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

FORM 10-K/A
(AMENDMENT NO. 1)

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2018
or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15 (d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to .

Commission file number: 0-21121

TRANSACT Technologies Incorporated

(Exact name of registrant as specified in its charter)

Delaware	**06-1456680**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
One Hamden Center, 2319 Whitney Avenue, Suite 3B, Hamden, CT	**06518**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code 203-859-6800

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

Title of Each Class	**Name of Exchange on which Registered**
Common Stock, par value $.01 per share	**Nasdaq Global Market**

Securities registered pursuant to Section 12(g) of the Act**: None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer", "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐	Accelerated filer ☒
Non-accelerated filer ☐	Smaller reporting company ☒
	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 standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The aggregate market value of the voting and non-voting common equity stock held by non-affiliates of the Registrant was approximately $87,900,000 based on the last sale price on June 30, 2018.

As of February 28, 2019, the number of shares outstanding of the Registrant's common stock, $0.01 par value, was 7,450,968.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's Proxy Statement filed with the Securities and Exchange Commission within 120 days after the year covered by this Form 10-K with respect to the 2019 Annual Meeting of Stockholders are incorporated by reference into Part III hereof.

EXPLANATORY NOTE

On November 5, 2019, TransAct Technologies Incorporated (the "Company") announced that the Company had identified control deficiencies that management determined to represent material weaknesses in the Company's internal control over financial reporting ("ICFR") as of December 31, 2018 (the "Reporting Date"). As a result, management reconsidered its original conclusion regarding the effectiveness of its ICFR as of the Reporting Date and determined that the Company did not, as of such date, design and maintain effective internal controls over user access to ensure appropriate segregation of duties and to adequately restrict user access to appropriate personnel, and the completeness and accuracy of information included in key spreadsheets. This reassessment and conclusion was reached following an inspection relating to the audit by PricewaterhouseCoopers LLP ("PwC"), the Company's independent registered public accounting firm, of the Company's December 31, 2018 consolidated financial statements and ICFR as of that date, as reported in the Company's 2018 Annual Report on Form 10-K filed with the Securities and Exchange Commission (the "2018 Form 10-K"), and a related PwC internal review.

The Company also disclosed that Management's Annual Report on Internal Control Over Financial Reporting included in Item 9A of the 2018 Form 10-K, and PwC's opinion relating to the effectiveness of the Company's ICFR as of December 31, 2018 included in the 2018 Form 10-K, should no longer be relied upon.

To address the material weaknesses in ICFR described above, the Company is developing a remediation plan and is currently implementing certain changes with respect to identified control deficiencies.

This Amendment No. 1 on Form 10-K/A (this "Amendment No. 1") amends the 2018 Form 10-K. The purpose of this Amendment No.1 is to: (i) add an additional risk factor regarding the Company's ICFR in Part I, Item 1A "Risk Factors", (ii) amend Part II, Item 8 "Financial Statements and Supplementary Data" solely to reissue the Report of Independent Registered Public Accounting Firm as it pertains to PwC's opinion on the effectiveness of the Company's ICFR as of the Reporting Date, which is contained on page F-2 annexed to the 2018 Form 10-K, and (iii) restate Part II, Item 9A "Controls and Procedures" of the 2018 Form 10-K to reflect management's conclusion that the Company's ICFR and disclosure controls and procedures were not effective as of the Reporting Date due to the material weaknesses described above, and to describe the Company's remediation plan for addressing such material weaknesses. Additionally, this Amendment No. 1 includes new certifications by management, a new consent from PwC and related amendments to the Index to Exhibits and Exhibit List contained in Part IV, Item 15 of the 2018 Form 10-K.

As required by Rule 12b-15 promulgated under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), the Company has included the entire text of the Part II, Item 8 and Part II, Item 9A of the 2018 Form 10-K in this Amendment No. 1. However, there have been no changes to the text of such Items other than the changes stated in the immediately preceding paragraph. Furthermore, this Amendment No. 1 does not change the financial statements in the 2018 Form 10-K, and there have been no changes to the XBRL data filed in Exhibit 101 of the 2018 Form 10-K. Other than as described above, this Amendment No. 1 speaks only as of the date of the 2018 Form 10-K and does not amend, supplement or update any information contained in the 2018 Form 10-K to give effect to any subsequent events (including with respect to the cover page of the 2018 Form 10-K, which has been updated to present this filing as Amendment No. 1 and reflect the documents incorporated by reference into the 2018 Form 10-K as filed). Accordingly, this Amendment No. 1 should be read in conjunction with the 2018 Form 10-K and the Company's reports filed with the SEC subsequent to the 2018 Form 10-K, as such reports may be amended.

Forward-Looking Statements

Certain statements in this report include forward-looking statements. Forward-looking statements generally can be identified by the use of forward-looking terminology, such as “may”, “will”, “expect”, “intend”, “estimate”, “anticipate”, “believe”, or “continue”, or the negative thereof, or other similar words. These forward-looking statements involve risks and uncertainties, as well as assumptions that, if they do not fully materialize or prove incorrect, could cause the Company’s results to differ materially from those expressed or implied by such forward-looking statements. More information about these and other risks that may impact the Company’s business are set forth in the 2018 Form 10-K, as amended by this Amendment No. 1, and the Company’s other periodic and current reports filed with the SEC. All forward-looking statements in this report are based on information available as of the date hereof, and the Company assumes no obligation to update these forward-looking statements.

