessarily indicative of results to be expected for the year.

Out-of-period adjustment

As of January 1, 2019, the Company recorded an adjustment to reclassify the cumulative unrealized gain of $5.1 million related to an investment in common stock with a readily determinable fair value from other comprehensive income to opening retained earnings. This adjustment was recorded to comply with the guidance in Accounting Standards Update ("ASU") No. 2016-01, *Recognition and Measurement of Financial Assets and Financial Liabilities*.

Fair Value Measurement

Refer to Note 3 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K, for a discussion regarding fair value measurement.

The Company had no transfers between Level 1, Level 2 or Level 3 assets during the six months ended June 30, 2019 and 2018.

As of June 30, 2019, the Company had recorded goodwill in the amount of $4.1 billion. The Company performs its annual impairment testing of its goodwill balance as of May 31st of each year. The Company performed its annual impairment testing of its goodwill balance as of May 31, 2019, and this test did not indicate any impairment. The fair value of the reporting units substantially exceeds their carrying value.

Recently Adopted Accounting Pronouncements

The Company adopted the following ASUs on January 1, 2019:

In September 2017, the Financial Accounting Standards Board ("FASB") issued ASU No. 2017-13, *Revenue Recognition (Topic 605), Revenues from Customers (Topic 606), Leases (Topic 840) and Leases (Topic 842),* which made amendments to SEC paragraphs pursuant to the Staff Announcement at the July 20, 2017 Emerging Issues Task Force ("EITF") Meeting and Rescission of Prior SEC Staff Announcements and Observer comments. This guidance, which is effective immediately, generally relates to the adoption of ASC 606 and 842. The adoption of the amendments in this ASU did not have a material impact on the Company's financial position, results of operations or cash flows.

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)*, which introduced a lessee model that brings most operating leases on the balance sheet and aligns many of the underlying principles of the new lessor model with those in the FASB's new revenue recognition standard. The FASB has issued several additional ASUs since this time that provide additional clarification to certain issues existing after the original ASU was released. All of the new standards were effective for the Company on January 1, 2019. TSYS adopted the new leases standard as of January 1, 2019 using the cumulative effect method. See Note 4 for further discussion of the Company's adoption of this new standard.

New Accounting Pronouncements

In June 2016, the FASB issued ASU 2016-13 *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* The amendments in this update change how companies measure and recognize credit impairment for many financial assets. The new expected credit loss model will require companies to immediately recognize an estimate of credit losses expected to occur over the remaining life of the financial assets (including trade receivables) that are in the scope of the update. The update also made amendments to the current impairment model for held-to-maturity and available-for-sale debt securities and certain guarantees. The ASU is effective for the Company on January 1, 2020. Early adoption is permitted for periods beginning on or after January 1, 2019.

The FASB has issued additional ASUs that provide clarification to certain issues identified after ASU 2016-13 was released. In May 2019, the FASB issued ASU 2019-05 *Financial Instruments – Credit Losses (Topic 326): Targeted Transition Relief.* ASU 2019-05 was issued to provide entities with more flexibility in applying the fair value option upon the adoption of the new standard. On adoption, an entity is allowed to irrevocably elect the fair value option on an instrument-by-instrument basis. This alternative is available for all instruments in the scope of Subtopic 326-20 except for existing held-to-maturity debt securities. If an entity elects the fair value option, the difference between the instrument's fair value and carrying amount is recognized as a cumulative-effect adjustment. In April 2019, the FASB issued ASU 2019-04 *Codification Improvements to Topic 326, Financial Instruments—Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825, Financial Instruments.* ASU 2019-04 makes several changes to how entities will estimate expected credit losses, including two changes that will likely have the most significant effect. The ASU clarifies that the estimate of expected credit losses should include expected recoveries of financial assets, including recoveries of amounts expected to be written off and those previously written off. The ASU also clarifies that contractual extension or renewal options that are not unconditionally cancellable by the lender are considered when determining the contractual term over which expected credit losses are measured. The effective date and transition requirements for the amendments in ASU 2019-05 and ASU 2019-04 are the same as the effective date and transition requirements in ASU 2016-13.

The Company is continuing to evaluate the potential effects of ASU 2016-13 on its consolidated financial statements. Based upon the Company's evaluation to date, the new guidance will apply to the Company's accounts receivable and contract assets. The Company does not have any available-for-sale debt securities. The adoption of this guidance will require the implementation of new or updated accounting processes, procedures and internal controls over financial reporting. The new standard will also require expanded qualitative and quantitative disclosures about the Company's financial assets and allowance for credit losses.

Refer to Note 1 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K for a discussion regarding other new accounting pronouncements.

Note 2 — Supplementary Balance Sheet Information

Cash, Cash Equivalents and Restricted Cash

The Company maintains accounts outside the United States denominated in currencies other than the U.S. dollar. All amounts in domestic accounts are denominated in U.S. dollars. The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the Consolidated Balance Sheets that sum to the total of the same such amounts shown in the Consolidated Statements of Cash Flows.

Cash, cash equivalents and restricted cash balances are summarized as follows:

(in thousands)	**June 30, 2019**	December 31, 2018
Cash and cash equivalents in domestic accounts	**$ 405,000**	405,535
Cash and cash equivalents in foreign accounts	**53,220**	65,621
Total cash and cash equivalents	**458,220**	471,156
Restricted cash included in other long-term assets	**2,442**	3,123
Total cash, cash equivalents and restricted cash shown in the statements of cash flows	**$ 460,662**	474,279

Restricted cash included in other assets in the Consolidated Balance Sheets represents immaterial amounts required across the Company's segments for operational purposes.

Prepaid Expenses and Other Current Assets

Significant components of prepaid expenses and other current assets are summarized as follows:

(in thousands)	**June 30, 2019**	December 31, 2018
Prepaid expenses	**$ 60,647**	48,058
Income taxes receivable	**48,509**	19,362
R&D state tax credit	**21,657**	26,541
Supplies inventory	**19,710**	18,089
Other	**73,525**	76,305
Total	**$ 224,048**	188,355

Other Current Liabilities

Significant components of other current liabilities are summarized as follows:

(in thousands)	**June 30, 2019**	December 31, 2018
Accrued card brand fees	**$ 63,887**	55,991
Accrued third-party commissions	**53,705**	46,977
Accrued expenses	**28,431**	25,178
Dividends payable	**23,780**	24,645
Accrued interest	**21,818**	22,191
Other	**86,451**	93,168
Total	**$ 278,072**	268,150

Accumulated Other Comprehensive Loss

The income tax effects allocated to and the cumulative balance of accumulated other comprehensive income (loss) are as follows:

(in thousands)	**Foreign Currency Translation Adjustments**	**Gain on Available-For-Sale Securities**	**Change in Postretirement Healthcare Plans**	**Total Accumulated Other Comprehensive Loss, Net of Tax**
Balance as of December 31, 2018	$ (63,186)	5,052	(2,089)	$ (60,223)
Reclassification from adoption of ASU No. 2016-01 (Note 1)	**—**	**(5,052)**	**—**	**(5,052)**
Balance after reclassification (a)	**(63,186)**	**—**	**(2,089)**	**(65,275)**
Pretax amount	**420**	**—**	**966**	**1,386**
Tax effect	**4**	**—**	**307**	**311**
Net-of-tax amount (b)	**416**	**—**	**659**	**1,075**
Balance as of June 30, 2019 (a)+(b)	**$ (62,770)**	**—**	**(1,430)**	**$ (64,200)**

Note 3 — Revenue from Contracts with Customers

Description of service offerings

Issuer Solutions

The Company’s Issuer Solutions revenues are derived from long-term processing contracts with financial and nonfinancial institutions. Payment processing services revenues are generated primarily from charges based on:

- The number of accounts on file;
- Transactions and authorizations processed;

- Statements generated and/or mailed;
- Managed services; and
- Cards embossed and mailed and other processing services for cardholder accounts on file.

Most of these contracts have prescribed annual revenue minimums, penalties for early termination, and service level agreements which may impact contractual fees if certain service levels are not achieved.

Issuer Solutions revenues also include loyalty redemption services and professional services.

Merchant Solutions

The Company's Merchant Solutions revenues are partially derived from relationships with thousands of individual merchants whose contracts range from thirty days to five years. Additionally, part of the revenues are derived from long-term processing contracts with large financial institutions, other merchant acquirers and merchant organizations which generally range from three to eight years. Merchant services revenue is generated primarily from processing all payment forms including credit, debit and electronic benefits transfer for merchants of all sizes across a wide array of retail market segments.

The products and services offered include:

- Authorizations and capture of electronic transactions;
- Clearing and settlement of electronic transactions;
- Information reporting services related to electronic transactions;
- Merchant billing services; and
- Point-of-sale equipment and services.

Most of these contracts have prescribed revenue minimums, penalties for early termination, and service level agreements which may impact contractual fees if certain service levels are not achieved.

Consumer Solutions

The Company's Consumer Solutions revenues principally consist of a portion of the service fees collected from cardholders and interchange revenues received by the issuing banks in connection with the programs that the Consumer Solutions segment manages.

Customers are charged fees in connection with the Consumer Solutions segment's products and services as follows:

- Transactions - Customers are typically charged a fee for each Personal Identification Number ("PIN") and signature-based purchase transaction made using their cards, unless the customer is on a monthly or annual service plan, in which case the customer is instead charged a monthly or annual subscription fee, as applicable. Customers are also charged fees for Automated Teller Machine ("ATM") withdrawals and other transactions conducted at ATMs.
- Customer Service and Maintenance - Customers are typically charged fees for balance inquiries made through call centers. Customers are also charged a monthly maintenance fee after a specified period of inactivity.
- Additional Products and Services - Customers are charged fees associated with additional products and services offered in connection with certain cards, including the use of overdraft features, a variety of bill payment options, card replacement, foreign exchange and card-to-card transfers of funds initiated through the call centers.
- Other - Customers are charged fees in connection with the acquisition and reloading of the cards at retailers and the Company receives a portion of these amounts in some cases.

Disaggregation of revenue

The following table summarizes volume-based and non-volume related revenue from contracts with external customers for the three and six months ended June 30, 2019 and 2018:

	Three months ended June 30, 2019			
(in thousands)	**Issuer Solutions**	**Merchant Solutions**	**Consumer Solutions**	**Total**
Volume-based revenues	**$ 231,265**	**342,651**	**195,659**	**$ 769,575**
Non-volume related revenues	**241,441**	**23,985**	**484**	**265,910**
Total revenues	**$ 472,706**	**366,636**	**196,143**	**$ 1,035,485**

	Six months ended June 30, 2019			
(in thousands)	**Issuer Solutions**	**Merchant Solutions**	**Consumer Solutions**	**Total**
Volume-based revenues	**$ 461,476**	**665,464**	**414,354**	**$ 1,541,294**
Non-volume related revenues	**481,389**	**46,353**	**980**	**528,722**
Total revenues	**$ 942,865**	**711,817**	**415,334**	**$ 2,070,016**

	Three months ended June 30, 2018			
(in thousands)	Issuer Solutions	Merchant Solutions	Consumer Solutions	Total
Volume-based revenues	$ 223,677	329,295	199,490	$ 752,462
Non-volume related revenues	234,924	19,419	775	255,118
Total revenues	$ 458,601	348,714	200,265	$ 1,007,580

	Six months ended June 30, 2018			
(in thousands)	Issuer Solutions	Merchant Solutions	Consumer Solutions	Total
Volume-based revenues	$ 442,949	628,242	409,211	$ 1,480,402
Non-volume related revenues	473,011	39,895	1,442	514,348
Total revenues	$ 915,960	668,137	410,653	$ 1,994,750

Issuer Solutions

Volume-based revenues are generated from charges based on the number of Accounts on File (“AOF”), transactions and authorizations processed, statements generated, and other processing services for cardholder AOF. Cardholder AOF includes active and inactive consumer credit, retail, prepaid, stored value and commercial card accounts. TSYS’ clients also have the option to use fraud and portfolio management services which are based on authorizations processed and AOF, respectively. Collectively, these services are considered volume-based revenues. Non-volume related revenues include processing fees which are not directly associated with AOF and transactional activity, such as value-added products and services, custom programming and certain other services, which are only offered to TSYS’ processing clients. Additionally, non-volume based revenues include licensing, managed services and output services such as card and document production.

Merchant Solutions

The Merchant Solutions segment’s revenues primarily consist of volume-based revenues generated from charges based on sales volume processed, and authorized transactions and settled transactions processed. Non-volume related revenues include chargeback and retrieval services, data transmissions, value added products and managed services which are not directly associated with transactional activity.

Consumer Solutions

The Consumer Solutions segment's revenues primarily consist of volume-based revenues generated from a portion of the service fees collected from cardholders and interchange revenues. Non-volume related revenues include value-added products and services which are not directly associated with transactional activity.

The following table summarizes revenue from contracts with customers, by currency, for the three and six months ended June 30, 2019 and 2018:

	Three months ended June 30, 2019			
(in thousands)	**Issuer Solutions**	**Merchant Solutions**	**Consumer Solutions**	**Total**
U.S. dollar	**$ 372,674**	**366,313**	**196,143**	**$ 935,130**
British Pound Sterling	**67,142**	**—**	**—**	**67,142**
Euro	**25,750**	**—**	**—**	**25,750**
Other	**7,140**	**323**	**—**	**7,463**
Total revenues	**$ 472,706**	**366,636**	**196,143**	**$ 1,035,485**

	Six months ended June 30, 2019			
(in thousands)	**Issuer Solutions**	**Merchant Solutions**	**Consumer Solutions**	**Total**
U.S. dollar	**$ 744,674**	**711,184**	**415,334**	**$ 1,871,192**
British Pound Sterling	**132,294**	**—**	**—**	**132,294**
Euro	**51,361**	**—**	**—**	**51,361**
Other	**14,536**	**633**	**—**	**15,169**
Total revenues	**$ 942,865**	**711,817**	**415,334**	**$ 2,070,016**

	Three months ended June 30, 2018			
(in thousands)	Issuer Solutions	Merchant Solutions	Consumer Solutions	Total
U.S. dollar	$ 367,489	348,524	200,265	$ 916,278
British Pound Sterling	59,098	—	—	59,098
Euro	25,419	—	—	25,419
Other	6,595	190	—	6,785
Total revenues	$ 458,601	348,714	200,265	$ 1,007,580

	Six months ended June 30, 2018			
(in thousands)	Issuer Solutions	Merchant Solutions	Consumer Solutions	Total
U.S. dollar	$ 727,359	667,743	410,653	$ 1,805,755
British Pound Sterling	122,219	—	—	122,219
Euro	52,016	—	—	52,016
Other	14,366	394	—	14,760
Total revenues	$ 915,960	668,137	410,653	$ 1,994,750

See Note 11 for disclosure of revenues by geography.

Performance obligations

The following table includes estimated revenue expected to be recognized in the future related to performance obligations that are unsatisfied or partially unsatisfied at the end of the reporting period. The purpose of this disclosure is to provide additional information about the amounts and expected timing of revenue to be recognized from the remaining performance obligations in the Company's existing contracts.

For revenue which is recognized using (i) the "as-invoiced" practical expedient and (ii) the "direct allocation" method, the Company is required to disclose the value of unsatisfied performance obligations for contractual minimums only. Accordingly, the total unsatisfied or partially unsatisfied performance obligations related to processing services are materially higher than the amounts disclosed in the below table.

(in thousands)	Remainder of 2019	2020	2021	2022	2023 - 2029	Total
Unsatisfied or partially unsatisfied performance obligations	$ 382,746	630,966	528,869	392,712	470,584	$2,405,877

Contract balances

Contract assets are defined as an entity's right to consideration in exchange for goods or services that the entity has transferred to a customer when that right is conditioned on something other than the passage of time (for example, the entity's future performance).

Contract liabilities are defined as an entity's obligation to transfer goods or services to a customer for which the entity has received consideration (or the amount is due) from the customer.

Net contract assets and liabilities may include amounts related to signing incentives for signing or renewing long-term contracts. Capitalized signing incentives are amortized over the contract term and the amortization is included as a reduction of revenues in the Company's Consolidated Statements of Income.

ASC 606 requires an entity to present in its Consolidated Balance Sheets the net position in a customer contract on acontract-by-contract basis. The net position in a customer contract is presented as either contract assets or contract liabilities. Significant changes in the contract assets and liabilities balances during the six months ended June 30, 2019 are as follows:

	Six months ended June 30, 2019	
(in thousands)	Contract Assets Increase/(Decrease)	Contract Liabilities (Increase)/Decrease
Signing incentive additions	$ 32,585	$ —
Signing incentive amortization	(13,336)	(2,631)
Revenue recognized in advance of billings	8,308	867
Billed amounts transferred to receivables	(4,387)	(316)
Cash received from customers	(1,460)	(80,485)
Deferred revenue that was recognized as revenue	3,499	68,548

Other changes in contract assets and contract liabilities primarily relate to movements in net contract position (between contract assets and contract liabilities) each period and foreign currency translation.

Note 4 – Leases

The Company adopted ASU No. 2016-02 and related ASUs ("ASC 842") as of January 1, 2019 using the cumulative effect method. Upon adoption, the Company recorded right-of-use ("ROU") assets of $195.2 million and additional operating liabilities of approximately $190.7 million for existing operating leases. Also as part of the initial adoption, the Company wrote off the carrying value of favorable lease intangible assets of $2.1 million and increased the ROU assets by the same amount. The cumulative effect adjustment recorded to opening retained earnings was not material. The adoption of this ASU did not have a material impact on the Company's results of operations or cash flows.

Description of leases and lease policies - lessee

TSYS enters into leases for datacenters, facilities, computer equipment and certain other equipment. Leases with an initial term of 12 months or less are not recorded on the balance sheet. TSYS recognizes lease expense or depreciation expense for leases on a straight-line basis over the lease term. Variable lease expense primarily relates to maintenance and other monthly expenses that do not depend on an index or rate.

TSYS determines if an arrangement is a lease at contract inception. Operating leases are included in operating lease ROU assets, other current liabilities, and operating lease liabilities in TSYS' Consolidated Balance Sheet. Finance leases are included in property and equipment, net and current and long-term obligations under finance leases in TSYS' Consolidated Balance Sheet.

ROU assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent its obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized at the commencement date based on the present value of the future lease payments. As most of its leases do not provide an implicit rate, the Company uses its incremental borrowing rate based on the information available at the commencement date in determining the present value of lease payments. TSYS uses the implicit rate when readily determinable. The operating lease ROU asset also includes any lease payments made and excludes lease incentives received. TSYS' lease terms may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option.

TSYS has lease agreements with lease and non-lease components, which are combined and accounted for as a single lease component for all asset classes excluding computer equipment. For computer equipment leases, the Company accounts for the lease and non-lease components as separate components. The majority of computer equipment lease commitments come with a renewal option or an option to terminate the lease. These lease commitments may be replaced with new leases, which allow the Company to continually update its computer equipment.

Practical expedients and policy elections

The Company has elected to utilize the following practical expedients and accounting policy elections:

- Electing as a package, the Company did not reassess: (a) whether expired or existing contracts contain leases under the new definition of a lease, (b) lease classification for expired or existing leases, and (c) whether previously capitalized initial direct costs would qualify for capitalization under ASU No. 2016-02.
- The Company did not evaluate land easements that existed or expired before the Company's adoption of ASU No. 2016-02 and that were not previously accounted for as leases.
- From a lessee perspective, the Company has elected to combine lease and non-lease components for all classes of assets except for computer equipment. Accordingly, for all asset classes excluding computer equipment, the Company accounts for the combined lease and non-lease components as a single lease component. For computer equipment, the Company accounts for lease and non-lease components, such as maintenance, separately.
- From a lessee perspective, the Company has elected, as an accounting policy election by class of underlying asset, not to recognize ROU assets and lease liabilities for short-term leases.
- From a lessor perspective, the Company has elected to utilize the practical expedient in ASU No. 2018-11 to not separate non-lease components from the associated lease component for arrangements including point-of-sale ("POS") terminals. Since the predominant component in these arrangements is service revenue and not the POS terminal, the combined components in these arrangements will be accounted for under ASC 606 and not ASC 842.
- The Company utilized incremental borrowing rates in transition (as of January 1, 2019) based on the remaining lease payments and remaining lease term.

The Company decided not to elect the use of hindsight in determining the lease term and in assessing impairment of the Company's ROU assets.

Supplemental Information

Supplemental balance sheet information related to leases is as follows:

(in thousands)	June 30, 2019	December 31, 2018
Lease assets:		
Operating lease right-of-use assets, net:		
Computer equipment	$ 68,179	na
Facilities	130,162	na
Other	198	na
Total operating lease right-of-use assets, net	198,539	na
Finance lease right-of-use assets:		
Computer and other equipment	62,896	91,526
Furniture and other equipment	3,894	6,104
Total finance lease assets	66,790	97,630
Less accumulated depreciation:		
Computer and other equipment	(24,605)	(47,903)
Furniture and other equipment	(3,000)	(4,859)
Total accumulated depreciation	(27,605)	(52,762)
Total finance lease right-of-use assets, net	39,185	44,868
Total lease assets	$ 237,724	44,868
Lease liabilities:		
Current portion of operating lease liabilities	$ 43,346	na
Operating lease liabilities, excluding current portion	167,102	na
Current portion of obligations under finance leases	5,986	5,934
Obligations under finance leases, excluding current portion	28,247	31,243
Total lease liabilities	$ 244,681	37,177

na = not applicable since TSYS adopted ASC 842 as of January 1, 2019

As of June 30, 2019, finance lease assets and finance lease accumulated depreciation decreased by approximately $30.8 million and $25.2 million, respectively, when compared to December 31, 2018. This decrease is related to the execution of purchase options for certain finance leases, the retirement of certain assets no longer in use as well as the expiration of certain leases at the end of their lease term. The balances of any finance leases subject to purchase options exercised during the six months ended June 30, 2019 were subsequently moved to Property and Equipment.

Lease expense

The components of lease expense are as follows:

(in thousands)	Three months ended June 30, 2019	Six months ended June 30, 2019
Operating lease expense:		
Fixed lease expense	$ 15,050	30,025
Variable lease expense	1,726	3,695
Short-term lease expense	1,715	3,084
Total operating lease expense	18,491	36,804
Finance lease expense:		
Amortization of ROU assets	2,836	5,727
Interest on finance lease liabilities	375	763
Total finance lease expense	3,211	6,490
Total lease expense	$ 21,702	43,294

Total rental expense under all operating leases for the year ended December 31, 2018 was $128.6 million.

Other lease information

Supplemental cash flow information related to leases is as follows:

(in thousands)	Six months ended June 30, 2019
Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows from operating leases	$ **41,703**
Operating cash flows from finance leases	**765**
Financing cash flows from finance leases	**2,927**

(in thousands)	Six months ended June 30, 2019	Six months ended June 30, 2018
Right-of-use assets obtained in exchange for lease obligations:		
Operating leases	$ **44,125**	na
Finance leases	—	7,382

na = not applicable since TSYS adopted ASC 842 as of January 1, 2019

The weighted-average remaining lease term and weighted-average discount rate are as follows:

	Six months ended June 30, 2019
Weighted-average remaining lease term (years):	
Operating leases	5.29
Finance leases	5.56
Weighted-average discount rate:	
Operating leases	4.21%
Finance leases	8.49%

Maturity of lease liabilities

The future minimum lease payments under noncancelable operating and finance leases with remaining terms greater than one year for the next five years and thereafter and in the aggregate as of June 30, 2019 and December 31, 2018, are as follows:

	June 30, 2019		December 31, 2018	
(in thousands)	**Operating Leases**	**Finance Leases**	Operating Leases	Finance Leases
2019[1]	$ **23,552**	**3,714**	54,818	7,393
2020	**55,056**	**7,381**	54,738	7,319
2021	**52,898**	**7,145**	50,794	7,085
2022	**44,350**	**7,111**	42,048	7,051
2023	**20,990**	**6,719**	19,089	6,658
Thereafter	**41,107**	**6,930**	32,894	6,868
Total lease payments	**237,953**	**39,000**	254,381	42,374
Less imputed interest	**(24,582)**	**(4,488)**	na	(5,197)
Total	**$213,371**	**34,512**	254,381	37,177

na = not applicable since TSYS adopted ASC 842 as of January 1, 2019

1 *For the six months ended June 30, 2019, this row represents the remaining payments from July to December 2019.*

In 2019, the Company entered into operating and finance leases for certain computer equipment as well as an operating lease for a facility, whose commencement dates range from July 2019 to August 2019. Amounts related to these operating and finance leases totaling $3.5 million are not reflected on the Company’s consolidated balance sheet as of June 30, 2019. However, amounts related to these operating and finance leases are reflected in the above disclosure of future lease commitments as of June 30, 2019.

Note 5 — Long-Term Borrowings and License Agreements

Refer to Note 12 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K for further discussion regarding long-term borrowings and license agreements.

Note 6 — Commitments and Contingencies

Refer to Note 15 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K for a discussion regarding commitments and contingencies.

Legal Proceedings – General

The Company is subject to various legal proceedings and claims and is also subject to information requests, inquiries and investigations arising out of the ordinary conduct of its business. The Company establishes accruals for litigation and similar matters when those matters present loss contingencies that TSYS determines to be both probable and reasonably estimable in accordance with GAAP. Legal costs are expensed as incurred. In the opinion of management, based on current knowledge and in part upon the advice of legal counsel, all matters not specifically discussed below are believed to be adequately covered by insurance, or, if not covered, the possibility of losses from such matters are believed to be remote or such matters are of such kind or involve such amounts that would not have a material adverse effect on the financial position, results of operations or cash flows of the Company if disposed of unfavorably.

TelexFree Matter

ProPay, Inc. ("ProPay"), a subsidiary of the Company, has been named as one of a number of defendants (including other merchant processors) in several purported class action lawsuits relating to the activities of TelexFree, Inc. and its affiliates and principals. TelexFree is a former merchant customer of ProPay. With regard to TelexFree, each purported class action lawsuit generally alleges that TelexFree engaged in an improper multi-tier marketing scheme involving voice-over Internet protocol telephone services. The plaintiffs in each of the purported class action complaints generally allege that the various merchant processor defendants, including ProPay, aided and abetted the improper activities of TelexFree. TelexFree filed for bankruptcy protection in Nevada. The bankruptcy proceeding was subsequently transferred to the Massachusetts Bankruptcy Court.

Specifically, ProPay has been named as one of a number of defendants (including other merchant processors) in each of the following purported class action complaints relating to TelexFree: (i) Waldermara Martin, et al. v. TelexFree, Inc., et al. (Case No. BK-S-14-12524-ABL) (Bankr. D. Nev.); (ii) Anthony Cellucci, et al. v. TelexFree, Inc., et. al. (Case No. 4:14-BK-40987) (Bankr. D. Mass.); (iii) Maduako C. Ferguson Sr., et al. v. Telexelectric, LLP, et. al (Case No. 5:14-CV-00316-D) (E.D.N.C.); (iv) Todd Cook v. TelexElectric LLP et al. (Case No. 2:14-CV-00134) (N.D. Ga.); (v) Felicia Guevara v. James M. Merrill et al., CA No. 1:14-cv-22405-DPG) (S.D. Fla.); (vi) Reverend Jeremiah Githere, et al. v. TelexElectric LLP et al. (Case No. 1:14-CV-12825-GAO) (D. Mass.); (vii) Paulo Eduardo Ferrari et al. v. Telexfree, Inc. et al. (CaseNo. 14-04080) (Bankr. D. Mass); (viii) Magalhaes v. TelexFree, Inc., et al., No. 14-cv-12437 (D. Mass.); (ix) Griffith v. Merrill et al., No. 14-CV-12058 (D. Mass.); (x) Abelgadir v. Telexelectric, LLP, No. 14-09857 (S.D.N.Y.); and (xi) Rita Dos Santos, v. TelexElectric, LLP et al., 2:15-cv-01906-NVW (D. Ariz.) (together, the "Actions").

On October 21, 2014, the Judicial Panel on Multidistrict Litigation ("JPML") transferred and consolidated the Actions filed before that date to the United States District Court for the District of Massachusetts (the "Consolidated Action"). The JPML subsequently transferred the remaining Actions to the Consolidated Action. The Consolidated Action is styled In Re: TelexFree Securities Litigation (4:14-md-02566-TSH) (D. Mass.).

The plaintiffs in the Consolidated Action filed a First Consolidated Amended Complaint on March 31, 2015 and filed a Second Consolidated Amended Complaint (the "Second Amended Complaint") on April 30, 2015. The Second Amended Complaint, which supersedes the complaints filed prior to consolidation of the Actions, purports to bring claims on behalf of all persons who purchased certain TelexFree "memberships" and suffered a "net loss" between January 1, 2012 and April 16, 2014. With respect to ProPay, the Second Amended Complaint alleges that ProPay aided and abetted tortious acts committed by TelexFree, and that

ProPay was unjustly enriched in the course of providing payment processing services to TelexFree. Several defendants, including ProPay, moved to dismiss the Second Amended Complaint on June 2, 2015. The court held a hearing on the motions to dismiss on November 2, 2015.

On January 29, 2019, the court granted in part and denied in part ProPay's motion to dismiss the Second Amended Complaint. The court dismissed plaintiffs' claim that ProPay was unjustly enriched by the alleged TelexFree fraud, but denied ProPay's motion to dismiss the plaintiffs' claim that ProPay allegedly aided and abetted TelexFree's purported scheme. The court's ruling does not reflect any determination of the merits of the plaintiffs' aiding and abetting claim against ProPay, but instead is merely a ruling that the plaintiffs have alleged facts that could potentially entitle them to relief from ProPay if those facts were true. ProPay denies that it had any knowledge of TelexFree's alleged fraud or that it aided and abetted that fraud in any way.

After deciding the motions to dismiss filed by ProPay and some of the other defendants in the litigation, the court lifted the stay on discovery that had been in place since the outset of the Consolidated Action. Approximately 50 defendants remain in the litigation. The Court held a scheduling conference on March 20, 2019, but has not yet entered an order setting the case schedule.

ProPay has also received various subpoenas, a seizure warrant and other inquiries requesting information regarding TelexFree from (i) the Commonwealth of Massachusetts, Securities Division, (ii) United States Securities and Exchange Commission, (iii) US Immigration and Customs Enforcement, and (iv) the bankruptcy Trustee of the Chapter 11 entities of TelexFree, Inc., TelexFree, LLC and TelexFree Financial, Inc. Pursuant to the seizure warrant served by the United States Attorney's Office for the District of Massachusetts, ProPay delivered all funds associated with TelexFree held for chargeback and other purposes by ProPay to US Immigration and Customs Enforcement. In addition, ProPay received a notice of potential claim from the bankruptcy Trustee as a result of the relationship of ProPay with TelexFree and its affiliates.

While the Company and ProPay intend to vigorously defend the Consolidated Action and other matters arising out of the relationship of ProPay with TelexFree and believe ProPay has substantial defenses related to these purported claims, the Company currently cannot reasonably estimate losses attributable to these matters.

TSYS and Global Payments Merger Litigation

As of the date of this report, three putative class action lawsuits challenging the Merger have been filed. Two of these lawsuits, captioned *Peters v. Total System Services, Inc. et al.* (Case No. 4:19-cv-00114) and *Wolf v. Total System Services, Inc., et al.* (Case No. 4:19-cv-00115), were filed in the United States District Court for the Middle District of Georgia on July 18, 2019. The third lawsuit, captioned *Drulias v. Global Payments Inc., et. al* (Case No. 60774/2019) was filed in the Supreme Court of the State of New York, County of Westchester on July 19, 2019.

In addition, a lawsuit challenging the Merger on behalf of an individual plaintiff captioned *Hickey v. Total System Services, Inc., et al.* (Civil Action No. 1:19-cv-03337-LMM) was filed in the United States District Court for the Northern District of Georgia, Atlanta Division, on July 23, 2019.

The *Peters* lawsuit names as defendants TSYS, the current members of the TSYS board of directors and certain former members of the TSYS board of directors. The *Wolf* lawsuit names as defendants TSYS, members of the TSYS board of directors and Global Payments. The *Drulias* lawsuit names as defendants Global Payments and members of its board. The *Hickey* lawsuit names as defendants TSYS and the members of the TSYS board of directors. The complaints filed in the lawsuits assert, among other things, claims for filing a materially incomplete registration statement with the SEC. The plaintiffs in the lawsuits seek, among other things, an injunction barring the Merger, rescission of the Merger or rescissory damages, and an award of damages and attorney's fees. TSYS believes that the claims asserted in the lawsuits are without merit.

Note 7 — Share-Based Compensation

Refer to Notes 1 and 18 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K for a discussion regarding the Company's share-based compensation plans and policy.

Share-Based Compensation

Share-based compensation costs are classified as selling, general and administrative expenses on the Company's Consolidated Statements of Income and corporate administration and other expenses for segment reporting purposes. TSYS' share-based compensation costs are expensed, rather than capitalized, as these awards are typically granted to individuals not involved in capitalizable activities.

Below is a summary of share-based compensation expense for the three and six months ended June 30, 2019 and 2018:

	Three months ended June 30,		Six months ended June 30,	
(in thousands)	**2019**	2018	**2019**	2018
Share-based compensation	**$11,500**	14,230	**22,214**	20,524

Nonvested Share Awards - Time-Based

The Company granted awards of TSYS common stock to certain key employees. The nonvested stock bonus awards are typically for services to be provided in the future and vest over a period of up to four years. The market value of the TSYS common stock as of the date of issuance is charged as compensation expense over the vesting periods of the awards. As of June 30, 2019, there was approximately $35.2 million of unrecognized compensation cost related to time-based nonvested share awards.

	Six months ended June 30,	
	2019	2018
Number of shares granted	**316,755**	320,853
Market value (*in millions*)	**$ 29.2**	28.6

Performance- and Market-Based Awards

The Company granted performance- and market-based awards to certain key employees. The performance- and market-based goals are established by the Compensation Committee of the Board of Directors and will vest up to a maximum of 200%. During the first six months of 2019 and 2018, the Compensation Committee established performance goals based primarily on various financial and market-based measures. The Company's market-based awards are based upon the Company's Total Shareholder Return ("TSR") as compared to the TSR of the companies in the S&P 500 determined at the end of the performance period for 2018 awards and determined using a twenty day average of the fair market value at the beginning and end of the performance period for 2019 awards.

Compensation expense for performance shares is measured on the grant date based on the quoted market price of TSYS common stock. The Company estimates the probability of achieving the goals through the performance period and expenses the awards on a straight-line basis. The fair value of market-based awards is estimated on the grant date using a Monte Carlo simulation model. The Company expenses market-based awards on a straight-line basis. Compensation costs related to performance- and market-based shares are recognized through the longer of the performance period or the vesting period. As of June 30, 2019, there was approximately $22.3 million of unrecognized compensation cost related to TSYS performance-based awards that is expected to be recognized through December 2021. As of June 30, 2019, there was approximately $3.4 million of unrecognized compensation cost related to TSYS market-based awards that is expected to be recognized through December 2021.

During the six months ended June 30, 2019 and 2018, the Company granted performance-based awards based onnon-financial metrics and the following performance measures:

Performance Measure	Definition of Measure
Adjusted diluted EPS	Adjusted earnings divided by weighted average diluted shares outstanding used for diluted EPS calculations. Adjusted earnings is net income excluding the after-tax impact of share-based compensation expense, amortization of acquisition intangibles, merger and acquisition expenses for completed acquisitions and litigation claims, judgments or settlement expenses and related legal expenses.
Net revenue	Net revenue is total revenues less reimbursable items that are recorded by TSYS as expense.
Adjusted EBITDA	Adjusted EBITDA is net income excluding equity in income of equity investments, nonoperating income/(expense), income taxes, depreciation, amortization, share-based compensation expenses and other items.

The number of performance-based shares with a one- to two-year performance period granted during the six months ended June 30, 2019 and 2018 totaled 86,779 and 95,904, respectively. The number of performance-based shares with a three-year performance period granted during the six months ended June 30, 2019 and 2018, totaled 79,132 and 79,218, respectively. The grants awarded with a three-year performance period during the first six months of 2019 and 2018 will be expensed through December 31, 2021 and 2020, respectively.

The number of market-based awards granted during the six months ended June 30, 2019 and 2018 were 30,856 and 33,940, respectively. The performance measure for the market-based awards is the Company's TSR as compared to the TSR of the companies in the S&P 500 determined at the end of the performance period for 2018 awards and determined using a twenty day average of the fair market value at the beginning and end of the performance period for 2019 awards.

Stock Option Awards

The Company granted stock options to certain key executives. The grants will vest over a period of up to three years.

The weighted average fair value of the option grants was estimated on the date of grant using the Black-Scholes-Merton option-pricing model with the following weighted average assumptions:

	Six months ended June 30,	
	2019	2018
Number of options granted	**233,667**	360,118
Weighted average exercise price	**$ 92.37**	86.90
Risk-free interest rate	**2.47%**	2.55%
Expected volatility	**22.79%**	21.80%
Expected term (years)	**4.8**	4.8
Dividend yield	**0.56%**	0.60%
Weighted average fair value	**$ 21.98**	19.23

As of June 30, 2019, there was approximately $5.1 million of unrecognized compensation cost related to TSYS stock options that is expected to be recognized over a remaining weighted average period of 1.7 years.

Note 8 — Income Taxes

Refer to Notes 1 and 14 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K for a discussion regarding income taxes.

TSYS is the parent of an affiliated group that files a consolidated U.S. federal income tax return, consolidated income tax returns for most states and separate entity basis income tax returns for most foreign jurisdictions. In the normal course of business, the Company is subject to examinations by these taxing authorities unless statutory examination periods lapse. TSYS is no longer subject to U.S. federal income tax examinations for years before 2011 and with few exceptions, the Company is no longer subject to income tax examinations from state and local or foreign tax authorities for years before 2014. In March 2019, TSYS reached a closing agreement with the IRS for the federal income tax examinations in progress for the years 2011 through 2013. Additionally, a number of tax examinations are in progress by the relevant state tax authorities. Although TSYS is unable to determine the ultimate outcome of these examinations, TSYS believes that its liability for uncertain tax positions relating to these jurisdictions for such years is adequate.

TSYS' effective tax rate was 17.1% and 22.3% for the three months ended June 30, 2019 and 2018, respectively, and 16.9% and 17.5% for the six months ended June 30, 2019 and 2018, respectively. The primary reasons for the lower effective income tax rate for the three and six months ended June 30, 2019 as compared to the same periods last year are favorable differences in discrete items related to FIN 48 reserves and equity investment true-ups. During the six-month period ended June 30, 2019, these were mostly offset by unfavorable differences in excess tax benefits of share-based compensation.

GAAP prescribes a recognition threshold and measurement attribute for the financial statement recognition, measurement and disclosure of a tax position taken or expected to be taken in a tax return. The unrecognized tax benefit amounts were $18.8 million and $22.3 million as of June 30, 2019 and December 31, 2018, respectively, which resulted in a decrease of $3.5 million during the period.

TSYS recognizes potential interest and penalties related to the underpayment of income taxes as income tax expense in the Consolidated Statements of Income. Gross accrued interest and penalties on unrecognized tax benefits totaled $1.7 million and $2.5 million as of June 30, 2019 and December 31, 2018, respectively. The total amounts of unrecognized income tax benefits as of June 30, 2019 and December 31, 2018, that, if recognized, would affect the effective tax rates are $19.3 million and $23.5 million (net of the federal benefit on state tax issues), respectively, which include interest and penalties of $1.0 million and $1.7 million, respectively. TSYS does not expect any significant changes to its calculation of uncertain tax positions during the next twelve months.

Note 9 – Earnings Per Share

The following tables illustrate basic and diluted EPS for the three and six months ended June 30, 2019 and 2018:

(in thousands, except per share data)	Three months ended June 30, 2019 Common Stock	Three months ended June 30, 2018 Common Stock	Six months ended June 30, 2019 Common Stock	Six months ended June 30, 2018 Common Stock
Basic EPS:				
Net income attributable to TSYS common shareholders	**$ 162,760**	142,435	**324,367**	284,276
Less income allocated to nonvested awards	**(3)**	(59)	**(41)**	(233)
Net income allocated to common stock for EPS calculation (a)	**$ 162,757**	142,376	**324,326**	284,043
Weighted average shares outstanding	**176,962**	182,355	**177,697**	181,992
Less participating securities	**(3)**	(76)	**(22)**	(150)
Average common shares outstanding (b)	**176,959**	182,279	**177,675**	181,842
Basic EPS (a)/(b)	**$ 0.92**	0.78	**1.83**	1.56
Diluted EPS:				
Net income attributable to TSYS common shareholders	**$ 162,760**	142,435	**324,367**	284,276
Less income allocated to nonvested awards	**(3)**	(59)	**(41)**	(233)
Add income reallocated to nonvested awards[1]	**3**	59	**41**	233
Net income allocated to common stock for EPS calculation (c)	**$ 162,760**	142,435	**324,367**	284,276
Weighted average shares outstanding	**176,962**	182,355	**177,697**	181,992
Less participating securities	**(3)**	(76)	**(22)**	(150)
Average common shares outstanding	**176,959**	182,279	**177,675**	181,842
Increase due to assumed issuance of shares related to common equivalent shares outstanding	**986**	881	**926**	1,064
Average nonvested awards[1]	**569**	415	**597**	551
Average common and common equivalent shares outstanding (d)	**178,514**	183,575	**179,198**	183,457
Diluted EPS (c)/(d)	**$ 0.91**	0.78	**1.81**	1.55

1 *In accordance with the diluted EPS guidance under the two-class method, the Company uses the approach- either the treasury stock method or the two-class method assuming a participating security is not exercised- that is more dilutive.*

The diluted EPS calculation excludes stock options and nonvested awards that are exercisable into 0.1 million and 0.2 million common shares for the three and six months ended June 30, 2019, respectively, and excludes 0.4 million common shares for the three and six months ended June 30, 2018, because their inclusion would have been anti-dilutive.

Note 10 — Supplementary Cash Flow Information

Software Acquired Under License Agreements

There was approximately $6.9 million and $3.4 million of software acquired under license agreements in the first six months of 2019 and 2018, respectively. Additionally, the Company did not acquire software through vendor financing and other arrangements during the first six months of 2019 compared to $39.6 million of software acquired through vendor financing and other arrangements during the first six months of 2018.

Note 11 — Segment Reporting and Major Customers

Refer to Note 21 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K for a discussion regarding segment reporting and major customers.

At TSYS, the chief operating decision maker ("CODM") is a group consisting of Senior Executive Management. In the first quarter of 2019, the CODM changed the profitability measure for its operating segments to adjusted segment EBITDA. All periods presented have been adjusted to reflect this new measure.

The following table presents the Company's total assets by segment:

(in thousands)	As of June 30, 2019	As of December 31, 2018
Issuer Solutions	**$ 7,049,467**	6,843,451
Merchant Solutions	**4,204,758**	4,248,183
Consumer Solutions	**1,383,015**	1,374,667
Intersegment assets	**(4,930,434)**	(4,997,592)
Total assets	**$ 7,706,806**	7,468,709

The Company maintains property and equipment, net of accumulated depreciation and amortization, in the following geographic areas:

(in thousands)	As of June 30, 2019	As of December 31, 2018
United States	**$ 312,707**	321,119
Europe	**46,466**	45,872
Other	**14,695**	16,083
Total	**$ 373,868**	383,074

The following table presents the Company's depreciation and amortization by segment:

(in thousands)	Three months ended June 30, 2019	Three months ended June 30, 2018	Six months ended June 30, 2019	Six months ended June 30, 2018
Depreciation and amortization by segment:				
Issuer Solutions	**$ 36,129**	29,640	**71,296**	57,971
Merchant Solutions	**8,257**	7,523	**15,940**	15,348
Consumer Solutions	**5,202**	4,313	**9,618**	8,573
Segment depreciation and amortization	**49,588**	41,476	**96,854**	81,892
Acquisition intangible amortization	**53,706**	61,865	**108,663**	124,888
Corporate administration and other	**1,479**	949	**2,966**	1,899
Total depreciation and amortization	**$104,773**	104,290	**208,483**	208,679

The following tables reconcile geographic revenues to external revenues by operating segment based on the domicile of the Company's customers:

(in thousands)	Three months ended June 30, 2019 Issuer Solutions	Merchant Solutions	Consumer Solutions	Total
United States	**$243,000**	**365,703**	**196,143**	**$ 804,846**
Europe[1]	**99,038**	**128**	**—**	**99,166**
Canada[1]	**107,368**	**422**	**—**	**107,790**
Other[1]	**23,300**	**383**	**—**	**23,683**
Total	**$472,706**	**366,636**	**196,143**	**$1,035,485**

1 Certain of these revenues are impacted by movements in foreign currency exchange rates.

(in thousands)	**Six months ended June 30, 2019** Issuer Solutions	Merchant Solutions	Consumer Solutions	Total
United States	**$514,130**	**710,001**	**415,334**	**$1,639,465**
Europe[1]	**193,425**	**288**	**—**	**193,713**
Canada[1]	**187,001**	**810**	**—**	**187,811**
Other[1]	**48,309**	**718**	**—**	**49,027**
Total	**$942,865**	**711,817**	**415,334**	**$2,070,016**

(in thousands)	Three months ended June 30, 2018 Issuer Solutions	Merchant Solutions	Consumer Solutions	Total
United States	$266,274	348,012	200,265	$ 814,551
Europe[1]	89,339	127	—	89,466
Canada[1]	81,076	279	—	81,355
Other[1]	21,912	296	—	22,208
Total	$458,601	348,714	200,265	$1,007,580

(in thousands)	Six months ended June 30, 2018 Issuer Solutions	Merchant Solutions	Consumer Solutions	Total
United States	$530,306	666,762	410,653	$1,607,721
Europe[1]	184,483	252	—	184,735
Canada[1]	158,657	558	—	159,215
Other[1]	42,514	565	—	43,079
Total	$915,960	668,137	410,653	$1,994,750

2 Certain of these revenues are impacted by movements in foreign currency exchange rates.

The following table presents the Company's operating results by segment:

(in thousands)	Three months ended June 30,		Six months ended June 30,	
Operating Segments	**2019**	2018	**2019**	2018
Adjusted segment EBITDA[1]:				
Issuer Solutions (a)	**$ 209,845**	195,275	**414,779**	391,040
Merchant Solutions (b)	**138,366**	133,418	**267,201**	252,358
Consumer Solutions (c)	**53,595**	54,545	**117,288**	108,212
Corporate administration and other	**(32,867)**	(38,217)	**(73,042)**	(75,667)
Total	**368,939**	345,021	**726,226**	675,943
Less:				
Share-based compensation	**11,500**	14,230	**22,214**	20,524
Merger & acquisition (M&A) and integration expenses[2]	**17,150**	2,581	**20,860**	16,949
Depreciation and amortization	**104,773**	104,290	**208,483**	208,679
Contract asset amortization	**8,250**	6,711	**16,288**	13,584
Contract cost asset amortization	**8,179**	8,511	**16,024**	19,238
Operating income	**219,087**	208,698	**442,357**	396,969
Nonoperating expenses, net	**(37,416)**	(41,170)	**(80,407)**	(78,812)
Income before income taxes and equity in income of equity investments	**$ 181,671**	167,528	**361,950**	318,157
Net revenue by segment:				
Issuer Solutions (e)	**$ 432,445**	421,015	**865,919**	844,589
Merchant Solutions (f)	**364,210**	346,389	**707,166**	663,792
Consumer Solutions (g)	**196,143**	200,293	**415,321**	410,781
Segment net revenue	**992,798**	967,697	**1,988,406**	1,919,162
Less: intersegment revenues	**12,878**	11,149	**28,217**	27,117
Net revenue[3]	**979,920**	956,548	**1,960,189**	1,892,045
Add: reimbursable items	**55,565**	51,032	**109,827**	102,705
Total revenues	**$1,035,485**	1,007,580	**2,070,016**	1,994,750
Adjusted segment EBITDA margin on net revenue:				
Issuer Solutions (a)/(e)	**48.5%**	46.4%	**47.9%**	46.3%
Merchant Solutions (b)/(f)	**38.0%**	38.5%	**37.8%**	38.0%
Consumer Solutions (c)/(g)	**27.3%**	27.2%	**28.2%**	26.3%

1 *Adjusted segment EBITDA is net income excluding equity in income investments, interest expense (net of interest income), income taxes, depreciation, amortization, contract asset amortization, contract cost asset amortization, gains or losses on foreign currency translation, other nonoperating income or expenses, share-based compensation, litigation, claims, judgments or settlements and M&A and integration expenses.*

2 *Excludes share-based compensation*

3 *Net revenue is defined as total revenues less reimbursable items (such as postage) that are recorded by TSYS as expense.*

Major Customers

For the three and six months ended June 30, 2019 and 2018, the Company did not have any major customers.

Note 12 — Subsequent Events

Management performed an evaluation of the Company's activity as of the date these consolidated financial statements were issued and has concluded that there are no significant subsequent events requiring disclosure, except for the TSYS and Global Payments merger litigation discussed in Note 6 in the Notes to Unaudited Consolidated Financial Statements.

Management's Discussion and Analysis of Financial Condition and Results of Operations of Total System Services, Inc. for the year ended December 31, 2018

This management's discussion and analysis provides a review of the results of operations, financial condition and liquidity and capital resources of Total System Services, Inc., ("TSYS," "we," "us," "our" or the "Company" refer to Total System Services, Inc. and its consolidated subsidiaries and "management" refers to the management of TSYS) and outlines the factors that have affected recent results, as well as those factors that may affect future results. Our actual results in the future may differ materially from those anticipated in these forward-looking statements as a result of many factors, including those set forth under "Information related to certain material risks related to Total System Services, Inc.'s business, operations and financial condition" included in Exhibit 99.6 to this Current Report on Form 8-K. The following discussion and analysis should be read in conjunction with TSYS' Consolidated Financial Statements and related notes included in Exhibit 99.1 to this Current Report on Form 8-K.

Financial Overview

TSYS' revenues are derived from providing payment processing, merchant services and related payment services to financial and nonfinancial institutions, generally under long-term processing contracts. The Company also derives revenues by providing general-purpose reloadable ("GPR") prepaid debit and payroll cards, demand deposit accounts and other financial service solutions to the underbanked and other consumers and businesses. The Company's services are provided through three operating segments: Issuer Solutions, Merchant Solutions and Consumer Solutions.

Through the Company's Issuer Solutions segment, TSYS processes information through its cardholder systems to financial and nonfinancial institutions throughout the United States and internationally. The Company's Merchant Solutions segment provides merchant services to merchant acquirers and merchants primarily in the United States. The Company's Consumer Solutions segment provides financial service solutions to consumers and businesses in the United States.

The following table sets forth each segment's revenues as a percentage of the Company's total revenues:

	Years Ended December 31,		
	2018[1]	2017	2016
Issuer Solutions	**46%**	36%	40%
Merchant Solutions	**34**	49	44
Consumer Solutions	**20**	15	16
Total revenues	**100%**	100%	100%

1 The change in the mix for each segment's revenues as a percentage of the Company's total revenues in 2018 is primarily the result of the Company's adoption of ASC 606 as of January 1, 2018.

As discussed in Note 1 to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K, TSYS has updated its revenue recognition policies in conjunction with the adoption of Accounting Standards Update ("ASU") 2014-09 *Revenue from Contracts with Customers* (Topic 606) and related ASUs ("ASC 606") as of January 1, 2018. The most significant impact of adopting ASC 606 in 2018 is primarily the result of gross versus net presentation of interchange and payment network fees. In 2018, these fees collected on behalf of the payment networks and card issuers are presented "net" of the amounts paid to them, as opposed to the "gross" presentation for certain of these fees in 2017 and 2016.

Due to the somewhat seasonal nature of the payments industry, TSYS' revenues and results of operations have generally increased in the fourth quarter of each year because of increased transaction and authorization volumes during the traditional holiday shopping season. Furthermore, growth or declines in card and merchant portfolios of existing clients, the conversion of cardholder and merchant accounts of new clients to the Company's processing platforms, the receipt of fees for early contract termination and the loss of cardholder and merchant accounts either through purges or deconversions impact the results of operations from period to period.

Another factor which may affect TSYS' revenues and results of operations from time to time is consolidation in the financial services or retail industries either through the sale by a client of its business, its card portfolio or a segment of its accounts to a party which processes cardholder or merchant accounts internally or uses another third-party processor. A change in the economic environment in the retail sector, or a change in the mix of payments between cash and cards could favorably or unfavorably impact TSYS' financial position, results of operations and cash flows in the future.

TSYS acquires other companies as part of its strategy for growth. The Company acquired Cayan Holdings, LLC ("Cayan") in January 2018 and substantially all of the assets of iMobile3, LLC in June 2018. In April 2016, the Company completed the acquisition of all of the outstanding stock of TransFirst Holdings Corp. ("TransFirst"). These acquisitions are part of the Merchant Solutions segment. Refer to Note 23 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K for more information regarding the Company's acquisitions.

TSYS' reported financial results will also be impacted by significant shifts in currency conversion rates. TSYS does not view foreign currency as an economic event for the Company but as a financial reporting consideration. Because changes in foreign currency exchange rates distort the operating growth rates, TSYS discloses the impact of foreign currency translation on its financial performance.

A significant amount of the Company's revenues are derived from long-term contracts with large clients. Processing contracts with large clients, representing a significant portion of the Company's total revenues, generally provide for discounts on certain services based on the size and activity of clients' portfolios. Therefore, revenues and the related margins are influenced by the client mix relative to the size of client portfolios, as well as the number and activity of individual cardholder or merchant accounts processed for each client. The revenue contracts can be highly complex and customized between customers.

Regulation

Government regulation affects key areas of TSYS' business, in the United States of America ("U.S.") as well as internationally. TSYS, along with the rest of the financial services industry, continues to experience increased legislative and regulatory scrutiny, including the enactment of additional legislative and regulatory initiatives such as the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Financial Reform Act") in 2010. This legislation, which provides for sweeping financial regulatory reform, may have a significant and negative impact on the Company and its clients, which could impact TSYS' earnings through fee reductions, higher costs (both regulatory and implementation) and new restrictions on operations. The Financial Reform Act may also impact the competitive dynamics of the financial services industry in the U.S. by more adversely impacting large financial institutions, some of which are TSYS clients, and by adversely impacting the competitive position of U.S. financial institutions in comparison to foreign competitors in certain businesses.

The Financial Reform Act created the Consumer Financial Protection Bureau ("CFPB") with responsibility for regulating consumer financial products and services and enforcing most federal consumer protection laws in the area of financial services, including consumer credit and the prepaid card industry. For example, the CFPB has promulgated a new rule regarding prepaid financial products, which, among other things, will establish new disclosure requirements specific to prepaid accounts, eliminate certain fees that may currently be imposed on prepaid accounts, and make it more difficult for a prepaid provider such as the Company's Consumer Solutions business to offer courtesy overdraft protection on prepaid accounts. The rule is scheduled to become effective on April 1, 2019. Similarly, other future actions of the CFPB may make payment card or product transactions generally less attractive to card issuers, acquirers, consumers and merchants, and thus negatively impact the Company's business.

On June 23, 2016, the United Kingdom ("U.K.") held a referendum in which voters approved an exit from the European Union ("E.U."), commonly referred to as "Brexit." The U.K. is currently negotiating the terms of its expected exit from the European Union which is scheduled for March 29, 2019. In November 2018, the U.K. and the European Union agreed upon a draft Withdrawal Agreement that sets out the terms of the U.K.'s departure, including a transition period from March 29, 2019 through December 31, 2020 to allow time for the U.K. and the European Union to agree upon a future trade deal. On January 15, 2019, the draft Withdrawal Agreement was rejected by the U.K. Parliament creating significant uncertainty about the terms (and timing) under which the U.K. will leave the European Union and the terms of U.K.'s future relationship with the European Union. TSYS continues to monitor Brexit and its potential impact across key areas including service continuity, contracts, regulatory (including data privacy), the economy and freedom of movement of people.

Financial Review

This Financial Review provides a discussion of critical accounting policies and estimates, related party transactions andoff-balance sheet arrangements. This Financial Review also discusses the results of operations, financial position, and liquidity and capital resources of TSYS and outlines the factors that have affected its recent earnings, as well as those factors that may affect its future earnings. The Consolidated Financial Statements and related Notes included in Exhibit 99.1 to this Current Report on Form 8-K are an integral part of this Financial Review and should be read in conjunction with it.

Critical Accounting Policies and Estimates

Risk factors that could affect the Company's future operating results and cause actual results to vary materially from expectations are listed in the Company's forward-looking statements. Negative developments in these or other risk factors could have a material adverse effect on the Company's financial position, results of operations and cash flows.

TSYS' financial position, results of operations and cash flows are impacted by the accounting policies the Company has adopted. Refer to Note 1 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K for more information on the Company's basis of presentation and a summary of significant accounting policies.

Management believes that the following accounting policies are the most critical to fully understand and evaluate the Company's results. Within each critical policy, the Company makes estimates that require management's subjective or complex judgments about the effects of matters that are inherently uncertain.

A summary of the Company's critical accounting estimates applicable to the reportable operating segments follows:

Acquisitions — Purchase Price Allocation

TSYS' purchase price allocation methodology requires the Company to make assumptions and to apply judgment to estimate the fair value of acquired assets and liabilities. TSYS estimates the fair value of assets and liabilities based upon appraised values, the carrying value of the acquired assets and widely accepted valuation techniques, including the cost approach, discounted cash flows and market multiple analyses. TSYS adjusts the purchase price allocation, as necessary, up to one year after the acquisition closing date as TSYS obtains more information regarding asset valuations and liabilities assumed. Unanticipated events or circumstances may occur which could affect the accuracy of the Company's fair value estimates, including assumptions regarding industry economic factors and business strategies, and may result in an impairment or a new allocation of purchase price. Refer to Note 23 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K for more information about acquisitions.

Goodwill

In accordance with the provisions of U.S. Generally Accepted Accounting Principles ("GAAP"), goodwill is required to be tested for impairment at least annually. The Company tests goodwill for impairment during the second quarter or more frequently whenever events or changes in circumstances indicate that the carrying amount of goodwill may not be recoverable. Examples of potential triggering events include, but are not limited to, a deterioration in general economic conditions, industry and market considerations such as a deterioration in the environment in which the Company operates, cost factors such as increases in labor or other costs, overall financial performance such as negative or declining cash flows, other relevant entity-specific factors, events affecting a reporting unit or a sustained decrease in share price.

In evaluating goodwill for recoverability, the Company has the option to perform a qualitative assessment to determine whether further impairment testing is necessary or to perform a quantitative assessment using discounted net cash flows for future periods estimated by management. The combination of the income approach, utilizing the discounted cash flow ("DCF") method, and the market approach, utilizing readily available market valuation multiples, is used to estimate the fair value of each reporting unit. Under the DCF method, the fair value of the asset reflects the present value of the projected earnings that will be generated by each asset after taking into account the revenues and expenses associated with the asset, the relative risk that the cash flows will occur, the contribution of other assets, and an appropriate discount rate to reflect the value of invested capital. To the extent the carrying amount of goodwill exceeds its fair value, an impairment charge is measured and recognized. Cash flows are estimated for future periods based on historical data and projections provided by management. If the actual cash flows are not consistent with the Company's estimates, a material impairment charge may result and net income may be materially different than was initially recorded. Note 6 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K contains a discussion of goodwill. The net carrying value of goodwill on the Company's Consolidated Balance Sheet as of December 31, 2018 was $4.1 billion. The Company did not recognize any goodwill impairment charges during the years ended December 31, 2018, 2017 and 2016.

Long-lived Assets other than Goodwill

The Company reviews long-lived assets, such as property and equipment, intangibles subject to amortization, computer software, contract assets and contract cost assets, for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Examples of potential triggering events include, but are not limited to, a significant decrease in the market price of a long-lived asset or asset group, a significant adverse change in the extent or manner in which a long-lived asset or asset group is being used, a significant adverse change in legal factors or business climate, an accumulation of costs significantly in excess of the originally expected amount, continuing losses associated with the use of a long-lived asset or asset group, or a current expectation that a long-lived asset or asset group will be sold or otherwise disposed of significantly before its previously estimated useful life.

In evaluating long-lived assets other than goodwill for recoverability, expected undiscounted future operating cash flows are estimated by management. To the extent the carrying amount of a long-lived asset exceeds its fair value, an impairment charge is measured and recognized. Assumptions and estimates about future cash flows and remaining useful lives are complex and subjective. They can be affected by a variety of factors, including industry and economic trends, changes in the Company's business strategy and changes in internal forecasts. If the actual cash flows are not consistent with the Company's estimates, a material impairment charge may result and net income may be materially different than was initially recorded. The Company did not recognize any material impairment charges during the years ended December 31, 2018, 2017 and 2016.

Revenue Recognition

As discussed in Note 1 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K, TSYS has updated its revenue recognition policies in conjunction with the adoption of ASC 606 as of January 1, 2018. The most significant impact of adopting ASC 606 in 2018 is primarily the result of gross versus net presentation of interchange and payment network fees. In 2018, these fees collected on behalf of the payment networks and card issuers are presented "net" of the amounts paid to them, as opposed to the "gross" presentation for certain of these fees in 2017 and 2016.

Interchange and payment network fees are charged by the card associations or payment networks and relate primarily to the Company's Merchant Solutions segment. With respect to interchange and payment network fees, the Company evaluated whether it is the principal or the agent in the arrangement. With the adoption of ASC 606, the Company determined that interchange and payment network fees are not provided in return or exchange for services that the Company controls or acts as the principal, and, therefore, are not part of the consideration paid for its services. Accordingly, the Company is acting as an agent and presents the fees collected from merchants on behalf of the payment networks and card issuers net of the amounts paid to them. In reaching this determination, the Company considered a number of factors including indicators of control such as the party primarily responsible and the party who has discretion in establishing prices.

The Company also applies judgment in the determination of performance obligations in accordance with ASC 606. Performance obligations promised in a contract are identified based on the goods or services that will be transferred to the customer that are both capable of being distinct, whereby the customer can benefit from the service either on its own or together with other resources that are readily available from third parties or from the Company, and are distinct in the context of the contract, whereby the transfer of the services is separately identifiable from other promises in the contract. To the extent a contract includes multiple promised services, the Company must apply judgment to determine whether promised services are capable of being distinct and are distinct in the context of the contract. If these criteria are not met, the promised services are accounted for as a combined performance obligation.

Income Taxes

In calculating its effective tax rate, the Company makes decisions regarding certain tax positions, including the timing and amount of deductions and allocations of income among various tax jurisdictions. The Company has various tax filing positions, including the timing and amount of deductions and credits, the establishment of reserves for audit matters and the allocation of income among various tax jurisdictions.

The Company makes estimates as to the amount of deferred tax assets and liabilities and records valuation allowances to reduce its deferred tax assets to reflect the amount that is more likely than not to be realized. The Company considers projected future taxable income and ongoing tax planning strategies in assessing the need for the valuation allowance.

Actual results may differ from the Company's estimates. If the Company realizes a deferred tax asset or the Company was unable to realize a net deferred tax asset, an adjustment to the deferred tax asset would increase or decrease earnings, respectively, in the period the difference is recognized.

On December 22, 2017, the President signed into law the Tax Cuts and Jobs Act of 2017 ("Tax Act"). A key provision of this law that impacted TSYS was the reduction of the Federal corporate income tax rate from 35% to 21%. The Company's Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K reflect the impact of this rate reduction.

Pursuant to the Tax Act, some amounts related to repatriation of foreign accumulated earnings and related to executive compensation may be considered provisional amounts pursuant to Securities and Exchange Commission ("SEC") Staff Accounting Bulletin No. 118. As such, these amounts were subject to adjustment during the measurement period ended December 22, 2018.

Off-Balance Sheet Arrangements

Operating Leases

As a method of funding its operations, TSYS employs noncancelable operating leases for computer equipment and facilities. These leases allow the Company to use the latest technology while avoiding the risk of ownership. Neither the assets nor obligations related to these leases are included on the Consolidated Balance Sheets. As discussed in Note 1 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K, the Company adopted ASU 2016-02 *Leases (Topic 842)* (ASU 2016-02) as of January 1, 2019. ASU 2016-02 introduces a lessee model that brings most operating leases on the consolidated balance sheets. Refer to Notes 1 and 15 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K for further information on operating lease commitments.

Contractual Obligations

The Company has long-term obligations which consist of required minimum future payments under contracts with the Company's distributors and other service providers.

Recent Accounting Pronouncements

For a discussion of recent accounting pronouncements, refer to Note 1 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K.

Results of Operations

Revenues

The Company generates revenues by providing transaction processing and other payment-related services. The Company's pricing for transactions and services is complex. Each category of revenue has numerous fee components depending on the types of transactions processed or services provided. TSYS reviews its pricing and implements pricing changes on an ongoing basis. In addition, standard pricing varies among its regional businesses, and such pricing can be customized further for customers through tiered pricing of various thresholds for volume activity. The revenue contracts can be highly complex and customized between customers. TSYS' revenues are based upon transactional information accumulated by its systems. The Company's revenues are impacted by currency translation of foreign operations, as well as doing business in the current economic environment.

The Company reviews revenue performance on a net revenue basis which is a non-generally accepted accounting principle ("non-GAAP") measure. Net revenue is defined as total revenues less reimbursable items (such as postage), as well as, merchant acquiring interchange and payment network fees charged by the card associations or payment networks that are recorded by TSYS as expense and are mainly related to the Merchant Solutions segment. The Company has included reimbursements received for out-of-pocket expenses as revenues and expenses. The largest reimbursable expense items for which TSYS is reimbursed by clients are postage fees. The Company's reimbursable items are impacted with changes in postal rates and changes in the volumes of mailing activities by its clients. Reimbursable items for the year ended December 31, 2018 were $212.3 million, a decrease of $47.9 million or 18.4%, compared to $260.2 million for the same period last year, primarily due to the Company's adoption of ASC 606 as of January 1, 2018. See Note 1 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K for further discussion. Reimbursable items for the year ended December 31, 2017 increased $0.7 million, or 0.3%, compared to $259.5 million for the same period in 2016. Interchange and payment network fees related to the TransFirst business were $1.3 billion and $868.7 million for the years ended December 31, 2017 and 2016, respectively.

TSYS' revenues in its Issuer Solutions segment are influenced by several factors, including volumes related to accounts on file ("AOF") and transactions. TSYS estimates that approximately 49.3% of the segment's net revenue is AOF and transaction volume driven. The remaining 50.7% of net revenue is not AOF and transaction volume driven, and is derived from production and optional services TSYS considers to be value added products and services, custom programming and licensing arrangements.

TSYS' revenues in its Merchant Solutions segment are influenced by several factors, including volumes related to transactions, dollar sales volume, value added services, monthly statement fees, compliance fees and miscellaneous services.

TSYS' revenues in its Consumer Solutions segment primarily consist of a portion of the service fees collected from cardholders and interchange revenues received by Consumer Solutions' issuing banks in connection with the programs managed by Consumer Solutions.

Total revenues decreased $899.7 million for the year ended December 31, 2018, compared to the year ended December 31, 2017, which increased $757.9 million compared to the year ended December 31, 2016. As discussed in Note 1 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K, the most significant impact of the Company's adoption of ASC 606 as of January 1, 2018 is primarily the result of gross versus net presentation of interchange and payment network fees. In 2018, these fees collected on behalf of the payment networks and card issuers are presented "net" of the amounts paid to them, as opposed to the "gross" presentation for certain of these fees in 2017 and 2016. The impact of acquisitions on total revenues was a year-over-year increase of $179.0 million in 2018 and $419.7 million in 2017. The decrease in revenues for 2018 was partially offset by an increase of $10.3 million related to the effects of currency translation of the Company's foreign-based subsidiaries and branches. The increase in revenues for 2017 includes a decrease of $15.5 million related to the effects of currency translation of the Company's foreign-based subsidiaries and branches.

Net revenue increased 12.2%, or $415.6 million, for the year ended December 31, 2018, compared to the year ended December 31, 2017, which increased 11.8.%, or $358.5 million, compared to the year ended December 31, 2016. The increase in net revenue for the year ended December 31, 2018, as compared to the same period in 2017, is primarily the result of organic growth and $179.0 million of revenues related to acquisitions and an increase associated with currency translation. The increase in net revenue for the year ended December 31, 2017, as compared to the same period in 2016, is primarily the result of the acquisition of TransFirst in April 2016, as well as organic growth, partially offset by decreases associated with currency translation.

A summary of the consolidated financial highlights is provided below:

(in thousands, except per share data)	Years Ended December 31, 2018	2017	2016	Percent Change 2018 vs. 2017	2017 vs. 2016
Total revenues	**$4,028,211**	4,927,965	4,170,077	**(18.3)%**	18.2%
Net revenue[1]	**$3,815,900**	3,400,332	3,041,876	**12.2**	11.8
Operating income	**$ 822,738**	734,044	573,382	**12.1**	28.0
Net income attributable to TSYS common shareholders	**$ 576,656**	586,185	319,638	**(1.6)**	83.4
Basic earnings per share (EPS) attributable to TSYS common shareholders[2]	**$ 3.17**	3.19	1.74	**(0.7)**	83.3
Diluted EPS attributable to TSYS common shareholders[2]	**$ 3.14**	3.16	1.73	**(0.8)**	82.4
Adjusted earnings before interest, taxes, depreciation and amortization (Adjusted EBITDA)[3]	**$1,370,453**	1,197,673	1,040,551	**14.4**	15.1
Adjusted earnings[4]	**$ 821,292**	624,183	516,419	**31.6**	20.9
Adjusted diluted EPS[5]	**$ 4.47**	3.37	2.80	**32.7**	20.2
Cash flows from operating activities	**$1,041,667**	857,049	718,284	**21.5**	19.3
Free cash flow[6]	**$ 799,483**	661,023	575,711	**20.9**	14.8

Refer to the reconciliation of GAAP to non-GAAP measures later in this section.

1 *Net revenue is defined as total revenues less reimbursable items, as well as, merchant acquiring interchange and payment network fees charged by credit card associations or payment networks that are recorded by TSYS as expense.*

2 *Under GAAP, entities that have participating securities must compute basic EPS using the two-class method and compute diluted EPS using the more dilutive approach of either the two-class method or the treasury stock method. Refer to Note 25 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K for more information on EPS.*

3 *Adjusted EBITDA is defined as net income excluding equity in income of equity investments, interest expense (net of interest income), nonoperating income/(expense), income taxes, depreciation, amortization, foreign currency translation gains/(losses), share-based compensation expenses, litigation, claims, judgments or settlements, and TransFirst and Cayan merger and acquisition expenses.*

4 *Adjusted earnings is net income excluding noncontrolling interests, the after-tax impact of share-based compensation expenses, amortization of acquisition intangibles and other items.*

5 *Adjusted diluted EPS is defined as adjusted earnings divided by weighted average diluted shares outstanding used for diluted EPS calculations.*

6 *Free cash flow is net cash provided by operating activities less capital expenditures.*

Major Customer

The Company works to maintain a large and diverse customer base across various industries. Although the Company does not have a major customer on a consolidated basis, a significant amount of the Company's revenues are derived from long-term contracts with large clients. TSYS derives revenues from providing various processing and other services to these clients, including processing of consumer and commercial accounts, as well as revenues for reimbursable items. The loss of one of the Company's large clients could have a material adverse effect on the Company's financial position, results of operations and cash flows.

Operating Segments

TSYS' services are provided through three operating segments: Issuer Solutions, Merchant Solutions and Consumer Solutions.

Issuer Solutions

The Company's Issuer Solutions segment has many long-term customer contracts with card issuers providing account processing and output services for printing and embossing items. These contracts generally require advance notice prior to the end of the contract if a client chooses not to renew. Additionally, some contracts may permit early termination upon the occurrence of certain events such as a change in control. The termination fees paid upon the occurrence of such events are designed primarily to cover balance sheet exposure related to items such as contract cost assets or contract assets associated with the contract and, in some cases, may cover a portion of lost future revenue and profit. Although these contracts may be terminated upon certain occurrences, the contracts provide the segment with a steady revenue stream since a vast majority of the contracts are honored through the contracted expiration date.

These services are provided throughout the period of each account's use, starting from a card-issuing client processing an application for a card. Services may include processing the card application, initiating service for the cardholder, processing each card transaction for the issuing retailer or financial institution and accumulating the account's transactions. Fraud management services monitor the unauthorized use of accounts which have been reported to be lost, stolen, or which exceed credit limits. Fraud detection systems help identify fraudulent transactions by monitoring each account holder's purchasing patterns and flagging unusual purchases. Other services provided include customized communications to cardholders, information verification associated with granting credit, debt collection and customer service.

Issuer Solutions revenues are generated from charges based on the number of AOF, transactions and authorizations processed, statements mailed, cards embossed and mailed, and other processing services for cardholder AOF. Cardholder AOF includes active and inactive consumer credit, retail, prepaid, stored value, government services and commercial card accounts. TSYS' clients also have the option to use fraud and portfolio management services. Collectively, these services are considered volume-based revenues.

Whether or not an account on file is active can impact TSYS' revenues differently. Active accounts are accounts that have had monetary activity either during the current month or in the past 90 days based on contractual definition. Inactive accounts are accounts that have not had a monetary transaction (such as a purchase or payment) in the past 90 days. The more active an account is, the more revenue is generated for TSYS (i.e. the more transactions and authorizations processed, statements billed and services driven by these activities, the more revenue is generated).

Occasionally, a client will purge inactive accounts from its portfolio. An inactive account typically will only generate an AOF charge. A processing client will periodically review its cardholder portfolio based upon activity and usage. Each client, based upon criteria individually set by the client, will flag an account to be "purged" from TSYS' system and deactivated.

A deconversion involves a client migrating all of its accounts to anin-house solution or another processor. Account deconversions include active and inactive accounts and can impact the Company's revenues significantly more than an account purge.

A sale of a portfolio typically involves a client selling a portion of its accounts to another party. A sale of a portfolio and a deconversion impact the Company's financial statements in a similar fashion, although a sale usually has a smaller financial impact due to the number of accounts typically involved.

Below is a summary of AOF for the Company's Issuer Solutions segment:

(in millions)	As of December 31,			Percent Change	
AOF	**2018**	2017	2016	**2018 vs. 2017**	2017 vs. 2016
Consumer	**514.6**	481.3	442.9	**6.9%**	8.7%
Commercial	**57.8**	54.2	47.9	**6.5**	13.2
Other	**41.6**	36.4	31.0	**14.1**	17.4
Traditional AOF[1]	**614.0**	571.9	521.8	**7.4**	9.6
Prepaid/Stored Value[2]	**11.8**	38.6	57.8	**(69.2)**	(33.3)
Government Services[3]	**—**	95.0	88.7	**(100.0)**	7.2
Commercial Card Single-Use[4]	**113.5**	92.0	83.2	**23.3**	10.7
Total AOF	**739.3**	797.5	751.5	**(7.3)**	6.1

1 *Traditional accounts include consumer, retail, commercial, debit and other accounts. These accounts are grouped together due to the tendency to have more transactional activity than prepaid, government services and single-use accounts.*

2 *Prepaid does not include Consumer Solutions accounts. These accounts tend to have less transactional activity than the traditional accounts. Prepaid and stored value cards are issued by firms through retail establishments to be purchased by consumers to be used at a later date. These accounts tend to be the least active of all accounts on file.*

3 *Government services accounts are disbursements of student loan accounts issued by the Department of Education, which have minimal activity. This portfolio of AOF had deconverted by December 31, 2018.*

4 *Commercial card single-use accounts are one-time use accounts issued by firms to book lodging and other travel related expenses.*

Non-volume related revenues include processing fees which are not directly associated with AOF and transactional activity, such as value-added products and services, custom programming and certain other services, which are offered to TSYS' processing clients.

Additionally, certain clients license the Company's processing systems and process in-house. Since the accounts are processed outside of TSYS for licensing arrangements, the AOF and other volumes are not available to TSYS. Thus, volumes reported by TSYS do not include volumes associated with licensing.

Output and managed services include offerings such as card production, statement production, correspondence and call center support services.

The Issuer Solutions segment provides payment processing and related services to clients in North America and internationally. Growth in revenues and operating profit in this segment is derived from retaining and growing the core business and improving the overall cost structure. Growing the core business comes primarily from an increase in account usage, growth from existing clients and sales to new clients and the related account conversions. This segment's financial results are impacted by foreign currency. Movements in foreign currency exchange rates as compared to the U.S. dollar can result in foreign denominated financial statements being translated into more or fewer U.S. dollars, which impacts the comparison to prior periods when the U.S. dollar was stronger or weaker. This segment had two major customers for the year ended December 31, 2018.

Below is a summary of the Issuer Solutions segment:

(in thousands, except key indicators)	Years Ended December 31, 2018	2017	2016	Percent Change 2018 vs. 2017	2017 vs. 2016
Volume-based revenues	**$ 846,259**	794,099	749,211	**6.6%**	6.0%
Non-volume related revenues:					
Processing fees	**$ 316,520**	309,746	296,021	**2.2**	4.6
Value-added, custom programming, licensing and other	**291,241**	254,847	233,424	**14.3**	9.2
Output and managed services	**264,157**	236,267	236,806	**11.8**	(0.2)
Total non-volume related revenues	**$ 871,918**	800,860	766,251	**8.9**	4.5
Net revenue[1]	**$1,718,177**	1,594,959	1,515,462	**7.7**	5.2
Adjusted segment operating income[2]	**$ 608,392**	574,580	525,025	**5.9**	9.4
Adjusted segment operating margin[3]	**35.4%**	36.0%	34.6%		
Key indicators *(in millions)*:					
AOF	**739.3**	797.5	751.5	**(7.3)**	6.1
Traditional AOF	**614.0**	571.9	521.8	**7.4**	9.6
Transactions	**24,350.0**	21,575.6	19,858.1	**12.9**	8.6

1 *Net revenue is defined as total revenues less reimbursable items (such as postage), as well as, merchant acquiring interchange and assessment fees charged by the card associations or payment networks that are recorded by TSYS as expense.*

2 *Adjusted segment operating income excludes acquisition intangible amortization and expenses associated with Corporate Administration and Other.*

3 *Adjusted segment operating margin equals adjusted segment operating income divided by net revenue.*

Net revenues increased $123.2 million for 2018, as compared to 2017. The increase was driven by organic growth, partially offset by a decrease in net revenue associated with the adoption of ASC 606. Net revenues increased $79.5 million for 2017, as compared to 2016. The increase was attributable to an increase in new business and internal growth, partially offset by client deconversions and price reductions.

Movements in foreign currency exchange rates as compared to the U.S. dollar can result in foreign denominated financial statements being translated into more or fewer U.S. dollars, which impacts the comparison to prior periods when the U.S. dollar was stronger or weaker.

Net revenue for the years ended December 31, 2018 and 2017, as compared to the same periods in 2017 and 2016, respectively, included an increase of $9.4 million and a decrease of $15.4 million, respectively, associated with currency translation.

Merchant Solutions

The Merchant Solutions segment provides merchant services and related services to clients based primarily in the United States. Merchant Solutions revenues are derived from providing processing services, acquiring solutions, related systems and integrated support services to merchant acquirers and merchants. Revenues from merchant services include processing all payment forms including credit, debit, prepaid, electronic benefit transfer and electronic check for merchants of all sizes across a wide array of market verticals. Merchant services include authorization and capture of transactions; clearing and settlement of transactions; information reporting services related to transactions; and merchant billing services. This segment had no major customers for the year ended December 31, 2018.

The Merchant Solutions segment results are driven by dollar sales volume and the authorization and capture transactions processed at the point-of-sale ("POS"). This segment's authorization and capture transactions are primarily through internet connectivity.

Below is a summary of the Merchant Solutions segment:

(in thousands, except key indicators)	Years Ended December 31, 2018	2017	2016	Percent Change 2018 vs. 2017	2017 vs. 2016
Net revenue[1]	**$1,344,718**	1,103,682	898,533	**21.8%**	22.8%
Adjusted segment operating income[2]	**$ 484,197**	391,466	307,595	**23.7**	27.3
Adjusted segment operating margin[3]	**36.0%**	35.5%	34.2%		
Key indicators:					
Dollar sales volume *(in millions)*	**$159,642.8**	124,165.1	97,735.1	**28.6**	27.0
POS transactions *(in millions)*	**5,874.6**	4,844.1	4,548.1	**21.3**	6.5
Net revenue per POS transaction	**$ 0.229**	0.228	0.198	**0.5**	15.3

1 *Net revenue is defined as total revenues less reimbursable items (such as postage), as well as, merchant acquiring interchange and payment network fees charged by the card associations or payment networks that are recorded by TSYS as expense.*
2 *Adjusted segment operating income excludes acquisition intangible amortization and expenses associated with Corporate Administration and Other.*
3 *Adjusted segment operating margin equals adjusted segment operating income divided by net revenue.*

With the acquisition of TransFirst in April 2016, TSYS included nine months for 2016 of TransFirst's results as part of the Merchant Solutions segment. Merchant Solutions net revenue is defined as total revenues less merchant acquiring interchange and payment network fees charged by the card associations or payment networks that are recorded by TSYS as expense.

For the year ended December 31, 2018, approximately 93.6% of TSYS' Merchant Solutions net revenue was influenced by several factors, including volumes related to transactions and dollar sales volume. The remaining 6.4% of net revenue was derived from value added services, chargebacks, managed services, investigation, risk and collection services performed. The increase in net revenue and adjusted segment operating income for 2018, as compared to 2017, was driven by $179.0 million of revenues related to acquisitions and higher processing volumes, product fees and processing fees, as well as a gain on the sale of a merchant portfolio in December 2018. The increase in adjusted segment operating income for 2017, as compared to 2016, was driven primarily by the acquisition of TransFirst in April 2016 as well as operating cost reduction in connection with the integration.

Consumer Solutions

Consumer Solutions provides GPR prepaid debit and payroll cards, demand deposit accounts and other financial service solutions to the underbanked and other consumers and businesses in the United States. Consumer Solutions' products provide customers with access to depository accounts insured by the Federal Deposit Insurance Corporation ("FDIC") with a menu of pricing and features specifically tailored to their needs. Consumer Solutions has an extensive distribution and reload network comprising financial service centers and other retail locations throughout the United States, and is a program manager for FDIC-insured depository institutions that issue the products that Consumer Solutions develops, promotes and distributes. Consumer Solutions currently has active agreements with five issuing banks.

The Consumer Solutions segment markets its products through multiple distribution channels, including alternative financial service providers, traditional retailers, direct-to-consumer and online marketing programs and contractual relationships with corporate employers. This segment had no major customers and one major third-party distributor for the year ended December 31, 2018.

The Consumer Solutions segment's revenues primarily consist of a portion of the service fees collected from cardholders and interchange revenues received by Consumer Solutions' issuing banks and others in connection with the programs managed by this segment. Customers are charged fees for transactions including fees for Personal Identification Number ("PIN") and signature-based purchase transactions made using their cards, for Automated Teller Machine ("ATM") withdrawals or other transactions conducted at ATMs, for balance inquiries, and monthly maintenance fees among others. Customers are also charged fees associated with additional features and services

offered in connection with certain products including the use of courtesy overdraft protection, bill payment options, card replacement, foreign exchange and card-to-card transfers of funds initiated through call centers. The Consumer Solutions segment also earns revenues from a portion of the interchange fees remitted by merchants when customers make purchase transactions using their products. Subject to applicable law, interchange fees are fixed by card associations and network organizations.

Below is a summary of the Consumer Solutions segment:

	Years Ended December 31,			Percent Change	
(in thousands, except key indicators)	**2018**	2017	2016	**2018 vs. 2017**	2017 vs. 2016
Net revenue[1]	**$ 806,430**	746,870	663,579	**8.0%**	12.6%
Adjusted segment operating income[2]	**$ 193,472**	182,082	160,371	**6.3**	13.5
Adjusted segment operating margin[3]	**24.0%**	24.4%	24.2%		
Key indicators *(in millions)*:					
Gross dollar volume[4]	**$34,465.5**	32,034.8	28,722.3	**7.6**	11.5
Number of active cards[5]	**5.0**	4.9	4.3	**2.5**	14.2
Number of active cards with direct deposit[6]	**2.5**	2.4	2.1	**4.9**	12.1
Percentage of active cards with direct deposit	**50.0%**	48.9%	49.7%		

1 *Net revenue is defined as total revenues less reimbursable items (such as postage), as well as merchant acquiring interchange and payment network fees charged by the card associations or payment networks that are recorded by TSYS as expense.*

2 *Adjusted segment operating income excludes acquisition intangible amortization and expenses associated with Corporate Administration and Other.*

3 *Adjusted segment operating margin equals adjusted segment operating income divided by net revenue.*

4 *Gross dollar volume represents the total dollar volume of debit transactions and cash withdrawals made using Consumer Solutions products.*

5 *Number of active cards represents the total number of cards that have had a PIN or signature-based purchase transaction, a POS load transaction or an ATM withdrawal within three months of the date of determination, adjusted to remove prepaid cards that consumers upgraded to a demand deposit account during the period.*

6 *Number of active cards with direct deposit represents the number of active cards that have had a direct deposit load within three months of the date of determination, adjusted to remove prepaid cards that consumers upgraded to a demand deposit account during the period.*

For the year ended December 31, 2018, 71.3% of revenues were derived from service fees charged to customers and 28.7% of revenues were derived from interchange and other revenues. Service fee revenues are driven by the number of active cards and in particular by the number of cards with direct deposit. Customers with direct deposit generally initiate more transactions and generate more revenues than those that do not take advantage of this feature. Interchange revenues are driven by gross dollar volume. Substantially all of the Consumer Solutions segment revenues were volume driven as they were driven by the active card and gross dollar volume indicators.

Consumer Solutions net revenue for 2018 increased $59.6 million compared to 2017. This increase was comprised of $55.9 million increase in service fee revenues and $3.7 million increase in interchange and other revenues. Consumer Solutions segment net revenue increased $83.3 million for 2017, as compared to 2016. This increase was comprised of $48.6 million increase in service fee revenues and $34.7 million increase in interchange and other revenues.

On January 25, 2018, the CFPB announced that it had finalized updates to its 2016 prepaid rule. The CFPB's 2016 prepaid rule put in place requirements for treatment of funds on lost or stolen cards, error resolution and investigation, upfront fee disclosures, access to account information, and overdraft features if offered in conjunction with prepaid accounts. The changes announced by the CFPB adjust requirements for resolving errors on unregistered accounts, provide greater flexibility for credit cards linked to digital wallets, and extend the effective date of the rule by one year to April 1, 2019.

Assuming no changes to the rule and before taking into consideration the mitigating effects of TSYS' business expansion and product diversification strategies for the Consumer Solutions segment, the Company currently expects that the Company's 2019 net revenue will be negatively impacted by approximately $60 to 65 million, with an estimated negative impact to adjusted diluted EPS of $0.17 to $0.19. TSYS expects to offset one-third to one-half of the expected negative financial impact of the rule, from both a net revenue and an adjusted diluted EPS perspective. TSYS will continue to review and interpret the rule and analyze its expected impact on the Consumer Solutions segment's business. The estimated net revenue and adjusted diluted EPS impact set forth above is subject to risks and uncertainties such as the success of TSYS' business expansion and product diversification strategies for the Consumer Solutions segment which success will depend on, among other things, the rate of adoption of the Company's new products (both by consumers and the Company's distribution partners), the rate of utilization of the various product features by cardholders, and overall market and regulatory dynamics. The estimated impact of the rule on the Company's 2019 financial performance could vary based on these and other factors.

Operating Expenses

The Company's operating expenses were $3.2 billion, $4.2 billion and $3.6 billion in 2018, 2017 and 2016, respectively. Operating expenses consist of cost of services and selling, general and administrative expenses. Cost of services describes the direct expenses incurred in performing a particular service for customers, including the cost of direct labor expense in putting the service in saleable condition. Selling, general and administrative expenses are incurred in selling or marketing and for the direction of the enterprise as a whole, including accounting, legal fees, sales, investor relations and mergers and acquisitions.

Operating expenses for the year ended December 31, 2018 decreased $988.4 million, mainly due to the adoption of ASC 606 and the net presentation of interchange and payment network fees. See Notes 1 and 2 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K for further discussion of the Company's adoption of ASC 606 as of January 1, 2018. The decrease was partially offset by an increase in operating expenses related to acquisitions as well as increased acquisition expenses and amortization of acquisition intangibles. Operating expenses for the year ended December 31, 2017 included a decrease of $7.0 million, related to the effects of currency translation of the Company's foreign-based subsidiaries. TransFirst had an incremental year-over-year impact on operating expenses of $417.3 million in 2017. Operating expenses for the year ended December 31, 2016 were also impacted by the TransFirst acquisition. Operating expenses increased $1.3 billion due to the acquisition of TransFirst in 2016. Operating expenses in 2017 and 2016 were also impacted by $1.9 million and $21.7 million, respectively, of litigation settlement, settlement discussions and related legal expenses. In 2017, TSYS incurred an expense associated with a special one-time cash bonus of $1,000 to certain employees as a result of the Company's continued success and to share some of the savings that resulted from the Tax Act legislation passed in December 2017. The Company's cost of services were $2.5 billion, $3.6 billion and $3.0 billion in 2018, 2017 and 2016, respectively. The decrease in cost of services for 2018, as compared to 2017, is due to the adoption of ASC 606 and the presentation of interchange and payment network fees on a net basis. The increases in cost of services for 2017, as compared to 2016, are due to increases in employment, severance, technology and facilities and other costs to support revenue growth and the acquisition of TransFirst. The Company's selling, general and administrative expenses were $713.0 million, $616.6 million and $603.6 million in 2018, 2017 and 2016, respectively. The increase in selling, general and administrative costs in 2018 is the result of an increase in acquisition expenses and amortization for acquisition intangibles. The increase in selling, general and administrative costs in 2017 were due primarily to the acquisition of TransFirst in April 2016.

The Company's merger and acquisition ("M&A") and integration expenses include transaction-related and integration-related expenses associated with acquisitions. These expenses consist of costs pertaining to the completion of the acquisition such as legal, accounting and professional fees, share-based compensation, as well as, third-party support fees, systems integration costs and personnel costs for severance and retention. M&A and integration expenses were $29.0 million, $13.4 million and $32.3 million for the year ended December 31, 2018, 2017 and 2016, respectively.

Operating Income

Operating income increased 12.1% for the year ended December 31, 2018, compared to 2017. The Company's operating profit margin for the year ended December 31, 2018 was 20.4%, compared to 14.9% in 2017. TSYS'

operating margins increased for the year ended December 31, 2018, as compared to 2017, due primarily to the adoption of ASC 606 and the presentation of interchange and payment network fees on a net basis. TSYS' operating margins increased for the year ended December 31, 2017, as compared to 2016, due primarily to a decrease in the amount of acquisition and integration expenses.

Nonoperating Income (Expense)

Nonoperating income (expense) consists of interest income, interest expense, and gains and losses on currency transactions. Nonoperating expense increased in 2018 as compared to 2017, and increased in 2017 as compared to 2016 primarily due to the increase in interest expense.

The following table provides a summary of nonoperating expense:

	Years Ended December 31,			Percent Change	
(in thousands)	**2018**	2017	2016	**2018 vs. 2017**	2017 vs. 2016
Interest expense[1]	**$(163,357)**	(118,221)	(115,363)	**38.2%**	2.5%
Interest income	**4,476**	2,193	1,840	**nm**	19.2
Currency translation and transaction gains (losses), net	**109**	(907)	1,748	**nm**	nm
Other	**(4,202)**	453	(575)	**nm**	nm
Total	**$(162,974)**	(116,482)	(112,350)	**39.9**	3.7

nm = not meaningful

1 *Interest expense includes interest and related costs on Senior Notes of $121.6 million, $102.0 million and $87.7 million, respectively, for the years ended December 31, 2018, 2017 and 2016.*

Interest expense for the year ended December 31, 2018 increased $45.1 million compared to 2017. The increase in interest expense in 2018 compared to 2017 is primarily due to the debt financing of the acquisition of Cayan. Interest expense for the year ended December 31, 2017 increased $2.9 million compared to 2016. The increase in interest expense in 2017 compared to 2016 is due to the debt financing of the acquisition of TransFirst in April 2016. Refer to Notes 12 and 23 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K for more information on long-term borrowings and acquisitions.

Income Taxes

Below is a summary of income tax expense:

	Years Ended December 31,			Percent Change	
(in thousands)	**2018**	2017	2016	**2018 vs. 2017**	2017 vs. 2016
Income tax expense	**$127,003**	65,878	161,175	**92.8%**	(59.1)%
Effective income tax rate	**19.3%**	10.7%	35.0%		

During 2018, the Company experienced a net decrease in its valuation allowance for deferred income tax assets of $1.7 million primarily as a result of the utilization of income tax credit carryforwards against the one-time transition tax that was enacted as part of the Tax Cuts and Jobs Act of 2017 (the "Tax Act").

As a result of the Tax Act, the Company realized a net tax benefit of $135.9 million. This was primarily the result of remeasuring deferred tax assets and deferred tax liabilities.

In 2018, TSYS reassessed its uncertain tax positions for all jurisdictions. As a result, the Company decreased unrecognized tax benefits by $1.5 million.

Refer to Note 14 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form8-K for more information on income taxes.

Equity in Income of Equity Investments

Below is a summary of TSYS' share of income from its interest in equity investments:

(in thousands)	Years Ended December 31, 2018	2017	2016	Percent Change 2018 vs. 2017	2017 vs. 2016
Equity in income of equity investments, net of tax	**$45,156**	40,532	26,115	**11.4%**	55.2%

The increases in equity income in 2018 and 2017 are primarily the result of organic growth in China Union Pay Data Co., Ltd ("CUP Data"). Refer to Note 11 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K for more information on equity investments.

Net Income

The following table provides a summary of net income and EPS:

(in thousands, except per share data)	Years Ended December 31, 2018	2017	2016	Percent Change 2018 vs. 2017	2017 vs. 2016
Net income	**$577,917**	592,216	325,972	**(2.4)%**	81.7%
Net income attributable to noncontrolling interests	**(1,261)**	(6,031)	(6,334)	**79.1**	4.8
Net income attributable to TSYS common shareholders	**$576,656**	586,185	319,638	**(1.6)**	83.4
Basic EPS attributable to TSYS common shareholders[1]	**$ 3.17**	3.19	1.74	**(0.7)**	83.3
Diluted EPS attributable to TSYS common shareholders[1]	**$ 3.14**	3.16	1.73	**(0.8)**	82.4

1 Basic and diluted EPS is computed based on the two-class method in accordance with the guidance under GAAP. Refer to Note 25 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K for more information on EPS.

Net income attributable to noncontrolling interests in 2018 decreased by $4.7 million from 2017 and decreased $0.3 million in 2017 from 2016. The decrease in 2018 compared to 2017 is the result of TSYS acquiring the remaining 15% equity interest in Central Payment Co., LLC ("CPAY") in April 2018. The decrease in 2017 compared to 2016 is the result of TSYS acquiring an additional 10% ownership in CPAY in February 2017 partially offset by an increase in operating results of CPAY. Refer to Note 23 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K for more information.

Non-GAAP Financial Measures

Management evaluates the Company's operating performance based on a constant currency basis, operating margin on a net revenue basis, adjusted EBITDA, adjusted earnings, adjusted diluted EPS and free cash flow which are non-GAAP measures. TSYS also uses these non-GAAP financial measures to evaluate and assess TSYS' financial performance against budget.

Although non-GAAP financial measures are often used to measure TSYS' operating results and assess its financial performance, they are not necessarily comparable to similarly titled measures of other companies due to potential inconsistencies in the method of calculation.

TSYS believes that its provision of non-GAAP financial measures provides investors with important key financial performance indicators that are utilized by management to assess TSYS' operating results, evaluate the business and make operational decisions on a prospective, going-forward basis. Hence, management provides disclosure of non-GAAP financial measures to give shareholders and potential investors an opportunity to see TSYS as viewed by management, to assess TSYS with some of the same tools that management utilizes internally and to be able to compare such information with prior periods. TSYS believes that inclusion of non-GAAP financial measures provides investors with additional information to help them better understand its financial statements just as management utilizes these non-GAAP financial measures to understand the business, manage budgets and allocate resources.

The following tables provide a reconciliation of GAAP tonon-GAAP financial measures:

Constant Currency Comparison

(in thousands)	Years Ended December 31,	
Consolidated	2018	2017
Total revenues (GAAP)	**$ 4,028,211**	4,927,965
Foreign currency impact[1]	**(10,325)**	—
Constant currency[2] (non-GAAP)	**$ 4,017,886**	4,927,965
Net revenue (non-GAAP)	**$ 3,815,900**	3,400,332
Foreign currency impact[1]	**(9,704)**	—
Constant currency[2] (non-GAAP)	**$ 3,806,196**	3,400,332
Operating income (GAAP)	**$ 822,738**	734,044
Foreign currency impact[1]	**(4,828)**	—
Constant currency[2] (non-GAAP)	**$ 817,910**	734,044
Issuer Solutions		
Segment net revenue (GAAP)	**$ 1,718,177**	1,594,959
Foreign currency impact[1]	**(9,446)**	—
Constant currency[2] (non-GAAP)	**$ 1,708,731**	1,594,959

Constant Currency Comparison

(in thousands)	Years Ended December 31,	
Consolidated	2017	2016
Total revenues (GAAP)	$ 4,927,965	4,170,077
Foreign currency impact[1]	15,468	—
Constant currency[2] (non-GAAP)	$ 4,943,433	4,170,077
Net revenue (non-GAAP)	$ 3,400,332	3,041,876
Foreign currency impact[1]	14,417	—
Constant currency[2] (non-GAAP)	$ 3,414,749	3,041,876
Operating income (GAAP)	$ 734,044	573,382
Foreign currency impact[1]	8,922	—
Constant currency[2] (non-GAAP)	$ 742,966	573,382
Issuer Solutions		
Segment net revenue (GAAP)	$ 1,594,959	1,515,462
Foreign currency impact[1]	14,326	—
Constant currency[2] (non-GAAP)	$ 1,609,285	1,515,462

1 *Reflects the impact of calculated changes in foreign currency rates from the comparable period.*

2 *Reflects current period results on a non-GAAP basis as if foreign currency rates did not change from the comparable prior year period.*

Net Revenue and Operating Margin on a Net Revenue Basis

(in thousands)	Years Ended December 31, 2018	2017	2016
Operating income (GAAP) (a)	**$ 822,738**	734,044	573,382
Total revenues (GAAP) (b)	**$4,028,211**	4,927,965	4,170,077
Less: reimbursable items, interchange and payment network fees	**212,311**	1,527,633	1,128,201
Net revenue (non-GAAP) (c)	**$3,815,900**	3,400,332	3,041,876
Operating margin (as reported) (GAAP) (a)/(b)	**20.4%**	14.9%	13.8%
Operating margin on a net revenue basis (non-GAAP) (a)/(c)	**21.6%**	21.6%	18.9%

Adjusted EBITDA

(in thousands)	Years Ended December 31, 2018	2017	2016
Net income (GAAP) (a)	**$ 577,917**	592,216	325,972
Adjust for:			
Less: Equity in income of equity investments	**(45,156)**	(40,532)	(26,115)
Add: Income tax expense	**127,003**	65,878	161,175
Add: Interest expense, net	**158,881**	116,028	113,523
Add: Depreciation and amortization	**408,573**	405,906	373,546
Add: Client incentive/contract asset amortization[1]	**28,105**	—	—
Add: Contract cost asset amortization[1]	**35,729**	—	—
Less/Add: (Gain)/loss on foreign currency translation and transaction (gains) losses	**(109)**	907	(1,748)
Add/Less: Other nonoperating expenses (income)	**4,202**	(453)	575
Add: Share-based compensation	**48,758**	42,409	43,728
Add: Cayan and TransFirst M&A and integration expenses[2]	**26,550**	13,367	28,176
Add: Litigation, claims, judgments or settlements[3]	**—**	1,947	21,719
Adjusted EBITDA (non-GAAP) (b)	**$1,370,453**	1,197,673	1,040,551
Total revenues (GAAP) (c)	**$4,028,211**	4,927,965	4,170,077
Net income margin on total revenues (GAAP) (a)/(c)	**14.3%**	12.0%	7.8%
Net revenue (non-GAAP) (d)	**$3,815,900**	3,400,332	3,041,876
Adjusted EBITDA margin on net revenue (non-GAAP) (b)/(d)	**35.9%**	35.2%	34.2%

1 *Client incentive and contract asset amortization are no longer included in depreciation and amortization due to the adoption of ASC 606 on January 1, 2018.*

2 *Costs associated with the Cayan and TransFirst acquisitions which are included in selling, general and administrative expenses and nonoperating expenses.*

3 *Litigation settlement or settlement discussions with counterparties and related legal expenses.*

Adjusted Earnings and Adjusted Diluted Earnings Per Share

(in thousands, except per share data)	Years Ended December 31, 2018	2017	2016
Income attributable to TSYS common shareholders from continuing operations (GAAP)	**$ 576,656**	586,185	319,638
Adjust for amounts attributable to TSYS common shareholders:			
Add: Acquisition intangible amortization	**236,707**	207,172	188,887
Add: Share-based compensation	**48,757**	42,399	43,691
Add: Cayan and TransFirst M&A and integration expenses[1]	**26,550**	13,306	37,957
Add: Litigation, claims, judgments or settlements[2]	—	1,947	19,913
Less: Tax impact of adjustments[3]	**(68,655)**	(90,955)	(93,667)
Less: Impact of Tax Cuts and Jobs Act[4]	**1,277**	(135,871)	—
Adjusted earnings (non-GAAP)	**$ 821,292**	624,183	516,419
Diluted EPS - Net income attributable to TSYS common shareholders:			
As reported (GAAP)	**$ 3.14**	3.16	1.73
Adjusted diluted EPS (non-GAAP)	**$ 4.47**	3.37	2.80
Weighted average diluted shares	**183,919**	185,430	184,448

1 *Costs associated with the Cayan and TransFirst acquisitions which are included in selling, general and administrative expenses and nonoperating expenses.*

2 *Litigation settlement or settlement discussions and related legal expenses.*

3 *Certain of these merger and acquisition costs are nondeductible for income tax purposes. Income tax impact includes a discrete item as a result of the acquisition.*

4 *On December 22, 2017, President Trump signed into law the Tax Act. In addition to the reduction in the federal corporate income tax rate, TSYS realized a non-recurring income tax expense/(benefit) of $1.3 million and ($135.9) million for the years ended December 31, 2018 and 2017, respectively, due to the reduction of certain deferred tax assets and liabilities and the repatriation of foreign earnings as a result of the Tax Act.*

Free Cash Flow

(in thousands)	Years Ended December 31, 2018	2017[1]	2016[1]
Net cash provided by operating activities (GAAP)	**$ 1,041,667**	857,049	718,284
Capital expenditures	**(242,184)**	(196,026)	(142,573)
Free cash flow (non-GAAP)	**$ 799,483**	661,023	575,711

1 *As result of adopting ASU 2016-18 in 2018, TSYS recasted prior periods for changes related to restricted cash.*

Capital expenditures include purchases of property and equipment, additions to licensed computer software from vendors and additions to internally developed computer software and additions to contract acquisition costs.

Financial Position, Liquidity and Capital Resources

The Consolidated Statements of Cash Flows detail the Company's cash flows from operating, investing and financing activities. TSYS' primary methods for funding its operations and growth have been cash generated from current operations, the use of leases and the occasional use of borrowed funds to supplement financing of capital expenditures.

Cash Flows from Operating Activities

(in thousands)	Years Ended December 31, 2018	2017[1]	2016[1]
Net income	**$ 577,917**	592,216	325,972
Depreciation and amortization	**408,573**	405,906	373,546
Provisions for cardholder losses	**65,108**	51,194	49,363
Share-based compensation	**48,758**	42,409	43,728
Provisions for bad debt expenses and billing adjustments	**10,313**	10,169	7,584
Charges for transaction processing provisions	**7,163**	11,716	5,351
Amortization of debt issuance costs	**4,982**	4,307	13,570
Deferred income tax expense (benefit)	**21,400**	(172,488)	7,435
Equity in income of equity investments	**(45,156)**	(40,532)	(26,115)
Other noncash items and charges, net	**25,923**	26,008	5,117
Net change in current and other assets and current and other liabilities	**(83,314)**	(73,856)	(87,267)
Net cash provided by operating activities	**$ 1,041,667**	857,049	718,284

1 As result of adopting ASU 2016-18 in 2018, TSYS recasted prior periods for changes related to restricted cash.

TSYS' main source of funds is derived from operating activities, specifically net income. The change in depreciation and amortization is mainly the result of acquisitions partially offset by the adoption of ASC 606. Net change in current and other assets includes accounts receivable, contract assets, contract cost assets, prepaid expenses, other current assets and other long-term assets. Net change in current and other liabilities includes accounts payable, accrued salaries and employee benefits, and other current liabilities and other long-term liabilities. The change in accounts receivable as of December 31, 2018, as compared to 2017, is the result of timing of collections. The change in accounts payable and other liabilities for the same period is the result of the timing of payments of vendor invoices. The change in accrued salaries and employee benefits is due primarily to changes in incentive bonuses and benefits paid during the year ended December 31, 2018 compared to the same period in 2017. The increase in 2017, as compared to 2016, in net cash provided by operating activities was primarily the result of the combined increase of the net earnings of the Company and the impact of TransFirst.

Impact of adoption of ASC 606

TSYS makes cash payments for processing rights, third-party development costs and other direct salary-related costs in connection with converting new clients to the Company's processing systems. Upon the Company's adoption of ASC 606 as of January 1, 2018, costs to obtain or fulfill a contract are classified as contract cost assets and payments for processing rights or signing incentives are classified as contract assets in the Company's Consolidated Balance Sheets. See Notes 1, 2 and 10 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K.

The decrease in additions to contract costs assets for 2018, as compared to 2017, is primarily attributable to payments for processing rights that are included in the changes in contract assets and liabilities in the operating activities section of the Company's Consolidated Statements of Cash Flows upon the Company's adoption of ASC 606 as of January 1, 2018.

Cash Flows from Investing Activities

(in thousands)	Years Ended December 31, 2018	2017	2016
Cash used in acquisitions, net of cash acquired	**$ (1,051,629)**	—	(2,345,493)
Purchases of property and equipment	**(113,266)**	(70,039)	(51,132)
Additions to licensed computer software from vendors	**(89,756)**	(25,916)	(11,551)
Additions to internally developed computer software	**(39,162)**	(30,265)	(34,043)
Proceeds from sale of acquisition intangibles	**3,847**	—	—
Other investing activities	**(4,183)**	(2,718)	(4,930)
Additions to contract acquisition costs	**—**	(69,806)	(45,847)
Net cash used in investing activities	**$ (1,294,149)**	(198,744)	(2,492,996)

The major uses of cash for investing activities in 2018 were for acquisitions, purchases of property and equipment, the purchase of licensed computer software and internal development of computer software. The primary uses of cash for investing activities in 2017 and 2016 were for acquisitions, purchases of property and equipment, additions to contract acquisition costs, internally developed computer software and licensed computer software from vendors.

Cash Used in Acquisitions

In 2018, the Company completed the acquisition of Cayan in an all cash transaction valued at approximately $1.05 billion. In 2016, the Company used cash of $2.3 billion in connection with the acquisition of TransFirst.

Property and Equipment

Capital expenditures for property and equipment were $113.3 million in 2018, compared to $70.0 million in 2017 and $51.1 million in 2016. The majority of capital expenditures in 2018, 2017 and 2016 related to computer processing hardware.

Additionally, 2018 capital expenditures included TSYS' interest in corporate assets purchased as part of the collaborative arrangement discussed in Note 24 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K.

Internally Developed Computer Software Costs

Additions to capitalized software development costs, including enhancements to, and development of, processing systems were $39.2 million in 2018, $30.3 million in 2017 and $34.0 million in 2016. The changes in capitalized software development costs in 2018, as compared to 2017, were the result of an increase in the level of activity of initiatives that consist of enhancing TSYS' Consumer Solutions and Issuer Solutions platforms. The changes in capitalized software development costs in 2017, as compared to 2016, were the result of a decrease in the level of activity in a multi-year, multi-phase initiative that consists of enhancing TSYS' issuing processing platforms.

Licensed Computer Software from Vendors

Capital expenditures for licensed computer software from vendors for increases in processing capacity were $89.8 million in 2018, compared to $25.9 million in 2017 and $11.6 million in 2016. The increase in expenditures during 2018 relate to new or extended software agreements with certain vendors.

Contract Cost Assets

TSYS makes cash payments for processing rights, third-party development costs and other direct salary-related costs in connection with converting new customers to the Company's processing systems. As discussed earlier, upon the Company's adoption of ASC 606 as of January 1, 2018, costs to obtain or fulfill a contract are classified as contract cost assets and payments for processing rights or signing incentives are classified as contract assets in the Company's Consolidated Balance Sheets. Prior to the Company's adoption of ASC 606, contract cost assets were referred to as contract acquisition costs and included both conversion costs and payments for processing rights (signing incentives). The Company's investments in contract acquisition costs were $69.8 million in 2017 and $45.8 million in 2016. The Company made cash payments for processing rights of $48.6 million and $25.8 million in 2017 and 2016, respectively.

Conversion cost additions were $21.3 million and $20.0 million in 2017 and 2016, respectively.

Purchases of Private Equity Investments

The Company is a party to partnership agreements in connection with investing in two Atlanta-based venture capital funds focused exclusively on investing in technology-enabled financial services companies. Pursuant to each limited partnership agreement, the Company has committed to invest up to $20.0 million in each fund so long as its ownership interest in each fund does not exceed 50%. The Company made investments in the funds of $6.6 million, $2.7 million and $4.9 million in 2018, 2017 and 2016, respectively.

Cash Flows from Financing Activities

(in thousands)	Years Ended December 31, 2018	2017	2016
Principal payments on long-term borrowings, capital lease obligations and license agreements	$ (2,812,366)	(421,306)	(724,084)
Repurchases of common stock under plans and tax withholding	(172,966)	(284,237)	(30,275)
Purchase of noncontrolling interests	(126,000)	(70,000)	(5,878)
Dividends paid on common stock	(94,557)	(79,017)	(73,378)
Debt issuance costs	(16,004)	—	(26,555)
Subsidiary dividends paid to noncontrolling shareholders	(3,777)	(5,997)	(5,548)
Proceeds from borrowings of long-term debt	3,477,000	200,000	2,666,295
Proceeds from exercise of stock options	31,177	21,832	11,708
Excess tax benefit from share-based payment arrangements	—	—	9,905
Net cash provided by (used in) financing activities	$ 282,507	(638,725)	1,822,190

Net cash used in financing activities for the year ended December 31, 2018 was primarily related to principal payments on long-term borrowings, repurchases of common stock, the purchase of the remaining fifteen percent interest in CPAY, payment of dividends and capital lease obligations and license agreements. The main source of cash provided by financing activities in 2018 is the proceeds from borrowing of long-term debt and exercises of stock options. Cash provided by financing activities for the year ended December 31, 2018 primarily related to proceeds from long-term borrowings in connection with the Cayan acquisition.

TSYS continues to monitor developments related to the anticipated transition from the London Interbank Offered Rate ("LIBOR") to an alternative benchmark reference rate, such as the Secured Overnight Financing Rate ("SOFR"), beginning January 1, 2022. Additionally, TSYS maintains contact with its lenders and other stakeholders to evaluate the potential impact of these changes on TSYS' future financing activities.

Net cash used in financing activities for the year ended December 31, 2017 was primarily related to principal payments on long-term borrowings and capital lease obligations, repurchase of common stock, dividends paid on common stock, as well as the purchase of noncontrolling interests. Cash provided by financing activities for the year ended December 31, 2017 primarily relate to proceeds from long-term borrowings.

Net cash used in financing activities for the year ended December 31, 2016 was primarily related to principal payments on long-term borrowings and capital lease obligations, as well as dividends paid on common stock. Cash provided by financing activities for the year ended December 31, 2016 primarily related to proceeds from long-term borrowings in connection with the TransFirst acquisition.

Refer to Notes 12 and 23 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form8-K for more information on the long-term debt financing and acquisitions.

Borrowings

Refer to Note 12 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form8-K for further information on borrowings.

Purchase of Noncontrolling Interest

In connection with the acquisition of CPAY, the Company was party to call and put arrangements with respect to the membership units that represent the remaining noncontrolling interest of CPAY. The call arrangement was exercisable by TSYS and the put arrangement was exercisable by the Seller. The put arrangement was outside the control of the Company by requiring the Company to purchase the Seller's entire equity interest in CPAY at a put

price at fair value. At the time of the original acquisition, the redemption of the put option was considered probable based upon the passage of time of the second anniversary date. The put arrangement was recorded on the Consolidated Balance Sheet and was classified as redeemable noncontrolling interest in consolidated subsidiary outside of permanent equity.

In April 2018, the Company acquired the remaining 15% equity interest in CPAY from a privately-owned company for $126.0 million.

In February 2017, the Company acquired an additional 10% equity interest in CPAY from a privately owned company for $70.0 million. This purchase reduced the remaining redeemable noncontrolling interest in CPAY to 15% of its total outstanding equity and extended the put call arrangement until April 2018. The transaction resulted in a decrease to noncontrolling interest of $9.8 million and a decrease to additional paid-in-capital of $60.2 million.

The put option was not redeemable on December 31, 2017, but redemption was considered probable based upon the passage of time toward the April 2018 date. The Company's accounting policy is to accrete changes in the redemption value over the period from the date of issuance to the earliest redemption date. The Company recorded accretion in fair value of $101.4 million for the year ended December 31, 2017 using the effective interest method.

Refer to Note 23 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form8-K for more information on this purchase.

Stock Repurchase Plan

In January 2015, TSYS announced that its Board had approved a stock repurchase plan to repurchase up to 20 million shares of TSYS stock. The shares may be purchased from time to time at prices considered appropriate. There is no expiration date for the plan. Through December 31, 2018, the Company purchased 11.5 million shares for approximately $720.9 million at an average price of $62.69.

On January 31, 2019, TSYS executed an accelerated share repurchase ("ASR") agreement to repurchase $400 million of its outstanding common stock. Pursuant to the ASR Agreement, approximately 83% of the shares expected to be repurchased were received by the Company on February 5, 2019. The total number of shares ultimately repurchased under the ASR program will be determined upon final settlement and will be based on a discount to the volume-weighted average price of the Company's common stock during the ASR period. The Company anticipates that all repurchases under the ASR will be completed by the end of the first quarter of 2019.

Dividends

Dividends on common stock of $94.6 million were paid in 2018, compared to $79.0 million and $73.4 million in 2017 and 2016, respectively. For 2018, the Company declared dividends of $0.52 per share, compared to dividends of $0.46 per share in 2017 and $0.40 per share in 2016.

Significant Noncash Transactions

During 2018, 2017 and 2016, the Company issued 326,968, 329,051 and 362,804 shares of common stock, respectively, to certain key employees and non-management members of its Board of Directors. The grants to certain key employees were issued in the form of nonvested stock bonus awards for services to be provided in the future by such officers and employees. The market value of the common stock at the date of issuance is amortized as share-based compensation expense over the vesting period of the awards. The grants to the Board of Directors were fully vested on the date of grant. The Company acquired computer equipment under capital leases and software under license agreements in the amount of $23.2 million, $40.8 million and $1.8 million in 2018, 2017 and 2016, respectively.

Refer to Notes 18 and 22 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form8-K for more information on share-based compensation and significant noncash transactions.

Additional Cash Flow Information

Off-Balance Sheet Financing

TSYS uses various operating leases in its normal course of business. These"off-balance sheet" arrangements obligate TSYS to make payments for computer equipment and facilities. These computer lease commitments may be replaced with new lease commitments due to new technology. Management expects that, as these leases expire, they will be evaluated and renewed or replaced by similar leases based on need. As discussed in Note 1 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K, the Company adopted ASU 2016-02 *Leases (Topic 842)* (ASU 2016-02) as of January 1, 2019. ASU 2016-02 introduces a lessee model that brings most operating leases on the balance sheet.

The following table summarizes future contractual cash obligations, including lease payments and software arrangements, as of December 31, 2018, for the next five years and thereafter:

	Contractual Cash Obligations Payments Due by Period				
(in thousands)	**Total**	**1 Year or Less**	**2-3 Years**	**4-5 Years**	**After 5 Years**
Debt obligations (principal)	$3,887,149	$ 20,807	761,342	1,905,000	1,200,000
Debt obligations (interest)[1]	836,265	158,756	294,628	213,437	169,444
Operating leases	254,381	54,818	105,532	61,137	32,894
Purchase commitments	131,788	59,182	39,463	12,330	20,813
Capital lease obligations	42,374	7,393	14,404	13,709	6,868
License agreements	18,146	2,939	15,168	39	—
Total contractual cash obligations	$5,170,103	$303,895	1,230,537	2,205,652	1,430,019

1 *Amounts utilize prevailing interest rates as of December 31, 2018.*

Income Taxes

The total liability for uncertain tax positions as of December 31, 2018 is $22.3 million. Refer to Note 14 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K for more information on income taxes. The Company is not able to reasonably estimate the amount by which the liability will increase or decrease over time; however, at this time, the Company does not expect any significant changes related to these obligations within the next twelve months.

Foreign Operations

TSYS operates internationally and is subject to adverse movements in foreign currency exchange rates. On June 23, 2016, the U.K. held a referendum in which voters approved an exit from the E.U., commonly referred to as "Brexit." The U.K. is currently negotiating the terms of its expected exit from the European Union which is scheduled for March 29, 2019. In November 2018, the U.K. and the European Union agreed upon a draft Withdrawal Agreement that sets out the terms of the U.K.'s departure, including a transition period from March 29, 2019 through December 31, 2020 to allow time for the U.K. and the European Union to agree upon a future trade deal. On January 15, 2019, the draft Withdrawal Agreement was rejected by the U.K. Parliament creating significant uncertainty about the terms (and timing) under which the U.K. will leave the European Union and the terms of U.K.'s future relationship with the European Union. TSYS continues to monitor Brexit and its potential impact across key areas including service continuity, contracts, regulatory (including data privacy), the economy and freedom of movement of people. Uncertainty over the terms of the withdrawal of the U.K. from the E.U. may create global economic uncertainty, and have unknown social and geopolitical impact, which may adversely affect the Company's business, results of operations and financial condition, as well as potentially affect TSYS' relationships with its existing and future customers, vendors and employees. Additionally, the U.K. may be required to negotiate new terms of trade with various jurisdictions which could be disruptive and adversely affect TSYS' tax benefits or liabilities in those jurisdictions. TSYS has not entered into foreign exchange forward contracts to reduce its exposure to foreign currency rate changes. TSYS continues to analyze potential hedging instruments to safeguard it from significant foreign currency translation risks.

TSYS maintains operating cash accounts outside the United States. Refer to Note 4 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K for more information on cash, cash equivalents and restricted cash. TSYS has adopted the permanent reinvestment exception under GAAP with respect to future earnings of certain foreign subsidiaries. While some of the foreign cash is available to repay intercompany financing arrangements, some remaining amounts may not be presently available to fund domestic operations and obligations without paying withholding taxes upon its repatriation. Demand on the Company's cash has increased as a result of its strategic initiatives. TSYS funds these initiatives through a balance of internally generated cash, external sources of capital and, when advantageous, access to foreign cash in a tax efficient manner. Where local regulations limit an efficient intercompany transfer of amounts held outside of the U.S., TSYS will continue to utilize these funds for local liquidity needs. Under current law, balances available to be repatriated to the U.S. may be subject to foreign withholding taxes. Pursuant to the Tax Act, TSYS has not provided for the U.S. federal tax liability on these amounts for financial statement purposes. TSYS utilizes a variety of tax planning and financing strategies with the objective of having its worldwide cash available in the locations where it is needed.

Impact of Inflation

Although the impact of inflation on its operations cannot be precisely determined, the Company believes that by controlling its operating expenses and by taking advantage of more efficient computer hardware and software, it can minimize the impact of inflation.

Working Capital

TSYS may seek additional external sources of capital in the future. The form of any such financing will vary depending upon prevailing market and other conditions and may include short-term or long-term borrowings from financial institutions or the issuance of additional equity and/or debt securities such as local industrial revenue bonds. However, there can be no assurance that funds will be available on terms acceptable to TSYS. Management expects that TSYS will continue to be able to fund a significant portion of its capital expenditure needs through internally generated cash in the future, as evidenced by TSYS' current ratio of 2.2:1. As of December 31, 2018, TSYS had working capital of $625.2 million, compared to $90.2 million in 2017 and $602.3 million in 2016.

Legal Proceedings

Refer to Note 15 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K for information regarding the Company's commitments and contingencies, including legal proceedings.

**Management's Discussion and Analysis of Financial Condition and Results of Operations of Total System Services, Inc.
for the three and six months ended June 30, 2019 and 2018**

This management's discussion and analysis provides a review of the results of operations, financial condition and liquidity and capital resources of Total System Services, Inc. ("TSYS," "we," "us," "our" or the "Company" refer to Total System Services, Inc. and its consolidated subsidiaries and "management" refers to the management of TSYS) and outlines the factors that affected recent results, as well as factors that may affect future results. TSYS' actual results in the future may differ materially from those anticipated in these forward-looking statements as a result of many factors, including those set forth under "Information related to certain material risks related to Total System Services, Inc.'s business, operations and financial condition" included in Exhibit 99.6 to this Current Report on Form 8-K. The following discussion should be read in conjunction with TSYS' unaudited consolidated financial statements and related notes appearing in Exhibit 99.2 to this Current Report on Form 8-K, as well as management's discussion and analysis and consolidated financial statements for the year ended December 31, 2018 included in Exhibits 99.3 and 99.1, respectively, to this Current Report on Form 8-K.

TSYS' revenues are derived from providing payment processing services, merchant services and related payment services to financial and nonfinancial institutions, generally under long-term processing contracts. The Company also derives revenues by providing general-purpose reloadable ("GPR") prepaid debit and payroll cards, demand deposit accounts and other financial service solutions to the underbanked and other consumers and businesses. The Company's services are provided through three operating segments: Issuer Solutions, Merchant Solutions and Consumer Solutions.

Through the Company's Issuer Solutions segment, TSYS processes information through its cardholder systems to financial and nonfinancial institutions throughout the United States and internationally. The Company's Merchant Solutions segment provides merchant services to merchant acquirers and merchants mainly in the United States. The Company's Consumer Solutions segment provides financial service solutions to consumers and businesses in the United States.

For a detailed discussion regarding the Company's operations, see Management's Discussion and Analysis of Financial Condition and Results of Operations included in Exhibit 99.3 to this Current Report on Form 8-K.

Pending Merger with Global Payments Inc.

On May 27, 2019, TSYS entered into an Agreement and Plan of Merger (the "Merger Agreement") with Global Payments Inc., a Georgia corporation ("Global Payments"). The Merger Agreement provides that, upon the terms and subject to the conditions set forth therein, TSYS will merge with and into Global Payments (the "Merger"), with Global Payments as the surviving entity in the Merger. Refer to Note 1 in the Notes to Unaudited Consolidated Financial Statements included in Exhibit 99.2 to this Current Report on Form 8-K for further discussion.

Management's discussion and analysis contains items prepared in conformity with GAAP, as well asnon-GAAP measures. For detailed information and reconciliations to GAAP, refer to the discussion under the caption Non-GAAP Measures.

A summary of the financial highlights for 2019, as compared to 2018, is provided below:

(in thousands, except per share data)	Three months ended June 30, 2019	2018	Percent Change	Six months ended June 30, 2019	2018	Percent Change
Total revenues	**$1,035,485**	1,007,580	**2.8%**	**$2,070,016**	1,994,750	**3.8%**
Net revenue[1]	**$ 979,920**	956,548	**2.4**	**$1,960,189**	1,892,045	**3.6**
Operating income	**$ 219,087**	208,698	**5.0**	**$ 442,357**	396,969	**11.4**
Net income attributable to TSYS common shareholders	**$ 162,760**	142,435	**14.3**	**$ 324,367**	284,276	**14.1**
Basic earnings per share (EPS) attributable to TSYS common shareholders[2]	**$ 0.92**	0.78	**17.7**	**$ 1.83**	1.56	**16.9**
Diluted EPS attributable to TSYS common shareholders[2]	**$ 0.91**	0.78	**17.5**	**$ 1.81**	1.55	**16.8**
Adjusted earnings before interest, taxes, depreciation and amortization (Adjusted EBITDA)[3]	**$ 368,939**	345,021	**6.9**	**$ 726,226**	675,943	**7.4**
Adjusted earnings[4]	**$ 226,686**	203,796	**11.2**	**$ 442,132**	411,383	**7.5**
Adjusted diluted EPS[5]	**$ 1.27**	1.11	**14.4**	**$ 2.47**	2.24	**10.0**
Cash flows from operating activities				**$ 395,430**	470,593	**(16.0)**
Free cash flow[6]				**$ 278,560**	382,835	**(27.2)**

Refer to the reconciliation of GAAP to non-GAAP measures later in Item 2.

1 *Net revenue is defined as total revenues less reimbursable items (such as postage) that are recorded by TSYS as expense.*

2 *Under GAAP, entities that have participating securities must compute basic EPS using the two-class method and compute diluted EPS using the more dilutive approach of either the two-class method or the treasury stock method. Refer to Note 9 in the Notes to Unaudited Consolidated Financial Statements included in Exhibit 99.2 to this Current Report on Form 8-K for more information on EPS.*

3 *Adjusted EBITDA is defined as net income excluding equity in income of equity investments, nonoperating income/(expense), income taxes, depreciation, amortization, share-based compensation expenses and other items.*

4 *Adjusted earnings is net income excluding noncontrolling interests, the after-tax impact of share-based compensation expenses, amortization of acquisition intangibles and other items.*

5 *Adjusted diluted EPS is defined as adjusted earnings divided by weighted average shares outstanding used for diluted EPS calculations.*

6 *Free cash flow is defined as net cash provided by operating activities less capital expenditures.*

Financial Review

This Financial Review provides a discussion of critical accounting policies and estimates, related party transactions and off-balance sheet arrangements. This Financial Review also discusses the results of operations, financial position, liquidity and capital resources of TSYS and outlines the factors that have affected its recent earnings, as well as those factors that may affect its future earnings. For a detailed discussion regarding these topics, refer to the Notes to Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K and Management's Discussion and Analysis of Financial Condition and Results of Operations included in Exhibit 99.3 to this Current Report on Form 8-K.

Critical Accounting Policies and Estimates

Refer to Note 1 in the Notes to Unaudited Consolidated Financial Statements included in Exhibit 99.2 to this Current Report on Form 8-K for more information on changes to the Company's critical accounting policies, estimates and assumptions on the judgments affecting the application of those estimates and assumptions in 2019. TSYS has updated its lease policies in conjunction with the adoption of Accounting Standards Update No. 2016-02, *Leases (Topic 842)* ("ASC 842") as further described in Notes 1 and 4 in the Notes to Unaudited Consolidated Financial Statements included in Exhibit 99.2 to this Current Report on Form 8-K. The most significant impact of adopting ASC 842 in 2019 is primarily the addition of operating lease right-of-use assets and corresponding liabilities to the Consolidated Balance Sheet.

Off-Balance Sheet Arrangements

Operating Leases

As a method of funding its operations, TSYS employs noncancelable operating leases for computer equipment and facilities. These leases allow the Company to provide the latest technology while avoiding the risk of ownership. Neither the assets nor obligations related to these leases are included on the Consolidated Balance Sheets as of December 31, 2018. With the adoption of ASC 842, operating lease right-of-use assets and operating lease liabilities were recognized on the Consolidated Balance Sheet as of January 1, 2019.

Contractual Obligations

The Company has long-term obligations which consist of required minimum future payments under contracts with certain of our distributors and other service providers.

Recent Accounting Pronouncements

For a discussion of recent accounting pronouncements, refer to Note 1 in the Notes to Unaudited Consolidated Financial Statements included in Exhibit 99.2 to this Current Report on Form 8-K.

Results of Operations

Revenues

The Company generates revenues by providing transaction processing and other payment-related services. The Company's pricing for transactions and services is complex. Each category of revenue has numerous fee components depending on the types of transactions processed or services provided. TSYS reviews its pricing and implements pricing changes on an ongoing basis. In addition, standard pricing varies among its regional businesses, and such pricing can be customized further for its clients through tiered pricing of various thresholds for volume activity. TSYS' revenues are based upon transactional information accumulated by its systems. The Company's revenues are impacted by currency translation of foreign operations, as well as doing business in the current economic environment.

Total revenues increased 2.8% and 3.8%, for the three and six months ended June 30, 2019, respectively, compared to the same periods in 2018. Revenues for the three and six months ended June 30, 2019 also included decreases of $6.8 million and $15.1 million, respectively, related to the effects of currency translation of the Company's foreign-based subsidiaries and branches.

The Company reviews revenue performance on a net revenue basis which is a non-GAAP measure. Net revenue is defined as total revenues less reimbursable items that are recorded by TSYS as expense. The Company has included reimbursements received for out-of-pocket expenses as revenues and expenses. The largest reimbursable expense items for which TSYS is reimbursed by clients are postage fees. The Company's reimbursable items are primarily impacted by changes in postal rates and changes in the volumes of mailing activities by its clients. Reimbursable items for the three and six months ended June 30, 2019 were $55.6 million and $109.8 million, increases of 8.9% and 6.9%, respectively, compared to the same periods last year, primarily due to an increase in postal rates.

Net revenue increased $23.4 million and $68.1 million, or 2.4% and 3.6% during the three and six months ended June 30, 2019, respectively, compared to the same periods in 2018. The increase in net revenue for the three and six months ended June 30, 2019, as compared to the same periods in 2018, is primarily the result of organic growth, partially offset by decreases of $6.4 million and $14.1 million, respectively, associated with currency translation.

Major Customers

For a discussion regarding the Company's major customers, refer to Note 11 in the Notes to Unaudited Consolidated Financial Statements included in Exhibit 99.2 to this Current Report on Form 8-K and see Management's Discussion and Analysis of Financial Condition and Results of Operations, which is included in Exhibit 99.3 to this Current Report on Form 8-K.

The Company works to maintain a large and diverse customer base across various industries. For the three and six months ended June 30, 2019, the Company did not have a major customer on a consolidated basis. However, a significant amount of the Company's revenues are derived from long-term contracts with large clients. TSYS derives revenues from providing various processing and other services to these clients, including processing of consumer and commercial accounts, as well as revenues for reimbursable items. The loss of one of the Company's large clients could have a material adverse effect on the Company's financial position, results of operations and cash flows.

Operating Segments

TSYS' services are provided through three operating segments: Issuer Solutions, Merchant Solutions and Consumer Solutions. Refer to Note 11 in the Notes to Unaudited Consolidated Financial Statements included in Exhibit 99.2 to this Current Report on Form 8-K for more information on the Company's operating segments.

Issuer Solutions

The Company's Issuer Solutions segment has many long-term customer contracts with card issuers providing account processing and output services for printing and embossing items. These contracts generally require advance notice prior to the end of the contract if a client chooses not to renew. Additionally, some contracts may permit early termination upon the occurrence of certain events such as a change in control. The termination fees paid upon the occurrence of such events are designed primarily to cover balance sheet exposure related to items such as contract assets and contract cost assets associated with the contract and, in some cases, may cover a portion of lost future revenue and profit. Although these contracts may be terminated upon certain occurrences, the contracts provide the segment with a steady revenue stream since a vast majority of the contracts are honored through the contracted expiration date.

These services are provided throughout the period of each account's use, starting from a card-issuing client processing an application for a card. Services may include processing the card application, initiating service for the cardholder, processing each card transaction for the issuing retailer or financial institution and accumulating the account's transactions. Fraud management services monitor the unauthorized use of accounts which have been reported to be lost, stolen, or which exceed credit limits. Fraud detection systems help identify fraudulent transactions by monitoring each accountholder's purchasing patterns and flagging unusual purchases. Other services provided include customized communications to cardholders, information verification associated with granting credit, debt collection and customer service.

TSYS' revenues in its Issuer Solutions segment are primarily derived from electronic payment processing. There are certain basic core services directly tied to accounts on file ("AOF") and transactions. These are provided to all of TSYS' processing clients. The core services begin with AOF.

The core services include housing AOF, authorizing transactions (authorizations), accumulating monthly transactional activity (transactions) and providing a monthly statement (statement generation). From these core services, TSYS' clients also have the option to use fraud and portfolio management services which are based on authorizations processed and AOF, respectively. Collectively, these services are considered volume-based revenues.

Below is a summary of AOF for the Company's Issuer Solutions segment:

(in millions)	As of June 30,		
AOF	**2019**	2018	**Percent Change**
Consumer	**532.2**	493.8	**7.8%**
Commercial	**61.6**	56.8	**8.4**
Other	**45.1**	38.3	**18.0**
Traditional AOF[1]	**638.9**	588.9	**8.5**
Prepaid/Stored Value[2]	**8.4**	37.0	**(77.2)**
Commercial Card Single-Use[3]	**121.7**	106.0	**14.8**
Government Services[4]	**—**	97.4	**(100.0)**
Total AOF	**769.0**	829.3	**(7.3)**

1 *Traditional accounts include consumer, retail, commercial, debit and other accounts. These accounts are grouped together due to the tendency to have more transactional activity than prepaid, single-use accounts and government services.*

2 *Prepaid does not include Consumer Solutions accounts. These accounts tend to have less transactional activity than the traditional accounts. Prepaid and stored value cards are issued by firms through retail establishments to be purchased by consumers to be used at a later date. These accounts tend to be the least active of all accounts on file.*

3 *Commercial card single-use accounts are one-time use accounts issued by firms to book lodging and other travel related expenses.*

4 *Government services accounts are disbursements of student loan accounts issued by the Department of Education, which have minimal activity. This portfolio of AOF had deconverted by December 31, 2018.*

Non-volume related revenues include processing fees which are not directly associated with AOF and transactional activity, such as certain value added products and services, custom programming and certain other services, which are only offered to TSYS' processing clients.

Additionally, certain clients license the Company's processing systems and process in-house. Since the accounts are processed outside of TSYS for licensing arrangements, the AOF and other volumes are not available to TSYS. Thus, volumes reported by TSYS do not include volumes associated with licensing.

Output and managed services include offerings such as card production, statement production, correspondence and call center support services.

The Issuer Solutions segment provides payment processing and related services to clients based in the United States and internationally. Growth in revenues and operating profit in this segment is derived from retaining and growing the core business and improving the overall cost structure. Growing the core business comes primarily from an increase in account usage, growth from existing clients and sales to new clients and the related account conversions. This segment has one major customer for the three and six months ended June 30, 2019.

Below is a summary of the Issuer Solutions segment:

(in thousands, except key indicators)	Three months ended June 30, 2019	Three months ended June 30, 2018	Percent Change	Six months ended June 30, 2019	Six months ended June 30, 2018	Percent Change
Volume-based revenues	**$215,945**	208,872	**3.4%**	**$ 431,369**	414,496	**4.1%**
Non-volume related revenues:						
Processing fees	**76,131**	82,349	**(7.6)**	**150,996**	162,190	**(6.9)**
Value-added, custom programming, licensing and other	**71,072**	67,227	**5.7**	**142,620**	143,283	**(0.5)**
Output and managed services	**69,297**	62,567	**10.8**	**140,934**	124,620	**13.1**
Total non-volume related revenues	**216,500**	212,143	**2.1**	**434,550**	430,093	**1.0**
Net revenue[1]	**$432,445**	421,015	**2.7**	**$ 865,919**	844,589	**2.5**
Adjusted segment EBITDA[2]	**$209,845**	195,275	**7.5**	**$ 414,779**	391,040	**6.1**
Adjusted segment EBITDA margin[3]	**48.5%**	46.4%		**47.9%**	46.3%	
Key indicators *(in millions)*:						
AOF				**769.0**	829.3	**(7.3)**
Traditional AOF				**638.9**	588.9	**8.5**
Transactions	**6,645.4**	6,050.0	**9.8**	**12,594.2**	11,598.0	**8.6**

1 *Net revenue is defined as total revenues less reimbursable items (such as postage) that are recorded by TSYS as expense.*
2 *Adjusted segment EBITDA excludes acquisition intangible amortization and expenses associated with Corporate Administration and Other.*
3 *Adjusted segment EBITDA margin is adjusted segment EBITDA divided by net revenue.*

For the three and six months ended June 30, 2019, approximately 49.9% and 49.8%, respectively, of net revenue was driven by the volume of AOF and transactions processed and approximately 50.1% and 50.2%, respectively, was derived from non-volume based revenues.

The increase in net revenue for the three and six months ended June 30, 2019, as compared to the same periods in 2018, was driven by organic growth.

Movements in foreign currency exchange rates as compared to the U.S. dollar can result in foreign denominated financial statements being translated into more or fewer U.S. dollars, which impacts the comparison to prior periods when the U.S. dollar was stronger or weaker.

Net revenue for the three and six months ended June 30, 2019, as compared to the same periods in 2018, included decreases of $6.4 million and $14.3 million, respectively, associated with currency translation.

Merchant Solutions

The Merchant Solutions segment provides merchant processing and related services to clients based primarily in the United States. Merchant Solutions revenues are derived from providing processing services, acquiring solutions, related systems and support services to merchant acquirers and merchants. Revenues from merchant services include processing all payment forms including credit, debit, prepaid, electronic benefit transfer and electronic check for merchants of all sizes across a wide array of market verticals. Merchant Solutions include authorization and capture of transactions; clearing and settlement of transactions; information reporting services related to transactions; and merchant billing services. This segment has no major customers for the three and six months ended June 30, 2019.

The Merchant Solutions segment's results are driven by dollar sales volume and the authorization and capture transactions processed at the point-of-sale ("POS"). This segment's authorization and capture transactions are primarily through Internet connectivity.

Below is a summary of the Merchant Solutions segment:

(in thousands, except key indicators)	Three months ended June 30, 2019	Three months ended June 30, 2018	Percent Change	Six months ended June 30, 2019	Six months ended June 30, 2018	Percent Change
Net revenue[1]	**$ 364,210**	346,389	**5.1%**	**$ 707,166**	663,792	**6.5%**
Adjusted segment EBITDA[2]	**$ 138,366**	133,418	**3.7**	**$ 267,201**	252,358	**5.9**
Adjusted segment EBITDA margin[3]	**38.0%**	38.5%		**37.8%**	38.0%	
Key indicators:						
Dollar sales volume (*in millions*)	**$43,890.0**	40,362.1	**8.7**	**$84,131.6**	77,628.8	**8.4**
POS transactions (*in millions*)	**1,700.3**	1,498.5	**13.5**	**3,224.7**	2,838.0	**13.6**
Net revenue per POS transaction	**$ 0.214**	0.231	**(7.3)**	**$ 0.219**	0.234	**(6.2)**

1 *Net revenue is defined as total revenues less reimbursable items (such as postage) that are recorded by TSYS as expense.*
2 *Adjusted segment EBITDA excludes acquisition intangible amortization and expenses associated with Corporate Administration and Other.*
3 *Adjusted segment EBITDA margin is adjusted segment EBITDA divided by net revenue.*

For the three and six months ended June 30, 2019, approximately 93.4% of net revenue was influenced by several factors, including volumes related to transactions and dollar sales volume. The remaining 6.6% of this segment's net revenue was derived from value added services, chargebacks, managed services, investigation and risk and collection services performed.

The increase in net revenue and adjusted segment EBITDA for the three and six months ended June 30, 2019, as compared to the same periods in 2018, was driven by higher processing volumes, product fees and processing fees.

Consumer Solutions

The Consumer Solutions segment provides GPR prepaid cards, payroll cards, demand deposit accounts and other financial service solutions to the underbanked and other consumers and businesses in the United States. The segment's products provide customers with access to depository accounts insured by the Federal Deposit Insurance Corporation ("FDIC") with a menu of pricing and features specifically tailored to their needs. The Consumer Solutions segment has an extensive distribution and reload network including financial service centers and other retail locations throughout the United States, and is a program manager for FDIC-insured depository institutions that issue the products that the segment develops, promotes and distributes. The Consumer Solutions segment currently has active agreements with five issuing banks.

The Consumer Solutions segment markets its products through multiple distribution channels, including alternative financial service providers, traditional retailers, direct-to-consumer and online marketing programs, and contractual relationships with corporate employers. This segment has no major customers and one major third-party distributor for the three and six months ended June 30, 2019.

The Consumer Solutions segment's revenues primarily consist of a portion of the service fees and interchange revenues received by the segment's issuing banks and others in connection with the programs managed by this segment. Customers are charged fees for transactions including fees for PIN and signature-based purchase transactions made using their cards, for ATM withdrawals or other transactions conducted at ATMs, for balance inquiries, and monthly maintenance fees among others. Customers are also charged fees associated with additional features and services offered in connection with certain products including the use of courtesy overdraft protection, bill payment options, custom card designs and card-to-card transfers of funds initiated through call centers. The Consumer Solutions segment also earns revenues from a portion of the interchange fees remitted by merchants when customers make purchase transactions using their products. Subject to applicable law, interchange fees are fixed by card associations and network organizations.

Below is a summary of the Consumer Solutions segment:

(in thousands, except key indicators)	Three months ended June 30, 2019	2018	Percent Change	Six months ended June 30, 2019	2018	Percent Change
Net revenue[1]	**$ 196,143**	200,293	**(2.1)%**	**$ 415,321**	410,781	**1.1%**
Adjusted segment EBITDA[2]	**$ 53,595**	54,545	**(1.7)**	**$ 117,288**	108,212	**8.4**
Adjusted segment EBITDA margin[3]	**27.3%**	27.2%		**28.2%**	26.3%	
Key indicators *(in millions)*:						
Gross dollar volume[4]	**$ 8,659.8**	8,336.2	**3.9**	**$18,713.3**	18,030.5	**3.8**
Number of active cards[5]				**5.0**	5.1	**(2.1)**
Number of active cards with direct deposit[6]				**2.5**	2.5	**(2.6)**
Percentage of active cards with direct deposit				**49.3%**	49.6%	

1 *Net revenue is defined as total revenues less reimbursable items (such as postage) that are recorded by TSYS as expense.*
2 *Adjusted segment EBITDA excludes acquisition intangible amortization and expenses associated with Corporate Administration and Other.*
3 *Adjusted segment EBITDA margin is adjusted segment EBITDA divided by net revenue.*
4 *Gross dollar volume represents the total dollar volume of debit transactions and cash withdrawals made using Consumer Solutions products.*
5 *Number of active cards represents the total number of cards that have had a PIN or signature-based purchase transaction, apoint-of-sale load transaction or an ATM withdrawal within three months of the date of determination, adjusted to remove prepaid cards that consumers upgraded to a demand deposit account during the period.*
6 *Number of active cards with direct deposit represents the number of active cards that have had a direct deposit load within three months of the date of determination, adjusted to remove prepaid cards that consumers upgraded to a demand deposit account during the period.*

For the three and six months ended June 30, 2019, 68.7% and 69.1%, respectively, of revenues were derived from service fees charged to customers and 31.3% and 30.9%, respectively, of revenues were derived from interchange and other revenues. Service fee revenues are driven by the number of active cards and in particular by the number of cards with direct deposit. Customers with direct deposit generally initiate more transactions and generate more revenues than those that do not take advantage of this feature. Interchange revenues are driven by gross dollar volume. Substantially all of the Consumer Solutions segment revenues were volume driven as they were driven by the active card and gross dollar volume indicators.

Net revenue for the three and six months ended June 30, 2019, compared to the same periods in 2018, decreased $4.2 million and increased $4.5 million, respectively. Service fee revenue decreased $7.8 million and $2.4 million, or 5.5% and 0.8% for the three months and six months ended June 30, 2019, respectively, compared to the same periods in 2018. The decrease in service fee revenue for the three and six months ended June 30, 2019, was driven by the removal of certain service fees on prepaid products effective April 1, 2019, upon the effective date of the Consumer Financial Protection Bureau's ("CFPB") 2016 prepaid rule. Revenues from interchange and other services for the three and six months ended June 30, 2019, increased $3.6 million and $6.9 million, or 6.3% and 5.7%, respectively, compared to the same periods last year. The increase in revenues from interchange and other services for the three and six months ended June 30, 2019, was driven by the increase in gross dollar volume.

On January 25, 2018, the CFPB announced that it had finalized updates to its 2016 prepaid rule. The CFPB's 2016 prepaid rule put in place requirements for treatment of funds on lost or stolen cards, error resolution and investigation, upfront fee disclosures, access to account information, and overdraft features if offered in conjunction with prepaid accounts. The changes announced by the CFPB adjusted requirements for resolving errors on unregistered accounts, provided greater flexibility for credit cards linked to digital wallets, and extended the effective date of the rule by one year to April 1, 2019.

Operating Expenses

The Company's operating expenses were $816.4 million and $1.6 billion for the three and six months ended June 30, 2019, respectively, compared to $798.9 million and $1.6 billion for the same periods in 2018. The Company's operating expenses consist of cost of services and selling, general and administrative expenses. Cost of services describes the direct expenses incurred in performing a particular service for the Company's customers, including the cost of reimbursable items and direct labor expense in putting the service in saleable condition. Selling, general and administrative expenses are incurred in selling or marketing and for the direction of the enterprise as a whole, including accounting, legal fees, sales, investor relations and mergers and acquisitions.

Operating expenses for the three and six months ended June 30, 2019 increased $17.5 million and $29.9 million, respectively, compared to the same periods last year. The increases primarily related to an increase in cost of services.

The Company's cost of services were $630.8 million and $1.3 billion for the three and six months ended June 30, 2019, respectively, which were increases of 2.1% and 2.6%, respectively, compared to the same periods last year. The increase in cost of services for the three and six months ended June 30, 2019 is due to an increase in merchant referral fees and commissions, reimbursable expenses and salaries. The Company's selling, general and administrative expenses were $185.6 million and $364.6 million for the three and six months ended June 30, 2019, respectively, an increase of 2.5% and a decrease of 0.5%, respectively, compared to the same periods last year. The increase in selling, general, and administrative costs for the three months ended June 30, 2019 is the result of expenses related to the merger with Global Payments partially offset by a decrease in amortization of acquisition intangibles. The decrease in selling, general, and administrative costs for the six months ended June 30, 2019 is the result of a decrease in amortization of acquisition intangibles.

The Company's transaction and integration expenses related to mergers and acquisitions were $17.6 million and $21.6 million for the three and six months ended June 30, 2019, respectively. These expenses consist of costs related to mergers and acquisitions such as legal, accounting and professional fees, share-based compensation, as well as, personnel costs for severance and retention.

Operating Income

Operating income increased 5.0% and 11.4% for the three and six months ended June 30, 2019, respectively, compared to the same periods in 2018. The Company's operating profit margin for the three and six months ended June 30, 2019, was 21.2% and 21.4%, respectively, compared to 20.7% and 19.9%, respectively, for the same periods last year. TSYS' operating margin increased for the three and six months ended June 30, 2019, as compared to the same periods in 2018, due primarily to a decrease in amortization of acquisition intangibles.

Nonoperating Expenses, net

Nonoperating income (expense) consists of interest expense, interest income and gains and losses on currency translation and transactions. Net nonoperating expense decreased and increased for the three and six months ended June 30, 2019, respectively, compared to the same periods in 2018.

The following table provides a summary of nonoperating expenses, net:

	Three months ended June 30,			Six months ended June 30,		
(in thousands)	**2019**	2018	**Percent Change**	**2019**	2018	**Percent Change**
Interest expense[1]	**$(44,244)**	(42,643)	**(3.8)%**	**$(88,241)**	(80,042)	**(10.2)%**
Interest income	**1,230**	1,524	**(19.2)**	**2,458**	2,270	**0.1**
Currency translation and transaction gains (losses), net	**850**	535	**59.0**	**(287)**	107	**nm**
Other	**4,748**	(586)	**nm**	**5,663**	(1,147)	**nm**
Total	**$(37,416)**	(41,170)	**9.1**	**$(80,407)**	(78,812)	**(2.0)**

nm = not meaningful

1 *Interest expense includes interest on Senior Notes of $32.9 million and $65.7 million for the three and six months ended June 30, 2019, respectively, and $30.6 million and $56.1 million, for the same periods in 2018.*

Interest expense for the three and six months ended June 30, 2019, increased $1.6 million and $8.2 million, respectively, compared to the same periods in 2018. The increase in interest expense for the three and six months ended June 30, 2019 was primarily the result of the addition of $450 million of bonds in May 2018 as well as the expiration of lower interest rate borrowings in June 2018. Additionally, the increase in interest expense is attributable to higher interest rates associated with the 4.000% and 4.450% Senior Notes issued in May 2018 compared to the 2.375% Senior Notes that were paid off at maturity on June 1, 2018.

Occasionally, the Company will provide financing to its subsidiaries in the form of an intercompany loan, which is required to be repaid in U.S. dollars. For its subsidiaries whose functional currency is other than the U.S. dollar, the translated balance of the financing (liability) is adjusted upward or downward to match the U.S. dollar obligation (receivable) on the Company's consolidated financial statements. The upward or downward adjustment is recorded as a gain or loss on foreign currency translation in the Company's Consolidated Statements of Income.

The Company records foreign currency translation adjustments on foreign-denominated balance sheet accounts. The Company maintains several cash accounts denominated in foreign currencies. As the Company translates the foreign-denominated cash balances into U.S. dollars, the translated cash balance is adjusted upward or downward depending upon the foreign currency exchange movements. The upward or downward adjustment is recorded as a currency translation and transaction gain or loss on foreign currency translation in the Company's Consolidated Statements of Income.

The balance of the Company's foreign-denominated cash accounts subject to risk of translation gains or losses as of June 30, 2019, was approximately $28.4 million, the majority of which is denominated in U.S. dollars and Euros. The net asset account balance subject to foreign currency exchange rates between the local currencies and the U.S. dollar as of June 30, 2019 was $63.6 million.

Income Taxes

For a detailed discussion regarding income taxes, refer to Notes 1 and 14 in the Notes to Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K and Management's Discussion and Analysis of Financial Condition and Results of Operations included in Exhibit 99.3 to this Current Report on Form 8-K. See also Note 8 in the Notes to Unaudited Consolidated Financial Statements included in Exhibit 99.2 to this Current Report on Form 8.

Below is a summary of income tax expense:

	Three months ended June 30,			Six months ended June 30,		
(in thousands)	**2019**	2018	**Percent Change**	**2019**	2018	**Percent Change**
Income tax expense	**$31,128**	37,415	**(16.8)%**	**$61,027**	55,549	**9.9%**
Effective income tax rate	**17.1%**	22.3%		**16.9%**	17.5%	

The primary reason for the lower effective income tax rate for the three months ended June 30, 2019, as compared to the same period last year, is the favorable variance in discrete items related to an equity investment in a foreign entity. During the six months ended June 30, 2019, most of the favorable variances in discrete items related to FIN 48 and equity investment true-ups were offset by unfavorable variances related to excess tax benefits of share-based compensation.

In the normal course of business, TSYS is subject to examinations from various tax authorities. These examinations may alter the timing or amount of taxable income or deductions or the allocation of income among tax jurisdictions.

TSYS continually monitors and evaluates the potential impact of current events and circumstances on the estimates and assumptions used in the analysis of its income tax positions, and accordingly, TSYS' effective tax rate may fluctuate in the future.

No provision for U.S. federal and state income taxes has been made in the Company's current year consolidated financial statements for those non-U.S. subsidiaries whose earnings are considered to be permanently reinvested. The amount of undistributed earnings considered to be "reinvested" which may be subject to withholding tax upon distribution was approximately $123.8 million as of June 30, 2019. Although TSYS does not intend to repatriate these earnings, a distribution of these non-U.S. earnings in the form of dividends, or otherwise, may subject the Company to withholding taxes payable to some of the various non-U.S. jurisdictions.

Equity in Income of Equity Investments

Below is a summary of TSYS' share of income from its interest in equity investments:

	Three months ended June 30,			Six months ended June 30,		
(in thousands)	**2019**	2018	**Percent Change**	**2019**	2018	**Percent Change**
Equity in income of equity investments, net of tax	**$12,217**	12,322	**(0.9)%**	**$23,444**	22,929	**2.2%**

The increase in equity income for the six months ended June 30, 2019, as compared to the same periods in 2018, is primarily the result of increased operating results associated with China UnionPay Data Services Co., LTD.

Net Income

The following table provides a summary of net income and EPS:

(in thousands, except per share data)	Three months ended June 30, 2019	Three months ended June 30, 2018	Percent Change	Six months ended June 30, 2019	Six months ended June 30, 2018	Percent Change
Net income	**$162,760**	142,435	**14.3%**	**$324,367**	285,537	**13.6%**
Net income attributable to noncontrolling interests	**—**	—	**na**	**—**	(1,261)	**100.0**
Net income attributable to TSYS common shareholders	**$162,760**	142,435	**14.3**	**$324,367**	284,276	**14.1**
Basic EPS attributable to TSYS common shareholders[1]	**$ 0.92**	0.78	**17.7**	**$ 1.83**	1.56	**16.9**
Diluted EPS attributable to TSYS common shareholders[1]	**$ 0.91**	0.78	**17.5**	**$ 1.81**	1.55	**16.8**

na = not applicable

1 *Basic and diluted EPS is computed based on the two-class method in accordance with the guidance under GAAP. Refer to Note 9 in the Notes to Unaudited Consolidated Financial Statements included in Exhibit 99.2 to this Current Report on Form 8-K for more information on EPS.*

Non-GAAP Measures

Management evaluates the Company's operating performance based upon net revenue, a constant currency basis, adjusted EBITDA, adjusted earnings, adjusted diluted EPS and free cash flow, which are all non-generally accepted accounting principles ("non-GAAP") measures. TSYS also uses these non-GAAP financial measures to evaluate and assess TSYS' financial performance against budget.

Although non-GAAP financial measures are often used to measure TSYS' operating results and assess its financial performance, they are not necessarily comparable to similarly titled measures of other companies due to potential inconsistencies in the method of calculation.

TSYS believes that its provision of non-GAAP financial measures provides investors with important key financial performance indicators that are utilized by management to assess TSYS' operating results, evaluate the business and make operational decisions on a prospective, going-forward basis. Hence, management provides disclosure of non-GAAP financial measures to give shareholders and potential investors an opportunity to see TSYS as viewed by management, to assess TSYS with some of the same tools that management utilizes internally and to be able to compare such information with prior periods. TSYS believes that inclusion of non-GAAP financial measures provides investors with additional information to help them better understand its financial statements just as management utilizes these non-GAAP financial measures to understand the business, manage budgets and allocate resources.

Although the Company excludes the amortization of purchased intangibles from these non-GAAP measures, management believes that it is important for investors to understand that such intangible assets were recorded as part of purchase accounting and contribute to revenue generation.

The following tables provide a reconciliation of GAAP to the Company's non-GAAP financial measures:

Net Revenue

(in thousands)	Three months ended June 30, 2019	Three months ended June 30, 2018	Six months ended June 30, 2019	Six months ended June 30, 2018
Total revenues (GAAP)	**$ 1,035,485**	1,007,580	**2,070,016**	1,994,750
Less: reimbursable items	**55,565**	51,032	**109,827**	102,705
Net revenue (non-GAAP)	**$ 979,920**	956,548	**1,960,189**	1,892,045

Constant Currency Comparison

(in thousands)	Three months ended June 30,		Six months ended June 30,	
Consolidated	**2019**	2018	**2019**	2018
Total revenues (GAAP)	**$ 1,035,485**	1,007,580	**2,070,016**	1,994,750
Foreign currency impact[1]	**6,839**	—	**15,107**	—
Constant currency[2] (non-GAAP)	**$ 1,042,324**	1,007,580	**2,085,123**	1,994,750
Net revenue (non-GAAP)	**$ 979,920**	956,548	**1,960,189**	1,892,045
Foreign currency impact[1]	**6,354**	—	**14,060**	—
Constant currency[2] (non-GAAP)	**$ 986,274**	956,548	**1,974,249**	1,892,045
Operating income (GAAP)	**$ 219,087**	208,698	**442,357**	396,969
Foreign currency impact[1]	**1,989**	—	**3,886**	—
Constant currency[2] (non-GAAP)	**$ 221,076**	208,698	**446,243**	396,969
Issuer Solutions				
Segment net revenue (GAAP)	**$ 432,445**	421,015	**865,919**	844,589
Foreign currency impact[1]	**6,415**	—	**14,261**	—
Constant currency[2] (non-GAAP)	**$ 438,860**	421,015	**880,180**	844,589

1 Reflects the impact of calculated changes in foreign currency rates from the comparable period.

2 Reflects current period results on a non-GAAP basis as if foreign currency rates did not change from the comparable prior year period.

Adjusted EBITDA

(in thousands)	Three months ended June 30,		Six months ended June 30,	
	2019	2018	**2019**	2018
Net income (GAAP) (a)	**$ 162,760**	142,435	**324,367**	285,537
Adjust for:				
Less: Equity in income of equity investments	**(12,217)**	(12,322)	**(23,444)**	(22,929)
Add: Income tax expense	**31,128**	37,415	**61,027**	55,549
Add: Interest expense, net	**43,014**	41,119	**85,783**	77,772
Add: Depreciation and amortization	**104,773**	104,290	**208,483**	208,679
Add: Contract asset amortization	**8,250**	6,712	**16,288**	13,584
Add: Contract cost asset amortization	**8,179**	8,511	**16,024**	19,238
Less/Add: (Gain) loss on foreign currency translation and transaction (gains) losses	**(850)**	(535)	**287**	(107)
Add/Less: Other nonoperating (income) expenses	**(4,748)**	586	**(5,663)**	1,147
Add: Share-based compensation	**11,500**	14,229	**22,214**	20,524
Add: M&A and integration expenses[1]	**17,150**	2,581	**20,860**	16,949
Adjusted EBITDA (non-GAAP) (b)	**$ 368,939**	345,021	**726,226**	675,943
Total revenues (GAAP) (c)	**$ 1,035,485**	1,007,580	**2,070,016**	1,994,750
Net income margin on total revenues (GAAP) (a)/(c)	**15.7%**	14.1%	**15.7%**	14.3%
Net revenue (non-GAAP) (d)	**$ 979,920**	956,548	**1,960,189**	1,892,045
Adjusted EBITDA margin on net revenue (non-GAAP) (b)/(d)	**37.6%**	36.1%	**37.0%**	35.7%

1 Costs associated with mergers & acquisitions and integrations are included in selling, general and administrative expenses and nonoperating expenses.

Adjusted Earnings and Adjusted Diluted Earnings Per Share

(in thousands, except per share data)	Three months ended June 30,		Six months ended June 30,	
	2019	2018	**2019**	2018
Net income attributable to TSYS common shareholders (GAAP)	**$ 162,760**	142,435	**324,367**	284,276
Adjust for amounts attributable to TSYS common shareholders:				
Add: Acquisition intangible amortization[1]	**53,707**	61,830	**108,663**	124,818
Add: Share-based compensation	**11,500**	14,228	**22,214**	20,522
Add: M&A and integration expenses[2]	**17,150**	2,581	**20,860**	16,949
Less: Tax impact of adjustments[3]	**(18,431)**	(17,278)	**(33,972)**	(35,182)
Adjusted earnings (non-GAAP)	**$ 226,686**	203,796	**442,132**	411,383
Diluted EPS - Net income attributable to TSYS common shareholders:				
As reported (GAAP)	**$ 0.91**	0.78	**1.81**	1.55
Adjusted diluted EPS (non-GAAP)	**$ 1.27**	1.11	**2.47**	2.24
Weighted average diluted shares	**178,514**	183,575	**179,198**	183,456

1 *The Company's amortization of acquisition intangible assets is disclosed in to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K(Note 7 Other Intangible Assets, Net and the amortization expense associated with acquisition technology intangibles in Note 8 Intangible Assets – Computer Software, Net).*

2 *Costs associated with mergers & acquisitions and integrations are included in selling, general and administrative expenses and nonoperating expenses.*

3 *Certain of these merger and acquisition costs are nondeductible for income tax purposes.*

Free Cash Flow

(in thousands)	Six months ended June 30,	
	2019	2018
Net cash provided by operating activities (GAAP)	**$ 395,430**	470,593
Capital expenditures	**(116,870)**	(87,758)
Free cash flow (non-GAAP)	**$ 278,560**	382,835

Financial Position, Liquidity and Capital Resources

Cash Flows

The Consolidated Statements of Cash Flows detail the Company's cash flows from operating, investing and financing activities. TSYS' primary method of funding its operations and growth has been cash generated from current operations. TSYS has occasionally used borrowed funds to supplement financing of capital expenditures and acquisitions.

As a result of the Merger Agreement with Global Payments discussed in Note 1 in the Notes to Unaudited Consolidated Financial Statements included in Exhibit 99.2 to this Current Report on Form 8-K, the Company is precluded from additional share repurchases, new debt or equity financings, increasing its quarterly dividend, or entering into acquisitions or dispositions above certain thresholds, among other activities, without prior written consent from Global Payments.

Cash Flows From Operating Activities

(in thousands)	Six months ended June 30, 2019	2018
Net income	**$ 324,367**	285,537
Depreciation and amortization	**208,483**	208,679
Provisions for cardholder losses	**25,540**	34,433
Amortization of operating lease right-of-use assets	**25,555**	—
Share-based compensation	**22,214**	20,524
Deferred income tax expense	**21,258**	18,657
Provisions for bad debt expenses and billing adjustments	**5,587**	5,170
Amortization of debt issuance costs	**2,652**	2,362
Charges for transaction processing provisions	**1,319**	3,177
Equity in income of equity investments	**(23,444)**	(22,929)
Other noncash items and charges, net	**(5,153)**	1,299
Net change in current and other assets and current and other liabilities	**(212,948)**	(86,316)
Net cash provided by operating activities	**$ 395,430**	470,593

TSYS' main source of funds is derived from operating activities, specifically net income. The amortization of operating leaseright-of-use assets relates to the Company's adoption of ASC 842, *Leases*, as of January 1, 2019. See further discussion in Notes 1 and 4 in the Notes to Unaudited Consolidated Financial Statements included in Exhibit 99.2 to this Current Report on Form 8-K. Net change in current and other assets includes accounts receivable, contract assets and contract liabilities, contract cost assets, prepaid expenses, other current assets and other long-term assets. Net change in current and other liabilities includes accounts payable, accrued salaries and employee benefits, other current liabilities and other long-term liabilities. The change in accounts receivable as of June 30, 2019, as compared to June 30, 2018, is the result of timing of payments by clients. The change in accounts payable and other liabilities for the same period is the result of the timing of payments of vendor invoices. The change in accrued salaries and employee benefits is due primarily to changes in incentive bonuses and benefits paid in the first six months ended June 30, 2019 compared to the same period in 2018.

Cash Flows From Investing Activities

(in thousands)	Six months ended June 30, 2019	2018
Additions to licensed computer software from vendors	**$ (61,209)**	(19,216)
Purchases of property and equipment	**(30,844)**	(48,608)
Additions to internally developed computer software	**(24,817)**	(19,934)
Cash used in acquisitions, net of cash acquired	—	(1,051,629)
Other investing activities	**(2,700)**	(4,119)
Net cash used in investing activities	**$ (119,570)**	(1,143,506)

The primary uses of cash for investing activities in 2019 were for the purchase of licensed computer software, purchases of property and equipment and internal development of computer software. The primary uses of cash for investing activities in 2018 were for acquisitions, purchases of property and equipment, internal development of computer software and the purchase of licensed computer software.

Cash Flows From Financing Activities

(in thousands)	Six months ended June 30, 2019	2018
Proceeds from borrowings of long-term debt	**$ 450,000**	3,477,000
Proceeds from exercise of stock options	**6,911**	29,289
Repurchase of common stock under plans and tax withholding	**(400,023)**	(82)
Principal payments on long-term borrowings, finance lease obligations and license agreements	**(299,499)**	(2,626,534)
Dividends paid on common stock	**(46,534)**	(47,190)
Purchase of noncontrolling interest	—	(126,000)
Debt issuance costs	—	(15,979)
Subsidiary dividends paid to noncontrolling shareholders	—	(3,778)
Net cash (used in) provided by financing activities	**$ (289,145)**	686,726

The main uses of cash for financing activities in 2019 were repurchase of common stock, principal payments on long-term borrowings, finance lease obligations and license agreements and the payment of dividends. The main sources of cash provided by financing activities in 2019 were the proceeds from borrowing of long-term debt and exercises of stock options. The main uses of cash for financing activities in 2018 were the purchase of the remaining fifteen percent interest in Central Payment Co., LLC ("CPAY"), principal payments on long-term borrowings, finance lease obligations and license agreements, and the payment of dividends. The main sources of cash provided by financing activities in 2018 were the proceeds from borrowing of long-term debt and exercises of stock options.

Refer to Note 5 in the Notes to Unaudited Consolidated Financial Statements included in Exhibit 99.2 to this Current Report on Form 8-K for more information on borrowings.

Dividends

Dividends on common stock of $46.5 million and $47.2 million were paid during the six months ended June 30, 2019 and 2018, respectively. For the six months ended June 30, 2019 and 2018, the Company paid dividends of $0.26 per share.

Stock Repurchase

For a detailed discussion regarding the Company's stock repurchase plan, see Management's Discussion and Analysis of Financial Condition and Results of Operations included in Exhibit 99.3 to this Current Report on Form 8-K.

In January 2019, the Company entered into an accelerated share repurchase ("ASR") agreement with a third-party financial institution to repurchase $400 million of the Company's common stock. Under the ASR agreement, the Company paid a specified amount to the financial institution and received an initial delivery of shares. This initial delivery of shares represents approximately 83% of the estimated shares delivered under the agreement by repurchasing $400 million of the Company's common stock divided by the Trade Date closing price. Upon settlement of the ASR agreement, the financial institution delivered additional shares, with the final number of shares delivered determined with reference to the volume-weighted average price of the Company's common stock over the term of the agreement, less an agreed-upon discount. The transactions are accounted for as equity transactions and are included in Treasury Stock when the shares are received, at which time there is an immediate reduction in the weighted-average common shares calculation for basic and diluted earnings per share.

In February 2019, the Company received an initial delivery of 3.7 million shares. The transaction was completed in March 2019, at which time the Company received an additional 638,414 shares.

Foreign Operations

TSYS operates internationally and is subject to adverse movements in foreign currency exchange rates. On June 23, 2016, the United Kingdom ("U.K.") held a referendum in which voters approved an exit from the European Union ("E.U."), commonly referred to as "Brexit." The U.K. is currently considering the terms of its expected exit from the E.U. which is now scheduled to occur no later than October 31, 2019.

This date represents an extension of the original date of March 29, 2019 and was jointly agreed to between the U.K. and the E.U. in April 2019. The extension is expected to only be as long as necessary and in any event no later than October 31, 2019 to allow for the ratification of the withdrawal agreement which was negotiated between the U.K. and the E.U.

TSYS continues to monitor Brexit and its potential impact across key areas including service continuity, contracts, regulatory (including data privacy), the economy and freedom of movement of people. Uncertainty over the terms of the withdrawal of the U.K. from the E.U. may create global economic uncertainty, and have unknown social and geopolitical impact, which may adversely affect the Company's business, results of operations and financial condition, as well as potentially affecting TSYS' relationships with its existing and future customers, vendors and employees.

Additionally, the U.K. may be required to negotiate new terms of trade with various jurisdictions which could be disruptive and adversely affect TSYS' tax benefits or liabilities in those jurisdictions. TSYS has not entered into foreign exchange forward contracts to reduce its exposure to foreign currency rate changes. TSYS continues to analyze potential hedging instruments to safeguard it from significant foreign currency translation risks.

TSYS maintains operating cash accounts outside the United States. Refer to Note 2 in the Notes to Unaudited Consolidated Financial Statements included in Exhibit 99.2 to this Current Report on Form 8-K for more information on cash and cash equivalents. TSYS has adopted the permanent reinvestment exception under GAAP with respect to future earnings of certain foreign subsidiaries. While some of the foreign cash is available to repay intercompany financing arrangements, some remaining amounts may not be presently available to fund domestic operations and obligations without paying withholding taxes upon its repatriation. Demand on the Company's cash has increased as a result of its strategic initiatives. TSYS funds these initiatives through a balance of internally generated cash, external sources of capital and, when advantageous, access to foreign cash in a tax efficient manner. Where local regulations limit an efficient intercompany transfer of amounts held outside of the U.S., TSYS will continue to utilize these funds for local liquidity needs. Under current law, balances available to be repatriated to the U.S. may be subject to foreign withholding taxes. Pursuant to the Tax Cuts and Jobs Act of 2017 ("Tax Act"), TSYS has not provided for the U.S. federal tax liability on these amounts for financial statement purposes. TSYS utilizes a variety of tax planning and financing strategies with the objective of having its worldwide cash available in the locations where it is needed.

Impact of Inflation

Although the impact of inflation on its operations cannot be precisely determined, the Company believes that by controlling its operating expenses, and by taking advantage of more efficient computer hardware and software, it can minimize the impact of inflation.

Working Capital

TSYS may seek additional external sources of capital in the future. The form of any such financing will vary depending upon prevailing market and other conditions and may include short-term or long-term borrowings from financial institutions or the issuance of additional equity and/or debt securities such as industrial revenue bonds. However, there can be no assurance that funds will be available on terms acceptable to TSYS. Management expects that TSYS will continue to be able to fund a significant portion of its capital expenditure needs through internally generated cash in the future, as evidenced by TSYS' current ratio of 2.5:1. As of June 30, 2019, TSYS had working capital of $738.5 million compared to working capital of $625.2 million as of December 31, 2018.

Legal Proceedings

Refer to Note 15 of the Company's audited financial statements included in Exhibit 99.1 to this Current Report on Form 8-K, for a discussion regarding commitments and contingencies including legal proceedings. Also, for more information regarding the Company's legal proceedings, refer to Note 6 in the Notes to Unaudited Consolidated Financial Statements included in Exhibit 99.2 to this Current Report on Form 8-K.

Information related to Total System Services, Inc.'s business and operations and information related to certain material regulatory matters related to Total System Services, Inc.'s business

Unless the context otherwise requires, all references herein to "TSYS," the "Company," "we," "our," or "us" refer to Total System Services, Inc. and its consolidated subsidiaries and references to "management" refer to the management of TSYS.

Business. Based in Columbus, Georgia, and traded on the New York Stock Exchange under the symbol "TSS," we are a global payment solutions provider that provides payment processing services, merchant services and related payment services to financial and nonfinancial institutions. In addition, we provide general purpose reloadable ("GPR") prepaid debit and payroll cards, demand deposit accounts and other financial service solutions to the underbanked and other consumers and businesses. The services we provide are divided into three operating segments, Issuer Solutions, which accounted for 46% of our revenues in 2018, Merchant Solutions, which accounted for 34% of our revenues in 2018 and Consumer Solutions, which accounted for 20% of our revenues in 2018.

Seasonality. Due to the somewhat seasonal nature of the payments industry, our revenues and results of operations have generally increased in the fourth quarter of each year because of increased transaction and authorization volumes during the traditional holiday shopping season.

Intellectual Property. Our intellectual property portfolio is a component of our ability to provide of transaction processing and other payment-related services. We rely on a combination of contractual rights and copyright, trademark, patent and trade secret laws to establish and protect our proprietary technology. We also use various licensed intellectual property to conduct our business. In addition to using our intellectual property in our own operations, we grant licenses to certain of our clients to use our intellectual property.

Major Customers. A significant amount of our revenues is derived from long-term contracts with large clients. The loss of one of our large clients could have a material adverse effect on our financial position, results of operations and cash flows. See "Major Customer" and "Operating Segments" under the "Financial Review" Section of Management's Discussion and Analysis of Financial Condition and Results of Operations of Total System Services, Inc. for the year ended December 31, 2018, in Exhibit 99.3 to this Current Report on Form 8-Kand Note 21 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K.

Competition. Each of our three business segments encounters vigorous competition in connection with the services it provides.

Issuer Solutions. Our Issuer Solutions segment encounters competition from credit card processing firms, third-party card processing software vendors and various other firms that provide products and services to credit card issuers in the United States and internationally. The United States market for third party processing for credit card issuers is primarily serviced by three vendors, including TSYS, with our largest competitor being a subsidiary of First Data Corporation. We believe that as of December 31, 2018, we are the largest third party processor for credit card issuers in North America and one of the largest in Europe based on net revenues derived from solutions for credit card issuers. Further, we believe that during 2018 we provided issuer processing services for approximately 40% of the domestic Visa and Mastercard credit card accounts issued in the United States, approximately 80% issued in Canada and approximately 20% issued in TSYS' Home European Markets (UK, Ireland, Netherlands, Italy, Germany and Switzerland). The principal methods of competition between us and our competitors are system performance and reliability, servicing capability, breadth of features and functionality, disaster recovery capabilities and business continuity preparedness, data security, scalability and flexibility of infrastructure and price.

Merchant Solutions. Our Merchant Solutions segment competes with financial institutions and merchant acquirers who provide businesses with merchant acquiring services and related services. Our primary competitors include First Data Corporation (and its alliances), Worldpay, Inc., Global Payments Inc., Square, Inc. and Elavon, Inc. We also provide third party processing and related services to other merchant acquirers, as well as Independent Sales Organizations ("ISOs") and financial institutions. We believe that as of December 31, 2018, we are the fifth largest merchant acquirer in the small and medium-sized business segment (merchants who have less than $5 million in annual bankcard sales volume) in the United States based on net revenue and one of the top two providers of third party processing services. The principal methods of competition between us and our competitors include quality of distribution partners, breadth of features and functionality, service levels, system performance and reliability, data security and price.

Consumer Solutions. Our Consumer Solutions segment primarily competes with other demand deposit account and prepaid debit account program managers to provide the underbanked and other consumers and businesses with financial service solutions. Our primary competitors in this space include Green Dot Corporation, InComm and First Data Corporation. As of December 31, 2018, we believe that we are one of the top two largest prepaid program managers in the United States based on gross dollar volume (total spending on the accounts we manage) processed during 2018. The principal methods of competition between us and our competitors include diversity and strength of distribution, breadth and strength of innovative features and functionality, quality of service, reliability of system performance and security and price.

Regulation and Examination. Government regulation affects key aspects of our business, in the U.S. as well as internationally. In addition, we are registered with Visa, Mastercard, American Express and the Discover Network as a service provider and are subject to their respective rules which subject us to a variety of fines or penalties that may be levied by the card networks for certain acts or omissions. Set forth below is a brief summary of some of the significant laws and regulations that apply to us. These descriptions are not exhaustive and are qualified in their entirety by reference to the particular statutory or regulatory provision, which provisions are subject to change.

Banking Laws and Regulations. Because we provide electronic payment processing services to banks and other financial institutions, we are subject to examination by the Federal Financial Institutions Examination Council (“FFIEC”), an interagency body comprised primarily of federal banking regulators, and also subject to examination by the various state financial regulatory agencies which supervise and regulate the financial institutions for which we provide electronic payment processing and other payment related services. The FFIEC examines large data processors in order to identify and mitigate risks associated with systemically significant service providers, including specifically the risks they may pose to the banking industry.

Money Transmission, Sale of Checks and Payment Instrument Laws and Regulations.Our Consumer Solutions segment is subject to money transfer and payment instrument licensing regulations. We have obtained licenses to operate as a money transmitter, seller of checks and/or provider of payment instruments in 48 states and the District of Columbia. In the remaining U.S. jurisdictions we either have an application pending or the jurisdiction does not currently regulate money transmission.

In those states where we are licensed as a money transmitter, seller of checks and/or provider of payment instruments, our Consumer Solutions segment is subject to direct supervision and regulation by the relevant state banking departments or similar agencies charged with enforcement of the relevant statutes and we must comply with various requirements, such as those related to the maintenance of a certain level of net worth, surety bonding, selection and oversight of our authorized agents, maintaining permissible investments in an amount equal to or in excess of our outstanding payment obligations, recordkeeping and reporting and disclosures to consumers. Our Consumer Solutions segment is also subject to periodic examinations by the relevant licensing authorities, which may include reviews of our compliance practices, policies and procedures, financial position and related records, various agreements that we have with our issuing banks, distributors and other third parties, privacy and data security policies and procedures and other matters related to our business.

Privacy, Information Security, and Other Business Practices Regulation. Aspects of our business are also subject, directly or indirectly, to business and trade practices regulation in the United States, the European Union and elsewhere. For example, in the United States, we and our financial institution clients are, respectively, subject to the Federal Trade Commission’s and the federal banking regulators’ privacy and information safeguarding requirements under the Gramm-Leach-Bliley Act. These requirements limit the manner in which personal information may be collected, stored, used and disclosed. The Federal Trade Commission’s information safeguarding rules require us to develop, implement and maintain a written, comprehensive information security program containing safeguards that are appropriate for our size and complexity, the nature and scope of our activities and the sensitivity of any customer information at issue. Our financial institution clients in the United States are subject to similar requirements under

the guidelines issued by the federal banking regulators. As part of their compliance with these requirements, each of our U.S. financial institution clients is expected to have a program in place for responding to unauthorized access to, or use of, customer information that could result in substantial harm or inconvenience to customers and they are also responsible for our compliance efforts as a major service provider. In many jurisdictions, including every U.S. State, consumers must be notified in the event of a data breach, and such notification requirements continue to increase in scope and cost. The changing privacy laws in the United States, Europe and elsewhere, including the adoption by the European Union of the General Data Protection Regulation, which became effective in May 2018, and the California Consumer Privacy Act, which is scheduled to become effective in January 2020, create new individual privacy rights and impose increased obligations on companies handling personal data. In addition, multiple states, Congress and regulators outside the United States are considering similar laws or regulations which could create new individual privacy rights and impose increased obligations on companies handling personal data. Information concerning our cybersecurity risks and how a cybersecurity incident could materially affect our business is discussed in Exhibit 99.6 to this Current Report on Form 8-K under the caption "Security breaches of our systems, including as a result of cyber-attacks, may damage client relations, our reputation and expose us to financial liability."

Anti-money Laundering and Counter Terrorist Regulation. The Financial Crimes Enforcement Network of the U.S. Department of the Treasury ("FinCEN") has issued a rule regarding the applicability of the Bank Secrecy Act's anti-money laundering provisions to "prepaid access programs." This rulemaking clarifies the anti-money laundering obligations for entities, such as our Consumer Solutions business and its distributors, engaged in the provision and sale of prepaid access devices like our GPR prepaid cards. We have registered with FinCEN as a money services business. This registration results in our having direct responsibility to maintain and implement an anti-money laundering compliance program.

We are subject to anti-corruption laws and regulations, including the U.S. Foreign Corrupt Practices Act, the UK Bribery Act and other laws that generally prohibit the making or offering of improper payments to foreign government officials and political figures for the purpose of obtaining or retaining business or to gain an unfair business advantage. In addition, as are all U.S. persons, we are also subject to regulations imposed by the U.S. Department of the Treasury Office of Foreign Assets Control ("OFAC") which prohibit or restrict financial and other transactions with specified countries and designated individuals and entities such as terrorists and narcotics traffickers. We have procedures and controls in place which are designed to protect against having direct business dealings with such prohibited countries, individuals or entities. We also have procedures and controls in place which are designed to allow our processing clients to protect against having direct business dealings with such prohibited countries, individuals or entities.

The Dodd-Frank Act. We and the rest of the financial services industry continue to experience increased legislative and regulatory scrutiny, including the enactment of additional legislative and regulatory initiatives such as the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Reform Act") in 2010. The Reform Act has resulted in significant structural and other changes to the regulation of the financial services industry. The Reform Act, among other things, provides for the regulation and oversight by the Board of Governors of the Federal Reserve System ("Board") of debit interchange fees that are typically paid by acquirers and charged or received by a payment card network for the purpose of compensating an issuer for its involvement in an electronic debit transaction. In accordance with the Reform Act, the Board capped the maximum U.S. debit interchange fee assessed for debit cards issued by large financial institutions at twenty-one cents per transaction plus five basis points, before applying a fraud prevention adjustment of up to an additional one cent. The cap on debit interchange fees has not had a significant negative impact on our business.

The Reform Act also created the Consumer Financial Protection Bureau ("CFPB") with responsibility for regulating consumer financial products and services and enforcing most federal consumer protection laws in the area of financial services, including consumer credit and the prepaid card industry. For example, the CFPB has promulgated a new rule regarding prepaid financial products, which, among other things, will establish new disclosure requirements specific to prepaid accounts, eliminate certain fees that may currently be imposed on prepaid accounts, and make it more difficult for a prepaid card provider such as our Consumer Solutions segment to offer courtesy overdraft protection on prepaid accounts. The rule is scheduled to become effective April 1, 2019. Similarly, other future actions of the CFPB may make payment card or product transactions generally less attractive to card issuers, acquirers, consumers and merchants, and thus negatively impact our business. In addition, the Reform Act created a Financial Stability Oversight Council that has the authority to determine whether nonbank financial companies such as TSYS should be supervised by the Board because they are systemically important to the U.S. financial system. To date, the Financial Stability Oversight Council does not appear to be focused on regulating entities such as TSYS. However, any such future designation would result in increased regulatory burdens on our business.

State Wage Payment Laws and Regulations. The use of payroll card programs as a means for an employer to remit wages or other compensation to its employees or independent contractors is governed by state labor laws related to wage payments, which laws are subject to change. The paycard portion of our Consumer Solutions segment includes payroll cards and convenience checks and is designed to allow employers to comply with applicable state wage and hour laws. Most states permit the use of payroll cards as a method of paying wages to employees, either through statutory provisions allowing such use or, in the absence of specific statutory guidance, the adoption by state labor departments of formal or informal policies allowing for their use. Nearly every state allowing payroll cards places certain requirements and/or restrictions on their use as a wage payment method, the most common of which involve obtaining the prior written consent of the employee, limitations on fees and disclosure requirements.

Telephone Consumer Protection Act. We are subject to the Federal Telephone Consumer Protection Act and various state laws to the extent we place telephone calls and short message service ("SMS") messages to clients and consumers. The Telephone Consumer Protection Act regulates certain telephone calls and SMS messages placed using automatic telephone dialing systems or artificial or prerecorded voices.

Escheat Laws. We are subject to unclaimed or abandoned property laws in the United States and in foreign countries that require us to transfer to certain government authorities the unclaimed property of others that we hold when that property has been unclaimed for a certain period of time. Moreover, we are subject to audit by state regulatory authorities with regard to our escheatment practices.

Employees. As of December 31, 2018, we had approximately 12,820 employees.

Available Information. Our website address is www.tsys.com. You may obtain free electronic copies of our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and all amendments to those reports in the Investor Relations section of our website under the heading "SEC Filings." These reports are available on our website as soon as reasonably practicable after we electronically file them with the Securities and Exchange Commission.

We have adopted a Code of Business Conduct and Ethics for our directors, officers and employees and have also adopted Corporate Governance Guidelines. Our Code of Business Conduct and Ethics, Corporate Governance Guidelines and the charters of our board committees are available in the Corporate Governance section of our website at www.tsys.com under "Investor Relations" then "Corporate Governance."

For more information about our business see the "Financial Overview" Section and the "Financial Review" Section of Management's Discussion and Analysis of Financial Condition and Results of Operations of Total System Services, Inc. for the year ended December 31, 2018, in Exhibit 99.3 to this Current Report on Form 8-Kand Note 1, Note 8, Note 15, Note 21 and Note 23 of Notes to the Consolidated Financial Statements in Exhibit 99.1 to this Current Report on Form 8-K.

EXHIBIT 99.6

Information related to certain material risks related to Total System Services, Inc.'s business, operations and financial condition

Unless the context otherwise requires, all references herein to "TSYS," the "Company," "we," "our," or "us" refer to Total System Services, Inc. and its consolidated subsidiaries and references to "management" refer to the management of TSYS.

RISK FACTORS

This section highlights specific risks that could affect our business and us. Although this section attempts to highlight key factors, please be aware that other risks may prove to be important in the future. New risks may emerge at any time and we cannot predict such risks or estimate the extent to which they may affect our financial performance. In addition to the factors discussed elsewhere or incorporated by reference in this report, among the other factors that could cause actual results to differ materially are the following:

Security breaches of our systems, including as a result of cyber-attacks, may damage client relations, our reputation and expose us to financial liability.

In order to provide our services, we process, store and transmit sensitive business information and personal consumer information which may include credit and debit card numbers, names and addresses, social security numbers, driver's license numbers, bank account numbers and other types of personal information or sensitive business information. Under the card network rules, various federal, state and international laws, and client contracts, we are responsible for information provided to us by financial institutions, merchants, ISOs and others and for our failure to protect this information. Some of this information is also processed and stored by financial institutions, merchants and other entities, as well as third-party service providers to whom we outsource certain functions and other agents, which we refer to collectively as our associated third parties. The confidentiality of the sensitive business information and personal consumer information that resides on our systems and our associated third parties' systems is critical to our business. While we maintain controls and procedures designed to protect the sensitive data we collect, we cannot be certain that these measures will be successful or sufficient to counter all current and emerging information security threats that we face on a daily basis.

Certain of our computer systems and certain of our associated third parties' computer systems have been, and could be in the future, breached, and our data protection measures have not and may not in the future prevent unauthorized access. Information security risks for us and our competitors have substantially increased in recent years in part due to the proliferation of new technologies and the increased sophistication, resources and activities of hackers, terrorists, activists, organized crime, and other external parties, including hostile nation-state actors. The techniques used by these bad actors to breach and otherwise obtain unauthorized access, disable or degrade service, sabotage systems or utilize payment systems in an effort to perpetrate financial fraud change frequently and are often difficult to detect. Although we are not aware of any material breach of our computer systems or of our associated third parties' computer systems that have had a material impact on us or caused us to incur material losses relating to cyber-attacks or other information security breaches to date, we and others in our industry are regularly the subject of sophisticated and numerous attempts by bad actors to gain unauthorized access to these computer systems and data or to obtain, change or destroy confidential data (including personal consumer information of individuals) through a variety of means, including, but not limited to, computer viruses, malware and phishing. In the future, these attacks may result in unauthorized individuals obtaining access to our confidential information or confidential information provided to us by financial institutions, merchants, ISOs and others, or otherwise accessing, damaging, or disrupting our computer systems or infrastructure. In addition, we expect bad actors to utilize increasingly sophisticated technology and techniques in the future to exploit vulnerabilities that may, or may not, be generally known. As a result, we must continuously develop and enhance our controls, processes, and practices designed to protect our computer systems, software, data and networks from attack, damage, or unauthorized access. This continuous development and enhancement will require us to expend additional resources, including to investigate and remediate significant information security vulnerabilities detected. Despite our investments in security measures, we are unable to assure that any security measures will be effective and will not be subject to breach, or system or human error. In addition, insider or employee cyber and security threats also pose a risk to all large companies, including ours. If one or more of the events described above were to occur, our computer systems or our associated third parties' computer systems could be breached and the information stored there could be accessed, publicly disclosed, lost, changed, controlled or stolen. While we maintain insurance coverage that may cover certain aspects of cyber risks, such insurance coverage may be insufficient to cover all losses.

We could also be subject to liability for claims relating to misuse of personal consumer information, such as unauthorized marketing purposes and violation of data privacy laws. We cannot provide assurance that the contractual requirements related to security and privacy that we impose on our associated third parties' who have access to customer data and personal consumer information will be followed or will be adequate to prevent the unauthorized use or disclosure of data. In addition, we have obligations under certain agreements to take certain protective measures to ensure the confidentiality of personal consumer information.

A breach of our systems processing or storing sensitive business information or personal consumer information may cause those systems to be unavailable; cause our clients and consumers to lose confidence in our services or deter the use of electronic payments generally; significantly harm our reputation; distract our management; delay future product rollouts; expose us to financial liability (as a result of uninsured liabilities, potential breaches of contract, litigation and penalties and fines from regulators and the card networks); result in the loss of our financial institution sponsorships; increase our risk of regulatory scrutiny; adversely affect our continued card network registration; cause us to modify our protective measures which would increase our expenses; and increase our expenses from containment and remediation costs, all of which could have a material adverse and long-term effect on our revenues, profitability, financial condition and future growth. Further, if we were to be removed from networks' lists of PCI DSS compliant service providers, our existing clients may cease utilizing our services, and prospective clients may delay or choose not to consider us for their processing needs. In addition, card networks could refuse to allow us to process through their networks.

Consolidation among financial institutions and retail clients, including the merger of TSYS clients with entities that are not TSYS clients or the sale of portfolios by TSYS clients to entities that are not TSYS clients could materially impact our financial position and results of operation.

Consolidation among financial institutions, particularly in the area of credit card operations, and consolidation in the retail industry, continues to be a major risk. Specifically, we face the risk that our clients may merge with entities that are not our clients, our clients may sell portfolios to entities that are not our clients or our financial institution clients may otherwise cease to exist, thereby negatively impacting our existing agreements and projected revenues with these clients. In addition, consolidation among financial institutions has led to an increasingly concentrated client base at TSYS which results in a changing client mix toward larger clients. Continued consolidation among financial institutions could increase the bargaining power of our current and future clients and further increase our client concentration. Consolidation among financial institutions and retail clients and the resulting loss of any significant client by us could have a material adverse effect on our financial position and results of operations.

If we do not obtain new clients or renew or renegotiate our agreements on favorable terms with our clients, our business will suffer.

A significant amount of our revenues is derived from long-term contracts with large clients. The financial position of these clients and their willingness to pay for our products and services are affected by general market positions, competitive pressures and operating margins within their industries. When our long-term contracts expire, the time of renewal or renegotiation presents our clients with the opportunity to consider other providers, transition all or a portion of the services we provide in-house or seek lower rates for our services. The loss of our contracts with existing clients or renegotiation of contracts at reduced rates or reduced service levels could have a material adverse effect on our financial position and results of operation.

For potential clients of our business segments, switching from one vendor of core processing or related services (or from an internally-developed system) to a new vendor is a significant undertaking. As a result, potential clients often resist change. We seek to overcome this resistance through strategies such as making investments to enhance the functionality of our systems. However, there can be no assurance that our strategies for overcoming potential clients' reluctance to change vendors will be successful, and this resistance may adversely affect our growth.

Economic and geopolitical conditions could adversely affect our business.

A significant portion of our revenues is derived from the number of consumer payment transactions that we process which may be affected by, among other things, overall economic conditions. The payment processing industry depends heavily upon the overall level of consumer, business and government spending. Any change in economic factors, including a sustained deterioration in general economic conditions or consumer confidence, particularly in the United States or Europe, or increases in interest rates in key countries in which we operate may adversely affect our financial performance by reducing the number or average purchase amount of transactions involving credit, debit, GPR prepaid and other payment-related cards. Future reductions in consumer spending through credit, debit, GPR prepaid debit and other payment-related card usage through methods that we process, including through an increase in the number of cash transactions, will result in our having fewer transactions to process and could result in a decrease in our revenues and profits. A weakening in the economy could also force some retailers to close, resulting in exposure to potential credit losses and declines in transactions. Additionally, credit card issuers may reduce credit limits and become more selective in their card issuance practices. Any of these developments could have a material adverse impact on our financial position and results of operation.

Our ability to anticipate and respond to changing industry and client needs and preferences may affect our competitiveness or demand for our products, which may adversely affect our financial results.

The payment processing markets in which we compete are subject to rapid and significant technological changes, new product introductions, including mobile payment applications, evolving competitive landscape, developing industry standards, and changing client and consumer needs and preferences. We expect that new services and technologies applicable to the payment processing markets will continue to emerge. These changes in technology may limit the competitiveness of and demand for our services. Also, our clients continue to adopt new technology for business and personal uses. We must anticipate and respond to these changes in order to remain competitive within our markets. If we are unable to effectively respond to these changes, the competitiveness of and demand for our services and products will be materially impaired and may result in our services being removed from the payments value chain. Our future success will depend in part on our ability to anticipate and respond to new competitors and to develop or adapt to technological changes and evolving industry standards on a timely basis. Our failure to do so could have a material adverse effect on our financial position and results of operation.

There may be a decline in the use of cards as a payment mechanism or adverse developments with respect to the card industry in general.

If the number of electronic payment transactions of the type we process does not continue to grow or if businesses or consumers do not continue to adopt our services, it could have a material adverse effect on the profitability of our business, financial position and results of operations. We believe future growth in the use of credit, debit and GPR prepaid debit cards and other electronic payments will be driven by the cost, ease-of-use, and quality of products and services offered to consumers and businesses. In order to consistently increase and maintain our profitability, businesses and consumers must continue to use electronic payment methods that we process, including credit, debit and GPR prepaid debit cards.

Conversions and deconversions of client portfolios may not occur as scheduled which may negatively impact our financial results.

The timing of the conversion of card portfolios of new payment processing clients to our processing systems and the deconversion of existing clients to other systems impacts our revenues and expenses. Due to a variety of factors, conversions and deconversions may not occur as scheduled and this may have a material adverse effect on our financial position and results of operations.

Acquisitions and integrating such acquisitions create certain risks and may affect our financial results.

We have acquired businesses both in the U.S. and internationally and will continue to explore opportunities for strategic acquisitions in the future. The acquisition and integration of businesses involve a number of risks. Core risks are in the area of valuation (negotiating a fair price for the business based on inherently limited diligence) and integration and conversion (managing the complex process of integrating the acquired company's people, services, technology and other assets to realize the projected value of the acquired company and the synergies projected to be realized in connection with the acquisition). In addition, international acquisitions often involve additional or increased risks including, for example: managing geographically separated organizations, systems, and facilities; integrating personnel with diverse business backgrounds and organizational cultures; complying with foreign regulatory requirements; fluctuations in currency exchange rates; enforcement of intellectual property rights in some foreign countries; difficulty entering new foreign markets due to, among other things, customer acceptance and business knowledge of those new markets; and general economic and political conditions. In all of our acquisitions, we also have risk associated with the information security posture of the acquired company and its products and services and activities required to address information security issues identified during the acquisition process and thereafter.

If the integration and conversion process when acquiring a business does not proceed smoothly, the following factors, among others, could have an adverse effect on our financial position and results of operations, and result in a loss of projected synergies:

- if we are unable to successfully integrate the benefits plans, duties and responsibilities, and other factors of interest to the management and employees of the acquired business, we could lose employees to our competitors, which could significantly affect our ability to operate the business and complete the integration;
- if the integration process causes any delays with the delivery of our services, or the quality of those services, we could lose clients to our competitors, which would reduce our revenues and earnings;
- if we are unable to identify and address information security weaknesses or vulnerabilities of the acquired company in a manner that prevents those from being exploited by malicious actors after close of the acquisition;
- the acquisition may otherwise cause disruption to the acquired company's business and operations and relationships with financial institution sponsors, customers, merchants, employees and other partners, as applicable;
- the acquisition and the related integration could divert the attention of our management from other strategic matters including possible acquisitions and alliances and planning for new product development; and
- the costs related to the integration of the acquired company's business and operations into ours and the financing of the transaction may be greater than anticipated.

A negative perception of our Company in the marketplace may affect our brands and reputation, which are key assets of our business.

Our brands and their attributes are key assets of our business. The ability to attract and retain business clients and consumers to TSYS and Netspend branded products depends highly upon the external perceptions of our Company and our industry's quality of service, use and protection of account holder data, regulatory compliance, financial condition, corporate responsibility and other factors. Negative perception or publicity, particularly in light of the rapid, widespread use of social media channels, could cause damage to our brands and reputation.

If business clients and consumers turn away from our brand and products, we may be required to incur additional liabilities and costs, result in greater regulatory or legislative scrutiny, and materially and adversely affect our financial position, results of operations and prospects for future growth and overall business.

Our business may be adversely affected by currency, geopolitical and other risks associated with foreign operations and, as we pursue international expansion, we may incur higher than anticipated costs and will become more susceptible to these risks.

We provide services to our clients worldwide. As a result, our revenues derived from international operations are subject to risk of loss from foreign currency exchange rates. Revenue and profit generated by international operations will increase or decrease compared to prior periods as a result of changes in foreign currency exchange rates. We have not entered into foreign exchange forward contracts to mitigate the risks associated with our foreign operations. In addition, we may become subject to exchange control regulations that might restrict or prohibit the conversion of our foreign currency into U.S. dollars. The occurrence of any of these factors could decrease the value of revenues we receive from international operations and adversely affect our financial position and results of operations. In addition, our revenues derived from international operations are subject to risk of loss as a result of social and geopolitical instability and unfavorable political or diplomatic developments which could negatively impact our financial results.

In June 2016, the United Kingdom ("U.K.") held a referendum in which voters approved an exit from the European Union, commonly referred to as "Brexit." The referendum has caused, and may continue to cause, volatility in global stock markets and currency exchange rate fluctuations, resulting in a decline in the value of the British pound relative to the U.S. dollar. The U.K. is currently negotiating the terms of its expected exit from the European Union which is scheduled for March 29, 2019. In November 2018, the U.K. and the European Union agreed upon a draft Withdrawal Agreement that sets out the terms of the U.K.'s departure, including a transition period from March 29, 2019 through December 31, 2020 to allow time for the U.K. and the European Union to agree upon a future trade deal. On January 15, 2019, the draft Withdrawal Agreement was rejected by the U.K. Parliament creating significant uncertainty about the terms (and timing) under which the U.K. will leave the European Union and the terms of the U.K's future relationship with the European Union. Uncertainty over the terms of the U.K.'s expected departure from the European Union and the exit itself could negatively impact the U.K. and other economies, which could adversely affect our financial position and results of operations. In addition, Brexit could lead to legal uncertainty and potentially divergent national laws and regulations in the U.K. and the European Union. Because we conduct business in and have operations in the U.K., we may incur additional costs or need to make operational changes as we adapt to potentially divergent regulatory frameworks from the rest of the European Union. Any of these effects of Brexit, among others, could adversely affect our business and financial results. We are monitoring the potential impact of Brexit on our Company including its impact on service continuity, contracts, the regulatory environment and freedom of movement of people as well as the potential impact to us if Brexit negatively impacts the U.K. or other economies, although the financial, trade and legal implications of Brexit are still uncertain and may be more severe than expected given that the final terms upon which the U.K. will exit the European Union are still unknown and the lack of comparable precedent.

We may also incur higher than anticipated costs as we expand internationally and grow our international client base. If we are unable to successfully manage these expenses as our business expands, our financial position and results of operations could be negatively impacted.

The costs and effects of pending and future litigation, investigations or similar matters, or adverse facts and developments related thereto, could materially affect our financial position and results of operations.

We are from time to time involved in various litigation matters and governmental or regulatory investigations or similar matters arising out of our business. Our insurance or indemnities may not cover all claims that may be asserted against it, and any claims asserted against us, regardless of merit or eventual outcome, may harm our reputation. Should the ultimate judgments or settlements in any pending litigation or future litigation or investigation significantly exceed our insurance coverage, they could have a material adverse effect on our financial position and results of operations. In addition, we may not be able to obtain appropriate types or levels of insurance in the future, nor may we be able to obtain adequate replacement policies with acceptable terms, if at all. For more information about our legal proceedings, see Note 15 in the Notes to the Consolidated Financial Statements included in Exhibit 99.1 to this Current Report on Form 8-K.

We operate in a competitive business environment, and if we are unable to compete effectively our financial position may be adversely affected.

The market for payment processing services is intensely competitive. Our payment solutions primarily compete against credit card processing firms, third party processing vendors, financial institutions, merchant acquirers and prepaid programs managers. If we are unable to differentiate ourselves from our competitors, drive value for our clients and/or effectively align our resources with our goals and objectives, we may not be able to compete effectively. We expect that the markets in which we compete will continue to attract new competitors and new technologies, including non-traditional competitors who offer certain innovations in payment methods. There can be no assurance that we will be able to compete successfully against current or future competitors or that the competitive pressures we face in the markets in which we operate will not materially adversely affect our financial position and results of operations.

The market for prepaid cards, demand deposit accounts and alternative financial services is highly competitive and competition is increasing as more companies endeavor to address the needs of underbanked consumers.

When we acquired Netspend, which we now refer to as our Consumer Solutions segment, we added an aspect to our business to complement our previous presence in the prepaid processing space to include GPR prepaid debit and payroll cards and alternative financial services. The alternative financial services industry, including the prepaid card market, is subject to intense and increasing competition. Our Consumer Solutions segment, which now includes demand deposit accounts, directly competes with a number of companies that market open-loop prepaid cards and demand deposit accounts through retail and online distribution. In addition, we compete with banks that offer demand deposit accounts and other traditional issuers of debit cards. We also compete against large retailers and technology companies who are seeking to integrate more financial services into their product offerings. We anticipate increased competition from alternative financial services providers who are often well-positioned to service the underbanked and who may wish to develop their own prepaid card or demand deposit account programs. The increased desire of banks, retailers, technology companies and alternative financial services providers to develop and promote prepaid card and demand deposit account programs could have an adverse effect on our Consumer Solutions Segment. We also face strong price competition. To stay competitive, we may have to increase the incentives that we offer to our distributors and decrease the prices of our products and services, which could adversely affect our operating results.

Our Consumer Solutions segment relies on certain relationships with issuing banks, distributors, marketers and brand partners. The loss of such relationships or if we are unable to maintain such relationships on terms that are favorable to us, our business, financial position and operating results may be materially adversely affected.

Our Consumer Solutions segment relies on arrangements we have with issuing banks to provide us with critical products and services, including the FDIC-insured depository accounts tied to the cards and accounts we manage, access to the ATM networks, membership in the card associations and network organizations and other banking services. The majority of our active Consumer Solutions cards and accounts are issued or opened through Meta Payment Systems (“MetaBank”). If any material adverse event were to affect MetaBank, or another of our other critical issuing banks, if we were to lose MetaBank or another critical bank, or if MetaBank or another critical bank grew to a size such that it was no longer able to avail itself of certain regulatory exemptions for small banks, we would be forced to find an alternative provider of these critical banking services for our Consumer Solutions segment. It may not be possible to find a replacement bank on terms that are acceptable to us or at all. Any change in the issuing banks could disrupt the business or result in arrangements with new banks that are less favorable to us than those we have with our existing issuing banks, either of which could have a material adverse impact on our results of operations and our financial position.

Furthermore, our Consumer Solutions segment depends in large part on establishing agreements with distributors, marketers and brand partners, primarily alternative financial services providers, as well as grocery and convenience stores and other traditional retailers. Some of these companies may endeavor to internally develop their own programs or enter into exclusive relationships with our competitors to distribute or market their products. The loss of, or a substantial decrease in revenues from, one or more of our top distributors, marketers or brand partners could have a material adverse effect on the Consumer Solutions segment and our operating results.

Changes in the laws, regulations, policies, credit card association rules or other industry standards affecting our business may impose costly compliance burdens and negatively impact our business.

There may be changes in the laws, regulations, credit card association rules or other industry standards that affect our operating environment in substantial and unpredictable ways at both the federal and state levels in the U.S. as well as internationally. For example, the Trump Administration has called for changes in existing regulatory requirements, including those applicable to financial services. We cannot predict the impact, if any, of such changes on our business. It is likely that some policies adopted by the new administration will benefit us, while others will negatively affect us. Until we know what changes are adopted, we will not know whether in total we benefit from, or are negatively affected by, the changes. More broadly, changes to statutes, regulations or industry standards, including interpretation and implementation of statutes, regulations or standards, could increase the cost of doing business or affect the competitive balance. Regulation of the payments industry has increased significantly in recent years. Failure to comply with laws, rules and regulations or standards to which we are subject in the U.S. as well as internationally, including the card network rules and rules with respect to privacy and information security, may result in the suspension or revocation of a license or registration, the limitation, suspension or termination of service, and the imposition of fines, sanctions or other penalties, which could have a material adverse effect on our financial position and results of operations, as well as damage our reputation. Even if such a change to statutes, regulations or industry standards does not directly apply to us, the effects of such a change on our financial institution clients could result in material, indirect effects on the way we operate or the costs to operate our business and impair the demand for our services amongst our financial institution clients.

We and the rest of the financial services industry continue to experience increased legislative and regulatory scrutiny, including the enactment of additional legislative and regulatory initiatives such as the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Reform Act") in 2010. The Reform Act has resulted in significant structural and other changes to the regulation of the financial services industry. The Reform Act, among other things, provides for the regulation and oversight by the Board of Governors of the Federal Reserve System ("Board") of debit interchange fees that are typically paid by acquirers and charged or received by a payment card network for the purpose of compensating an issuer for its involvement in an electronic debit transaction. The Reform Act also created the Consumer Financial Protection Bureau ("CFPB") with responsibility for regulating consumer financial products and services and enforcing most federal consumer protection laws in the area of financial services, including consumer credit and the prepaid card industry. The CFPB has mandated that supervised financial institutions, including our clients, are required to ensure that their service providers are in compliance with applicable federal consumer laws, which may increase regulatory oversight and our cost of doing business. In addition, the CFPB has promulgated a new rule regarding the prepaid industry which is expected to negatively impact our Consumer Solutions segment and thus negatively impact our revenues and earnings when it becomes effective which is scheduled to occur on April 1, 2019. Furthermore, the Reform Act created a Financial Stability Oversight Council that has the authority to determine whether nonbank financial companies such as TSYS should be supervised by the Board because they are systemically important to the U.S. financial system. Any such designation would result in increased regulatory burdens on our business. The overall impact of the Reform Act on TSYS is difficult to estimate. Current and future regulations as a result of the Reform Act may adversely affect our business or operations, directly or indirectly (if, for example, our clients' businesses and operations are adversely affected).

With respect to our Consumer Solutions segment, because each distributor offers prepaid cards, reload services and/or money remittance services as an agent of Consumer Solutions, or another third party, we do not believe that the distributors themselves are required to become licensed as money transmitters in order to engage in such activity. However, there is a risk that a federal or state regulator will take a contrary position and initiate enforcement or other proceedings against a distributor, us, our issuing banks or our other service providers. If we are unsuccessful in making a persuasive argument that a distributor should not be subject to such licensing requirements and it is therefore deemed to be in violation of one or more of the state money transmitter statutes, it could result in the imposition of fines, the suspension of the distributor's ability to offer some or all of our products and related services in the relevant jurisdiction, civil liability and criminal liability, each of which could negatively impact our financial position and results of operations. Furthermore, if the federal government or one or more state governments impose additional legislative or regulatory requirements on our Consumer Solutions segment, the issuing banks or the distributors, or prohibit or limit the activities of our Consumer Solutions segment as currently conducted, we may be required to modify or terminate some or all of our Consumer Solutions products and services offered in the relevant jurisdiction or certain of the issuing banks may terminate their relationship with us.

In addition, we are subject to tax laws in each jurisdiction where we do business. Changes in tax laws or their interpretations could decrease the value of revenues we receive, the value of tax losses and tax credits carry forwards recorded on our balance sheet and the amount of our cash flow and have a material adverse effect on our financial position and results of operations. Furthermore, changes in accounting policies can significantly affect how we calculate expenses and earnings.

We rely on financial institution sponsors in order to process Visa, Mastercard, American Express and Discover transactions. If these sponsorships are terminated and we are unable to secure new sponsors our business and results of operations will be materially and adversely affected.

In order to provide our Visa, Mastercard, American Express and Discover transaction processing services, we must be either a direct participant or be registered as a merchant processor or service provider of Visa, Mastercard, American Express and Discover. Registration as a merchant processor or service provider is dependent upon our being sponsored by member banks of these credit card companies. If our sponsor banks should stop providing sponsorship for us, we would need to find another financial institution to provide those services or we would need to attain direct participation, either of which could prove to be difficult and expensive. If we are unable to find a replacement financial institution to provide sponsorship or attain direct participation, we may no longer be able to provide processing services to the affected customers, which would have a material adverse effect on our business and results of operations.

If we fail to comply with the applicable requirements of the card networks, they could seek to fine us, suspend us or terminate our registrations. If our merchants or independent sales organizations incur fines or penalties that we cannot collect from them, we could end up bearing the cost of such fines or penalties.

We are subject to card association and network rules that could subject us to a variety of fines or penalties that may be levied by the card networks for certain acts or omissions. The rules of the card networks are set by their boards, which may be influenced by card issuers, and some of those issuers are our competitors with respect to these processing services. Many banks directly or indirectly sell processing services to merchants in direct competition with us. These banks could attempt, by virtue of their influence on the networks, to alter the networks' rules or policies to the detriment of non-members like us. The termination of our registrations or our status as a service provider or a merchant processor, or any changes in card association or other network rules or standards, including interpretation and implementation of the rules or standards, that increase the cost of doing business or limit our ability to provide transaction processing services to our customers, could have a material adverse effect on our financial position and results of operations. If a merchant or an ISO fails to comply with the applicable requirements of the card associations and networks, it could be subject to a variety of fines or penalties that may be levied by the card associations or networks. If we cannot collect such amounts from the applicable merchant or ISO, we could end up bearing such fines or penalties, resulting in lower earnings for us.

The providers of alternative financial services that distribute our Consumer Solutions products are subject to extensive and complex federal and state regulations and new regulations and/or changes to existing regulations could adversely affect their ability to offer Consumer Solutions products through their locations, which in turn could have an adverse impact on our business.

The distributors include a large number of companies in industries that are highly regulated, such as payday, title and installment lending and it is possible that changes in the legal regime governing such businesses could limit their ability to distribute our Consumer Solutions products or adversely impact their business and thereby have an indirect adverse impact on our Consumer Solutions segment. For example, a large number of states have either prohibited, or imposed substantial restrictions upon, the offering of "payday loans" and this activity continues to draw substantial scrutiny from federal and state legislatures, regulatory authorities and various consumer groups. Furthermore, the Reform Act grants supervisory authority over entities engaged in this activity to the CFPB, which recently promulgated regulations which may significantly impact the operations and/or viability of various entities. As a number of our Consumer Solutions distributors are engaged in offering payday, title and/or installment loans, current and future legislative and regulatory restrictions that negatively impact their ability to continue their operations could have a corresponding negative impact on our ability to offer Consumer Solutions products through their locations, potentially resulting in a significant decline in revenue from the Consumer Solutions segment.

We are subject to the business cycles and credit risk of our merchant customers and our independent sales organizations.

A recessionary economic environment could affect our merchants through a higher rate of business closures, resulting in lower revenues and earnings for us. Our merchants are liable for any charges properly reversed by the card issuer on behalf of the cardholder. Our merchants and ISOs are also liable for any fines, or penalties, that may be assessed by any card networks. In the event, however, that we are not able to collect such amounts from the merchants or ISOs, due to merchant fraud, breach of contract, insolvency, bankruptcy or any other reason, we may be liable for any such charges which could have a material adverse effect on our financial position and results of operations.

We incur chargeback liability when our merchants refuse or cannot reimburse chargebacks resolved in favor of their customers. We cannot accurately anticipate these liabilities, which may adversely affect our financial results.

In the event a billing dispute between a cardholder and a merchant is not resolved in favor of the merchant, the transaction is normally "charged back" to the merchant and the purchase price is credited or otherwise refunded to the cardholder. If we are unable to collect such amounts from the merchant's account or reserve account (if applicable), or if the merchant refuses or is unable, due to closure, bankruptcy or other reasons, to reimburse us for a chargeback, we bear the loss for the amount of the refund paid to the cardholder. We may experience significant losses from chargebacks in the future. Any increase in chargebacks not paid by our merchants could have a material adverse effect on our financial position and results of operation. We have policies to manage merchant-related credit risk and often mitigate such risk by requiring collateral and monitoring transaction activity. Notwithstanding our programs and policies for managing credit risk, it is possible that a default on such obligations by one or more of our merchants could have a material adverse effect on our business.

Fraudulent activities by merchants, prepaid card holders or others and losses from overdrawn cardholder accounts may adversely affect our financial results.

We have potential liability for fraudulent bankcard transactions or credits initiated by merchants or others, and our prepaid card programs expose us to threats involving the misuse of cards, collusion, fraud and identify theft. Examples of merchant fraud include when a merchant knowingly uses a stolen or counterfeit bankcard or card number to record a false sales transaction, processes an invalid bankcard, or intentionally fails to deliver the merchandise or services sold in an otherwise valid transaction. Criminals are using increasingly sophisticated methods to engage in illegal activities such as counterfeit and fraud. It is possible that incidents of fraud could increase in the future. Failure to effectively manage risk and prevent fraud would increase our chargeback liability or other liability. Increases in chargebacks or other liability could have a material adverse effect on our financial position and results of operations.

Our systems and our third-party providers' systems may fail which could interrupt our service, cause us to lose business, increase our costs and expose us to liability.

We depend on the efficient and uninterrupted operation of our computer systems, software, data centers and telecommunications networks, as well as the systems and services of third parties. A system outage or data loss could have a material adverse effect on our business, financial position and results of operations. Not only would we suffer damage to our reputation in the event of a system outage or data loss, we may also be liable to third parties. Many of our contractual agreements with financial institutions require the payment of penalties if we do not meet certain operating standards. Our systems and operations or those of our third-party providers could be exposed to damage or interruption from events that may be outside our control. Events that could cause system interruptions include, among other things, fire, natural disaster, power loss, telecommunications failure, terrorist acts, war, breach and unauthorized access and computer viruses or other defects. Defects in our systems or those of third parties, errors or delays in the processing of payment transactions, telecommunications failures, or other difficulties could result in loss of revenue, loss of customers, loss of merchant and cardholder data, harm to our business or reputation, exposure to fraud losses or other liabilities, negative publicity, additional operating and development costs, fines and other sanctions imposed by card networks, and/or diversion of technical and other resources. In addition, we have a third party risk management process in place through our global procurement program. If we are unable to effectively manage the risk associated with our third party relationships, it could negatively impact our financial condition and results of operations.

We may experience software defects, computer viruses, and development delays, which could damage client relations, our potential profitability and expose us to liability.

Our services are based on sophisticated software and computing systems that often encounter development delays, and the underlying software may contain undetected errors, viruses, or defects. Defects in our software products and errors or delays in our processing of electronic transactions could result in additional development costs, diversion of technical and other resources from our other development efforts, loss of credibility with current or potential clients, harm to our reputation, fines imposed by card networks, or exposure to liability claims. In addition, we rely on technologies supplied to us by third parties that may also contain undetected errors, viruses or defects that could have a material adverse effect on our business, financial condition and results of operations.

We may not be able to successfully manage our intellectual property and may be subject to infringement claims.

In our rapidly developing legal framework, we rely on a combination of contractual rights and copyright, trademark, patent and trade secret laws to establish and protect our proprietary technology. Despite our efforts to protect our intellectual property, third parties may infringe or misappropriate our intellectual property or may develop software or technology competitive to us. Our competitors may independently develop similar technology, duplicate our products or services or design around our intellectual property rights. We may have to litigate to enforce and protect our intellectual property rights, trade secrets and know-how or to determine their scope, validity or enforceability, which is expensive and could cause a diversion of resources and may not prove successful. The loss of intellectual property protection or the inability to secure or enforce intellectual property protection could harm our business and ability to compete.

We may also be subject to costly litigation in the event our products and technology infringe upon another party's proprietary rights. Third parties may have, or may eventually be issued, patents that would be infringed by our products or technology. Any of these third parties could make a claim of infringement against us with respect to our products or technology. We may also be subject to claims by third parties for breach of copyright, trademark or license usage rights. Any such claims and any resulting litigation could subject us to significant liability for damages. An adverse determination in any litigation of this type could limit our ability to use the intellectual property subject to these claims and require us to design around a third party's patent, which may not be possible, or to license alternative technology from another party, which may be costly. In addition, litigation is time consuming and expensive to defend and could result in the diversion of the time and attention of our management and employees.

If we lose key personnel or are unable to attract additional qualified personnel as we grow, our business could be adversely affected.

All of our businesses function at the intersection of rapidly changing technological, social, economic and regulatory developments that requires a wide ranging set of expertise and intellectual capital. To successfully compete and grow, we must recruit, develop and retain the necessary personnel who can provide the needed expertise across the entire spectrum of intellectual capital needs. In addition, we must develop our personnel to fulfill succession plans capable of maintaining continuity in the midst of the inevitable unpredictability of human capital. However, the market for qualified personnel is competitive and we may not succeed in recruiting additional personnel or may fail to effectively replace current personnel who depart with qualified or effective successors. Our efforts to retain and develop personnel may also result in significant additional expenses, which could negatively affect our profitability. We cannot assure that key personnel, including executive officers, will continue to be employed or that we will be able to attract and retain qualified personnel in the future. Failure to retain or attract key personnel could have a material adverse effect on our business, financial position and results of operations.

UNAUDITED PRO FORMA CONDENSED COMBINED FINANCIAL INFORMATION

On May 27, 2019, Global Payments and TSYS entered into an agreement providing for the merger of TSYS with and into Global Payments, with Global Payments as the surviving entity. The merger is subject to the satisfaction or waiver of the closing conditions set forth in the merger agreement, including the approval of the Global Payments merger proposal by holders of Global Payments common stock and the approval of the TSYS merger proposal by holders of TSYS common stock. Upon completion of the merger, TSYS will no longer be a separate publicly traded corporation.

The following tables present unaudited pro forma condensed combined financial information about Global Payments' consolidated balance sheet and statements of income, which we refer to as the "unaudited pro forma financial statements," after giving effect to the merger and the related financing transactions. The unaudited pro forma condensed combined statements of income for the year ended December 31, 2018 and for the six months ended June 30, 2019 combine the historical consolidated statements of income of Global Payments and TSYS, giving effect to the merger as if it had been completed on January 1, 2018. The accompanying unaudited pro forma condensed combined balance sheet as of June 30, 2019 combines the historical consolidated balance sheets of Global Payments and TSYS, giving effect to the merger as if it had been completed on June 30, 2019.

The unaudited pro forma financial statements and related notes were prepared using the acquisition method of accounting with Global Payments as the acquirer of TSYS. In the unaudited pro forma financial statements and related notes, the assets to be acquired and liabilities to be assumed of TSYS have been measured based upon their estimated fair values, unless otherwise noted, as of June 30, 2019. The historical consolidated financial information has been adjusted in the unaudited pro forma financial statements to give effect to events that are (i) directly attributable to the merger, (ii) factually supportable and (iii) with respect to the unaudited pro forma condensed combined statements of income, expected to have a continuing effect on the combined results of Global Payments and TSYS. The unaudited pro forma financial statements contained herein do not reflect the costs of any integration activities or benefits that may result from the realization of future revenue enhancements or cost savings from operating efficiencies, or any other synergies that may result from the merger. Management anticipates that certain material charges will be incurred subsequent to the merger for items such as operations and technology integration and severance. However, since the timing and effect are not specifically determinable at this time, no amounts are included in the unaudited pro forma financial statements for such items.

The unaudited pro forma financial statements and related notes are being provided for illustrative purposes only and do not purport to represent what the combined company's actual results of operations or financial position would have been had the merger been completed on the dates indicated, nor are they necessarily indicative of the combined company's future results of operations or financial position for any future period.

Global Payments has prepared a preliminary estimate of fair value for intangible assets and certain financial assets and financial liabilities of TSYS. Other TSYS assets and liabilities are presented at their respective historical carrying amounts. A final determination of the fair value of TSYS' assets and liabilities will be based on TSYS' actual assets and liabilities as of the acquisition date and, therefore, cannot be made prior to the completion of the merger. Differences in the fair values of the TSYS assets and liabilities as compared with the information shown in the unaudited pro forma financial statements could be material and may change the amount of the reported assets and liabilities and affect the combined company's statements of income.

In addition, the value of the merger consideration to be paid by Global Payments in shares of Global Payments common stock upon the completion of the merger will be determined based on the closing price of Global Payments common stock as of the acquisition date and the number of issued and outstanding shares of TSYS common stock immediately prior to the closing. The actual value of the merger consideration may differ from the amount reflected in the unaudited pro forma financial statements, and the difference may be material.

Further, Global Payments has not identified all adjustments necessary to conform TSYS' accounting policies and financial statement presentation to Global Payments' policies and presentation. Upon completion of the merger, or as more information becomes available, Global Payments will perform a more detailed review of TSYS' accounting policies and financial statement presentation. Differences identified in that review could have a material effect on the combined company's financial information.

As a result of the foregoing, the pro forma adjustments are preliminary and are subject to change as additional information becomes available and as additional analysis is performed. The preliminary pro forma adjustments have been made solely for the purpose of providing the unaudited pro forma financial statements.

The unaudited pro forma financial statements and related notes are based on and should be read in conjunction with (i) the historical audited consolidated financial statements of Global Payments and the related notes included in Global Payments' Annual Report on Form 10-K for the year ended December 31, 2018 and the historical unaudited consolidated financial statements of Global Payments included in Global Payments' Quarterly Report on Form 10-Q for the period ended June 30, 2019 and (ii) the historical audited consolidated financial statements of TSYS and the related notes included in TSYS' Annual Report on Form 10-K for the year ended December 31, 2018 and the historical unaudited consolidated financial statements of TSYS included in TSYS' Quarterly Report on Form 10-Q for the period ended June 30, 2019.

Global Payments Inc.
UNAUDITED PRO FORMA CONDENSED COMBINED BALANCE SHEET
June 30, 2019
(in thousands)

	Historical				
	Global Payments	TSYS	Pro Forma Adjustments	Note 4 References	Pro Forma Condensed Combined
ASSETS					
Current assets:					
Cash and cash equivalents	$ 1,047,727	$ 458,220	$ (157,411)	a	$ 1,348,536
Accounts receivable, net	394,603	513,712	1,753	b	908,907
			(1,161)	c	
Settlement processing assets	2,844,267	—	—		2,844,267
Prepaid expenses and other current assets	261,082	267,895	7,876	d	516,912
			(3,167)	e	
			(8,008)	e	
			(8,766)	l	
Total current assets	4,547,679	1,239,827	(168,884)		5,618,622
Goodwill	6,345,563	4,114,851	15,185,453	f	25,645,867
Other intangible assets, net	2,308,333	703,617	8,396,383	g	11,408,333
Other intangible assets - computer software, net	—	520,494	(520,494)	h	—
Property and equipment, net	712,396	373,868	301,725	h	1,387,989
Other noncurrent assets	670,101	754,149	(148,938)	i	1,283,416
			16,286	d	
			(8,182)	e	
Total assets	$ 14,584,072	$7,706,806	$23,053,349		$45,344,227
LIABILITIES AND EQUITY					
Current liabilities:					
Settlement lines of credit	$ 736,209	$ —	$ —		$ 736,209
Current portion of long-term debt	151,062	35,523	(168,774)	e	17,811
Accounts payable and accrued liabilities	1,117,938	465,804	(14,154)	b	1,539,507
			(1,161)	c	
			7,876	d	
			(2,557)	e	
			(20,931)	j	
			(13,308)	l	
Settlement processing obligations	2,478,373	—	15,907	b	2,494,280
Total current liabilities	4,483,582	501,327	(197,102)		4,787,807
Long-term debt	5,000,585	4,042,738	168,774	e	9,386,374
			174,277	k	
Deferred income taxes	556,130	401,486	(10,550)	e	2,810,881
			(13,995)	l	
			1,877,810	m	
Other noncurrent liabilities	368,659	266,661	16,286	d	616,480
			(35,126)	j	
Total liabilities	10,408,956	5,212,212	1,980,374		17,601,542
Commitments and contingencies					
Equity:					
Total controlling shareholders' equity	3,990,604	2,494,594	(44,255)	e	27,558,173
			10,550	e	
			(117,406)	l	
			13,995	l	
			21,210,091	n	
Noncontrolling interest	184,512	—	—		184,512
Total equity	4,175,116	2,494,594	21,072,975		27,742,685
Total liabilities and equity	$ 14,584,072	$7,706,806	$23,053,349		$45,344,227

See accompanying notes to unaudited pro forma condensed combined financial information.

Global Payments Inc.
UNAUDITED PRO FORMA CONDENSED COMBINED STATEMENT OF INCOME
Six Months Ended June 30, 2019
(in thousands, except per share data)

	Historical				
	Global Payments	TSYS	Pro Forma Adjustments	Note 4 References	Pro Forma Condensed Combined
Revenues	$ 1,818,190	$2,070,016	$ (8,574)	c	$3,872,003
			(7,629)	j	
Operating expenses:					
Cost of service	607,505	1,263,032	(8,574)	c	2,168,378
			(15,962)	i	
			70,519	o	
			251,858	p	
Selling, general and administrative	789,467	364,627	(26,594)	l	1,056,981
			(70,519)	o	
	1,396,972	1,627,659	200,728		3,225,359
Operating income	421,218	442,357	(216,931)		646,644
Interest and other income	9,112	2,458	—		11,570
Interest and other expense	(124,697)	(82,865)	33,630	q	(173,118)
			814	r	
	(115,585)	(80,407)	34,444		(161,548)
Income before income taxes	305,633	361,950	(182,487)		485,096
(Provision for) benefit from income taxes	(56,388)	(61,027)	43,505	s	(74,724)
			(814)	r	
Income before equity in income of equity investments	249,245	300,923	(139,796)		410,372
Equity in income of equity investments, net of tax	—	23,444	—		23,444
Net income	249,245	324,367	(139,796)		433,816
Net income attributable to noncontrolling interests	(16,445)	—	—		(16,445)
Net income attributable to controlling shareholders	$ 232,800	$ 324,367	$ (139,796)		$ 417,371
Earnings per share attributable to Global Payments:					
Basic	$ 1.48				$ 1.39
Diluted	$ 1.48				$ 1.39
Weighted-average number of shares outstanding:					
Basic	157,141		143,378	t	300,519
Diluted	157,638		143,378	t	301,016

See accompanying notes to unaudited pro forma condensed combined financial information.

Global Payments Inc.
UNAUDITED PRO FORMA CONDENSED COMBINED STATEMENT OF INCOME
Year Ended December 31, 2018
(in thousands, except per share data)

	Historical				
	Global Payments	TSYS	Pro Forma Adjustments	Note 4 References	Pro Forma Condensed Combined
Revenues	$ 3,366,366	$4,028,211	$ (18,347)	c	$7,356,745
			(19,485)	j	
Operating expenses:					
Cost of service	1,095,014	2,492,482	(18,347)	c	4,177,135
			(31,322)	i	
			153,951	o	
			485,357	p	
Selling, general and administrative	1,534,297	712,991	(153,951)	o	2,093,337
	2,629,311	3,205,473	435,688		6,270,472
Operating income	737,055	822,738	(473,520)		1,086,273
Interest and other income	20,719	4,476	—		25,195
Interest and other expense	(195,619)	(167,450)	18,129	q	(345,507)
			(567)	r	
	(174,900)	(162,974)	17,562		(320,312)
Income before income taxes	562,155	659,764	(455,958)		765,961
(Provision for) benefit from income taxes	(77,488)	(127,003)	108,700	s	(95,224)
			567	r	
Income before equity in income of equity investments	484,667	532,761	(346,691)		670,737
Equity in income of equity investments, net of tax	—	45,156	—		45,156
Net income	484,667	577,917	(346,691)		715,893
Net income attributable to noncontrolling interests	(32,614)	(1,261)	—		(33,875)
Net income attributable to controlling shareholders	$ 452,053	$ 576,656	$ (346,691)		$ 682,018
Earnings per share attributable to Global Payments:					
Basic	$ 2.85				$ 2.26
Diluted	$ 2.84				$ 2.25
Weighted-average number of shares outstanding:					
Basic	158,672		143,378	t	302,050
Diluted	159,271		143,378	t	302,649

See accompanying notes to unaudited pro forma condensed combined financial information.

NOTES TO UNAUDITED PRO FORMA CONDENSED COMBINED FINANCIAL STATEMENTS

Note 1—Basis of Presentation

The unaudited pro forma financial statements and related notes present the pro forma condensed combined financial position and results of operations of Global Payments and TSYS.

The historical financial information of Global Payments and TSYS as of and for the six months ended June 30, 2019 was derived from the unaudited consolidated financial statements presented in their respective Quarterly Reports on Form 10-Q for the period ended June 30, 2019. The historical financial information of Global Payments and TSYS for the year ended December 31, 2018 was derived from the audited consolidated financial statements presented in their respective Annual Reports on Form 10-K for the year ended December 31, 2018.

The unaudited pro forma financial statements reflect certain reclassifications to align the historical financial statement presentation of Global Payments and TSYS. Global Payments has not yet identified all adjustments necessary to conform TSYS' accounting policies and financial statement presentation to Global Payments' policies and presentation. Upon consummation of the merger or as more information becomes available, Global Payments will perform a detailed review of TSYS' accounting policies and financial statement presentation. Differences identified in that review could have a material effect on the combined company's financial information.

The unaudited pro forma financial statements also reflect adjustments as of and for the six months ended June 30, 2019 and for the year ended December 31, 2018 to eliminate the effect of transactions associated with certain preexisting commercial relationships between Global Payments and TSYS.

The unaudited pro forma financial statements were prepared using the acquisition method of accounting, with Global Payments as the acquirer of TSYS. In the pro forma balance sheet, the assets to be acquired and liabilities to be assumed of TSYS have been measured based upon their preliminary estimated fair values, unless otherwise noted, as of June 30, 2019. Definitive fair values will be determined and finalized for assets to be acquired and liabilities to be assumed based on certain valuations and other studies that will be performed by Global Payments. Accordingly, the fair value adjustments determined using the acquisition method of accounting reflected in the unaudited pro forma financial statements are preliminary and are subject to revision based on a final determination of fair value within the measurement period of up to twelve months subsequent to the acquisition date.

The pro forma adjustments are based on preliminary estimates and assumptions that are subject to change. The unaudited pro forma financial statements are presented solely for informational purposes and are not necessarily indicative of the combined results of operations or financial position that might have been achieved for the periods or dates indicated, nor are they necessarily indicative of the future combined results of the companies to be combined. The unaudited pro forma financial statements do not reflect the costs of any integration activities or benefits that may result from realization of future revenue enhancements or cost savings from operating efficiencies or any other synergies that may result from the merger. Management anticipates that certain material charges will be incurred subsequent to the merger for items such as operations and technology integration and severance. However, since the timing and effect are not specifically determinable at this time, no amounts are included in the unaudited pro forma financial statements for such items.

Note 2—Consideration and Debt Financing

Pursuant to the terms and subject to the conditions set forth in the merger agreement, each outstanding share of TSYS common stock will be converted into the right to receive 0.8101 of a share of Global Payments common stock. Holders of TSYS common stock will receive cash in lieu of fractional shares. In connection with the completion of the merger, Global Payments' Articles of Incorporation will be amended to increase the number of authorized shares of Global Payments common stock from two hundred million (200,000,000) to four hundred million (400,000,000).

At closing, each outstanding TSYS equity award granted under TSYS equity compensation plans (other than certain "single-trigger" awards described below) will be converted into a corresponding award with respect to Global Payments common stock, with the number of shares underlying such award (and, in the case of stock options, the applicable exercise price) adjusted based on the exchange ratio. Each such converted TSYS equity award will continue to be subject to the same terms and conditions (including vesting and exercisability or payment terms) as applied to the corresponding TSYS equity award. In the case of TSYS performance share awards with a performance period that is incomplete or for which performance is not determinable at closing, the number of shares underlying such awards will be the greater of the number of initial performance shares underlying such award and the number of shares that would have been earned based on actual performance at closing, determined as set forth in the merger agreement, and such awards will cliff vest, subject to the holder's continued service, on the last day of the originally scheduled performance period. In addition to the foregoing awards, certain TSYS equity awards held by employees who are not executive officers, pursuant to their terms, will vest automatically (i.e., "single-trigger") at closing and be converted into the right to receive a number of shares of Global Payments common stock determined based on the exchange ratio in respect of each share of TSYS common stock subject thereto. The number of shares of TSYS common stock subject to performance-based single-trigger awards will be determined in a manner similar to the performance share awards described above.

Global Payments has not completed its analysis of the TSYS employee equity awards; however, the effect is not expected to be material in the context of the transaction. Any corresponding adjustment may result in the recognition of an incremental component of purchase consideration transferred, which is not currently reflected in the preliminary estimate of merger consideration presented below, and/or an incremental amount of postcombination share-based compensation expense, which is not currently reflected in the unaudited pro forma financial statements.

The preliminary estimated merger consideration to be transferred to TSYS shareholders is $23.7 billion. The acquisition date fair value of common stock to be issued to TSYS shareholders was estimated based on 177.0 million shares of TSYS common stock issued and outstanding (excluding the aforementioned TSYS employee equity awards) multiplied by the exchange ratio and the closing share price of Global Payments common stock as of July 25, 2019 of $165.33 per share. Merger consideration will include the amount of TSYS' unsecured revolving loan and related accrued interest and fees that Global Payments is required to repay upon consummation of the merger, as shown in the table below (in thousands, except per share data):

Shares of TSYS common stock issued and outstanding as of July 25, 2019		176,988
Exchange ratio		0.8101
Shares of Global Payments common stock to be issued		143,378
Price per share of Global Payments common stock as of July 25, 2019	$	165.33
Estimated fair value of common stock to be issued	$	23,704,685
TSYS' unsecured revolving loan (including accrued interest and fees) as of June 30, 2019		970,472
Preliminary estimated fair value of total merger consideration	$	24,675,157

The estimated fair value of common stock to be issued and resulting goodwill may change based on fluctuations in the share price of Global Payments common stock or in the number of shares of TSYS common stock outstanding on the closing date. The fair value of the equity securities to be issued as the consideration transferred will be measured on the closing date pursuant to the terms of the merger agreement. This requirement will likely result in an amount that differs from the $23.7 billion assumed in the unaudited pro forma financial statements. A 10% fluctuation in the market price of Global Payments common stock would affect the value of the common stock to be issued with a corresponding change to goodwill, as illustrated in the table below (in thousands):

		Preliminary Estimated Fair Value of Common Stock to be Issued	Estimated Goodwill
As presented in the pro forma adjustments	$	23,704,685	$19,300,304
10% increase in common stock price		26,075,154	21,670,773
10% decrease in common stock price		21,334,216	16,929,835

In connection with entry into the merger agreement, Global Payments obtained commitments for a $2.75 billion,364-day senior unsecured bridge facility (the "Bridge Facility"). The Bridge Facility was established to refinance certain existing term loans under Global Payments existing credit facility and to refinance TSYS unsecured revolving credit facility in order to establish an unsecured capital structure under which Global Payments can assume certain existing TSYS notes. Global Payments expects to execute permanent financing of $7.5 billion (a new $3.0 billion revolving credit facility and a new $2.0 billion term loan facility, which we entered into on July 9, 2019, as described below, and $2.5 billion of senior notes expected to be issued prior to closing of the merger) that will eliminate the need for the Bridge Facility commitments. Global Payments could choose to borrow up to $3.0 billion under the term loan facility; however, the pro forma adjustment is based on the expectation that the term loan facility will be only $2.0 billion. In addition to refinancing the existing Global Payments and TSYS credit agreements, the proceeds from the permanent financing may be used, among other things, to fund cash payments to TSYS shareholders in lieu of fractional shares and to finance costs associated with the merger and the debt financing.

On July 9, 2019, Global Payments entered into a term loan credit agreement ("Term Loan Credit Agreement") and a credit agreement ("Unsecured Revolving Credit Agreement" and, together with the Term Loan Credit Agreement, the "Agreements"), in each case with a syndicate of financial institutions. The Term Loan Credit Agreement provides for a senior unsecured $2.0 billion term loan facility and Global Payments, at its discretion, has the ability to seek to increase the term loan capacity by an additional $1.0 billion ("Term Loan Facility"). The Unsecured Revolving Credit Agreement provides for a senior unsecured $3.0 billion revolving credit facility.

For purposes of the unaudited pro forma financial statements, the sources and uses of funds relating to the merger and the related financing transactions as if the merger had been consummated on June 30, 2019 are as follows (in thousands):

Sources:	
Available cash	$ 157,411
Expected proceeds to be drawn from the new unsecured revolving credit facility	1,659,473
Expected proceeds from the new unsecured term loan	2,000,000
Expected proceeds from the new unsecured senior notes	2,500,000
Total sources	$ 6,316,884
Uses:	
Repayment of outstanding borrowings under Global Payments' existing credit facility (including accrued interest and fees)	$ 5,186,542
Repayment of TSYS' unsecured revolving loan (including accrued interest and fees)	970,472
Estimated costs associated with debt refinancing	37,922
Estimated merger-related costs remaining to be paid as of June 30, 2019	121,948
Total uses	$ 6,316,884

For purposes of preparing the unaudited pro forma financial statements, the uses of funds relating to the merger do not present the effect of any cash to be paid to TSYS shareholders in lieu of fractional shares because that amount is not yet determinable. The payment of cash in lieu of fractional shares will not have any effect on the total merger consideration to be transferred to TSYS shareholders.

Note 3—Preliminary Valuation

The preliminary estimated amounts of assets to be acquired and liabilities to be assumed as if the merger had been consummated on June 30, 2019 and a reconciliation to the preliminary estimated fair value of total merger consideration are as follows (in thousands):

Cash and cash equivalents	$ 458,220
Accounts receivable	513,712
Prepaid expenses and other current assets	259,887
Identified intangible assets	9,100,000
Property and equipment	675,593
Other noncurrent assets	605,211
Accounts payable and accrued liabilities	(444,401)
Debt	(3,282,538)
Deferred income taxes	(2,279,296)
Other noncurrent liabilities	(231,535)
Total identifiable net assets	5,374,853
Goodwill	19,300,304
Preliminary estimated fair value of total merger consideration	$ 24,675,157

The assets to be acquired and the liabilities to be assumed are measured at fair value except for certain exceptions to the recognition principle of acquisition accounting, such as income taxes, employee benefits and contingencies. Global Payments has prepared preliminary estimates of fair value of identified intangible assets and certain financial assets and financial liabilities, including contract cost assets and contract assets and liabilities, as described in “Note 4—Pro Forma Adjustments.” Global Payments has not yet been able to complete an analysis of leases to determine any above or below market leases. The analysis will be completed as of the date the merger closes. Assumed debt, which consists primarily of unsecured senior notes, is also measured at its estimated fair value. Otherwise, acquired assets and liabilities assumed are presented at their respective historical carrying amounts. The fair value assessments are preliminary and are based upon available information and certain assumptions, which Global Payments believes are reasonable under the circumstances. Actual results may differ materially from the assumptions within the unaudited pro forma financial statements.

Note 4—Pro Forma Adjustments

The unaudited pro forma condensed combined balance sheet includes adjustments made assuming the merger and related financing transactions were completed as of June 30, 2019. The unaudited pro forma condensed combined statements of income include adjustments made assuming the merger and related financing transactions were completed as of January 1, 2018 and do not include any material nonrecurring charges that may arise in subsequent periods as a result of the merger.

The following items are reflected as pro forma adjustments:

a. This pro forma adjustment reflects the use of available cash to fund a portion of the debt refinancing and merger-related costs, as described in “Note 2—Consideration and Debt Financing.”

b. Global Payments applies offsetting to its settlement processing assets and obligations where a right of setoff exists. In the sponsorship model, Global Payments applies offsetting by member agreement because the member is ultimately responsible for funds settlement. If that net position is an asset, the net amount is reflected in settlement processing assets. If that net position is a liability, the net amount is reflected in settlement processing obligations. In the direct membership model, offsetting is not applied, and the individual components are presented as an asset or obligation based on the nature of that component. This pro forma adjustment conforms the historical consolidated balance sheet of TSYS to Global Payments' presentation of settlement processing assets and obligations (in thousands):

Account Description	Increase (Decrease)
Accounts receivable, net	$ 1,753
Accounts payable and accrued liabilities	(14,154)
Settlement processing obligations	15,907

c. This pro forma adjustment eliminates the effects of transactions associated with certain preexisting commercial relationships between Global Payments and TSYS. The adjustment eliminates revenues and expenses for the six months ended June 30, 2019 and the year ended December 31, 2018 of $8.6 million and $18.3 million, respectively, and accounts receivable and accounts payable of $1.2 million as of June 30, 2019.

d. This pro forma adjustment conforms TSYS' historical presentation of contract assets and contract liabilities to the presentation format of Global Payments, and results in an increase of $7.9 million in current assets (prepaid expenses and other current assets) and current liabilities (accounts payable and accrued liabilities) and an increase of $16.3 million in other noncurrent assets and other noncurrent liabilities.

e. For purposes of the unaudited pro forma financial statements, Global Payments' debt refinancing and the repayment of TSYS historical unsecured revolving loan are presented as if these transactions had been consummated on June 30, 2019 as further discussed in "Note 2—Consideration and Debt Financing." The components of the refinancing that affect debt are as follows, although in aggregate the debt refinancing results in no change to net debt (in thousands):

Proceeds from new unsecured revolving credit facility	$ 1,659,473
Proceeds from new unsecured term loan	2,000,000
Proceeds from new unsecured senior notes	2,500,000
Debt issuance costs capitalized in connection with the debt refinancing	(37,922)
Repayment of outstanding borrowings under Global Payments' historical credit facility	(5,184,457)
Elimination of historical unamortized debt issuance costs related to Global Payments' debt	32,906
Repayment of TSYS' historical unsecured revolving loan	(970,000)
Net change in debt	$ —

This pro forma adjustment reclassifies $168.8 million from current portion of long-term debt to long-term debt to reflect the expected payment terms of the new debt.

In connection with the repayment of outstanding balances under Global Payments' historical credit facility and the repayment of TSYS' historical unsecured revolving loan, Global Payments would also repay accrued interest and fees of $2.6 million. This pro forma adjustment reflects the elimination of Global Payments' historical unamortized debt issuance costs of $44.3 million, of which $32.9 million is a component of the net change in debt in the table above, $3.2 million is a reduction to prepaid expense and other current assets and $8.2 million is a reduction of other noncurrent assets. The debt issue costs would be written off as a charge to interest expense in connection with the extinguishment of Global Payments' historical credit facility through the debt refinancing discussed in "Note 2—Consideration and Debt Financing." Because the effect is directly attributable to the merger, this charge is included in the unaudited pro forma condensed combined balance sheet together with the related income tax benefit of $10.6 million, which was calculated utilizing the blended federal and state statutory income tax rate of 23.84%.

The pro forma adjustment also reflects the elimination of the portion of TSYS' historical unamortized debt issuance costs of $8.0 million related to its unsecured revolving credit facility that was included in prepaid expenses and other current assets.

f. This pro forma adjustment reflects goodwill as of June 30, 2019 as if the merger had been consummated on that date, as shown in "Note 3—Preliminary Valuation," and the elimination of the carrying amount of TSYS' historical goodwill (in thousands):

Goodwill (as determined in "Note 3—Preliminary Valuation")	$ 19,300,304
Elimination of TSYS' historical goodwill	(4,114,851)
Pro forma adjustment to goodwill	$ 15,185,453

g. As part of the preliminary valuation analysis, Global Payments identified intangible assets, including customer relationships, trademarks and trade names and acquired technology. The preliminary estimated fair values of these identifiable intangible assets were determined primarily using the income approach, which requires a forecast of all the expected future cash flows, and a relief from royalty approach. Since certain of the information required to perform a detailed valuation analysis of TSYS' intangible assets could not be obtained as of the date of this filing, for purposes of these unaudited pro forma financial statements, Global Payments made certain preliminary assumptions that may be revised. The following pro forma adjustment reflects the estimated preliminary fair values of identifiable intangible assets acquired by Global Payments as of June 30, 2019 as if the merger had been consummated on that date and elimination of the carrying amount of TSYS' historical intangible assets (in thousands):

Preliminary estimate of acquired intangible assets	$ 9,100,000
Elimination of TSYS' historical intangible assets	(703,617)
Pro forma adjustment to other intangible assets	$ 8,396,383

h. This pro forma adjustment of $520.5 million conforms the TSYS presentation of computer software on the balance sheet to Global Payments' presentation. $301.7 million of the computer software is reclassified to property and equipment. The remaining $218.8 million eliminates the portion of other intangible assets—computer software, the fair value of which is included in the acquired technology intangible asset described in Note 4(g) as if the merger had been consummated on June 30, 2019.

i. This pro forma adjustment represents the elimination of contract cost assets of $148.9 million as if the merger had been consummated on June 30, 2019. Contract cost assets primarily represent the incremental, direct costs of fulfilling a contract with a customer that are expected to be recoverable. Under the acquisition method of accounting, such deferred costs do not qualify for recognition as an asset.

After the consummation of the merger, this adjustment will have a continuing effect and would have reduced cost of service by $16.0 million for the six months ended June 30, 2019 and $31.3 million for the year ended December 31, 2018 to reflect the amortization of the adjustment over the expected period of benefit, assuming the merger had been consummated on January 1, 2018. The estimated effect on earnings subsequent to the merger date will be progressively eliminated over future periods. The estimated reduction to cost of service over the five years after the merger date is estimated to be $31.3 million in year one, $31.6 million in year two, $29.8 million in year three, $18.7 million in year four, $14.7 million in year five and $22.8 million thereafter.

j. This pro forma adjustment represents the estimated reduction to the carrying amount of historical contract liabilities to a fair value of $44.9 million, a reduction of $56.1 million ($20.9 million in accounts payable and accrued liabilities and $35.1 million in other noncurrent liabilities), as if the merger had been consummated on June 30, 2019. This estimate of fair value is preliminary and subject to change. The fair value was determined based on the estimated costs to fulfill the remaining obligations plus a normal profit margin. After the merger, this adjustment will have a continuing effect and would have reduced revenue by $7.6 million for the six months ended June 30, 2019 and $19.5

million for the year ended December 31, 2018, to reflect the difference between customer prepayments related to service contracts and the estimated fair value of the assumed performance obligations as they are satisfied, assuming the merger had been consummated on January 1, 2018. The estimated effect on earnings subsequent to the merger date will be progressively eliminated over future periods. The estimated reduction to revenue over the five years after the merger date is estimated to be $19.5 million in year one, $13.9 million in year two, $10.9 million in year three, $5.5 million in year four, $3.0 million in year five and $3.2 million thereafter.

k. This pro forma adjustment of $174.3 million reflects TSYS' historical unsecured senior notes at their estimated preliminary fair value of $3,203.5 million as of June 30, 2019 as if the merger had been consummated on that date. After the merger has been consummated, this adjustment will have a continuing effect on interest expense that is further described in Note 4(q).

l. Through June 30, 2019, Global Payments and TSYS have incurred merger-related costs of $26.6 million. Because these charges will not have a continuing effect on the combined entity's operations, this pro forma adjustment removes the effect of the merger-related costs from the unaudited pro forma condensed combined statement of income for the six months ended June 30, 2019.

Global Payments and TSYS have estimated total merger-related costs of $144.0 million expected to be incurred in connection with the merger. This pro forma adjustment reflects the remaining amount of merger-related costs expected to be incurred after June 30, 2019 of $117.4 million, as well as the estimated related income tax benefit of $14.0 million. The income tax effect was determined utilizing a blended federal and state statutory income tax rate of 23.84%, with an assumption that 50% of the estimated merger-related costs would be deductible for income tax purposes. The final determination of deductibility will depend on the actual amount and type of actual merger-related costs incurred. These amounts are included in the unaudited pro forma condensed combined balance sheet because they reflect charges directly attributable to the merger; however, they are not reflected in the unaudited pro forma condensed combined statements of income because these charges will not have a continuing effect on the combined entity's results of operations.

The unaudited pro forma condensed combined balance sheet reflects the total merger-related costs as if they were completely incurred and completely paid at June 30, 2019. Accordingly, this pro forma adjustment also removes deferred charges and accrued liabilities associated with merger-related costs of $8.8 million and $13.3 million, respectively.

m. This pro forma adjustment reflects deferred income tax liabilities of $1,877.8 million resulting from the merger as if it had been consummated on June 30, 2019. The adjustment includes deferred tax liabilities of $1,883.9 million related to fair value adjustments for assets to be acquired and liabilities to be assumed and the removal of TSYS' historical deferred income tax liability of $6.1 million related to tax deductible goodwill.

n. This pro forma adjustment reflects the fair value of Global Payments common stock to be issued (excluding the TSYS employee equity awards), described in "Note 2—Consideration and Debt Financing," as consideration to be transferred pursuant to the merger agreement as if the merger had been consummated on June 30, 2019 and the elimination of TSYS' historical equity (in thousands)**:**

Estimated fair value of common stock to be issued	$	23,704,685
Elimination of TSYS' historical equity		(2,494,594)
Pro forma adjustment to equity	$	21,210,091

o. This pro forma adjustment reflects the reclassification of amortization of acquired intangible assets and computer software of $70.5 million for the six months ended June 30, 2019 and $154.0 million for the year ended December 31, 2018 in the TSYS historical statements of income from selling, general and administrative expense to cost of service within operating expenses to conform to the presentation of Global Payments.

p. Global Payments uses the straight-line method of amortization for trademarks and trade names and acquired technologies. Amortization for most customer-related intangible assets is attributed using an accelerated method based on actual cash flows for a period relative to expected cash flows over the estimated life of the asset. For the purpose of these unaudited pro forma financial statements, the acquired intangible assets were amortized using the straight-line method over an estimated weighted-average useful life of 13.2 years, which may change when the valuation is finalized.

The following table summarizes the changes in the estimated amortization expense as if the merger had been consummated on January 1, 2018:

	Six Months Ended June 30, 2019	Year Ended December 31, 2018
	(in thousands)	
Estimated amortization expense	$ 374,452	$ 748,905
Elimination of TSYS' historical amortization expense	(122,594)	(263,548)
Pro forma adjustment	$ 251,858	$ 485,357

A change of 10% in the estimated fair values of intangible assets would change amortization expense by approximately $74.9 million in the first year following the merger.

q. This pro forma adjustment represents the net change in interest expense as if the refinancing of the Global Payments existing credit facility and the repayment of the TSYS historical unsecured revolving credit facility had been consummated on January 1, 2018 consistent with the permanent financing plan described in "Note 2—Consideration and Debt Financing." Interest expense on the new credit facility was calculated using pricing associated with the new agreement and one-month London Interbank Offered Rate ("LIBOR") as of July 25, 2019, taking into consideration related hedging activities. Interest expense on the new senior notes was calculated using applicable U.S. Treasury security rates as of July 25, 2019, taking into consideration related hedging activities, and Global Payments expected credit spread. For the purpose of these unaudited pro forma financial statements, the stated interest rate for the borrowings under the new credit facility was 3.62%, and the coupon interest rate for the senior notes was 3.61%.

The pro forma adjustment also reflects the effect on interest expense of adjusting TSYS unsecured senior notes to fair value, as discussed in Note 4(k), as of June 30, 2019 as if the merger had been consummated on that date. For the purpose of these unaudited pro forma financial statements, the premium on the TSYS senior notes, resulting from the fair value adjustment, as well as the deferred debt issuance costs on the new Global Payments debt, are amortized to interest expense using the effective interest method over the expected terms of the related debt instruments.

	Six Months Ended June 30, 2019	Year Ended December 31, 2018
	(in thousands)	
Interest expense on Global Payments' new unsecured senior notes and credit facility and amortization of new debt issuance costs	$ 117,089	$ 236,068
Elimination of Global Payments' historical interest expense	(111,628)	(183,094)
Elimination of TSYS' historical interest expense associated with its unsecured revolving loan	(19,737)	(32,559)
Adjustment to TSYS' historical interest expense associated with its unsecured senior notes	(19,354)	(38,544)
Pro forma adjustment to interest expense	$ (33,630)	$ (18,129)

The estimates of pro forma interest expense reflect the allocation of the type and amount and terms of Global Payments permanent debt structure after the debt refinancing and the issuance of senior notes, as currently anticipated. The actual allocation of the type and amount and terms of financing may differ from those set forth in "Note 2—Consideration and Debt Financing."

Interest expense on the new unsecured senior notes and credit facility and amortization of new debt issuance costs, as shown in the table above, were determined based on what Global Payments believes to be the most likely terms under which it would close such debt arrangements and on the prevailing interest rates at July 25, 2019. An increase or decrease of 12.5 basis points per year (or 1/8% variance) in the assumed interest rates would increase or decrease interest expense by $9.4 million in the first year following the consummation of the merger.

r. As an accounting policy election, Global Payments reflects interest on uncertain income tax positions in interest expense, and TSYS has historically reflected such interest in the provision for income taxes. This pro forma adjustment conforms the historical consolidated income statement of TSYS to the policy elected by Global Payments.

s. This pro forma adjustment reflects the income tax effect of the pro forma adjustments in the unaudited condensed combined pro forma statements of income utilizing the blended federal and state statutory income tax rate of 23.84%.

t. The unaudited pro forma basic and diluted earnings per share calculations are based on the basic and diluted weighted-average number of shares outstanding after giving effect to the number of shares of Global Payments common stock expected to be issued pursuant to the merger agreement. The pro forma weighted-average number of shares outstanding as presented below do not include the effect of the converted TSYS equity awards described in "Note 2—Consideration and Debt Financing."

	Six Months Ended June 30, 2019	**Year Ended December 31, 2018**
	(in thousands)	
Basic weighted-average number of shares outstanding	157,141	158,672
Shares of Global Payments common stock to be issued	143,378	143,378
Pro forma basic weighted-average number of shares outstanding	300,519	302,050
Diluted weighted-average number of shares outstanding	157,638	159,271
Shares of Global Payments common stock to be issued	143,378	143,378
Pro forma diluted weighted-average number of shares outstanding	301,016	302,649