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Item 1A. Risk Factors

Investors should carefully consider the risks, uncertainties and other factors described below, as well as other disclosures in Management's Discussion and Analysis of Financial Condition and Results of Operations, because they could have a material adverse effect on our business, financial condition, operating results, and growth prospects. The risks described below are not the only ones facing our Company. Additional risks not known to us at this time or that we currently deem immaterial, may also impair our business operations.

We assume no obligation (and specifically disclaim any such obligation) to update these Risk Factors or any other forward-looking statements contained in this Annual Report to reflect actual results, changes in assumptions or other factors affecting such forward-looking statements, except as required by law.

Our operating results and financial condition may fluctuate.

Our operating results and financial condition may fluctuate from quarter to quarter and year to year and are likely to continue to vary due to a number of factors, many of which are not within our control. If our operating results do not meet the expectations of securities analysts or investors, who may derive their expectations by extrapolating data from recent historical operating results, the market price of our common stock will likely decline. Fluctuations in our operating results and financial condition may be due to a number of factors, including, but not limited to, those identified throughout this "Risk Factors" section:

- delays between our expenditures to develop and market new or enhanced products and consumables and the generation of sales from those products;
- the geographic distribution of our sales;
- market acceptance of our products, both domestically and internationally;
- development of new competitive products by others;
- our responses to price competition;
- our level of research and development activities;
- changes in the amount that we spend to develop, acquire or license new products, consumables, technologies or businesses;
- changes in the amount we spend to promote our products and services;
- changes in the cost of satisfying our warranty obligations and servicing our installed base of products;
- availability of third-party components at reasonable prices;
- general economic and industry conditions, including changes in interest rates affecting returns on cash balances and investments, that affect customer demand;
- fluctuations of world-wide oil and gas prices;
- severe weather events (such as hurricanes) that can disrupt or interrupt the operation of our customers' or suppliers' facilities; and
- changes in accounting rules.

Due to all of the foregoing factors, and the other risks discussed in this report, quarter-to-quarter comparisons of our operating results may not be an indicator of future performance.

Our revenue and profitability depend on our ability to continue to develop, on a timely basis, new products and technologies which are free from hardware or software anomalies and cannot be fraudulently manipulated.

The success of newer products, such as the AccuDate™ restaurant solutions terminals, is dependent on how quickly customers in the related markets accept them given the very little market penetration these products have experienced since they are new and innovative and have limited competition. Additionally, the success of innovative technology, such as our BOHA! restaurant solution software and hardware products released in 2019, is dependent on our customers' acceptance of such technology. While the BOHA! terminals and software products were developed based on working with operators within the restaurant industry, such acceptance may nevertheless only build gradually over time or not at all. Delays in acceptance by our customers of new technologies may adversely affect our operations.

Our success depends upon our ability to adapt our capabilities and processes to meet the demands of producing new and innovative products. Because our newer products contain software and are generally more technologically sophisticated than those we have produced in the past, we must continually refine our capabilities to meet the needs of our product innovation. If we cannot efficiently adapt our infrastructure to meet the needs of our product innovations in a timely manner, our business could be negatively impacted.

In the lottery market, we have been dependent on sales to one large customer; the loss of this customer or reduction in orders from this customer could materially affect our sales.

Sales to IGT have represented a material percentage of our net sales since 1995. A reduction, delay or cancellation in orders from this customer, including reductions or delays due to market, economic, or competitive conditions in the industries in which we serve, could have a material adverse effect upon our results of operations.

Significant developments stemming from the UK's membership in the EU could have a material adverse effect on us.

In 2016, the UK held a referendum and voted in favor of leaving the European Union, or EU. This referendum has created political and economic uncertainty, particularly in the UK and the EU. Our business in the UK, the EU, and worldwide could be affected during this period of uncertainty, and perhaps longer, by the impact of the UK's referendum. There are many ways in which our business could be affected, only some of which we can identify as of the date of this Annual Report.

The referendum, and the likely withdrawal of the UK from the EU that it triggers, has caused and, along with events that could occur in the future as a consequence of the UK's withdrawal, including the possible breakup of the UK, may continue to cause significant volatility in global financial markets, including in global currency and debt markets. This volatility could cause a slowdown in economic activity in the UK, Europe or globally, which could adversely affect our operating results and growth prospects. In addition, our business could be negatively affected by new trade agreements between the UK and other countries, including the United States, and by the possible imposition of trade or other regulatory barriers in the UK.

Infringement on the proprietary rights of others could put us at a competitive disadvantage, and any related litigation could be time consuming and costly.

Third parties may claim that we violated their intellectual property rights. To the extent of a violation of a third-party's patent or other intellectual property right, we may be prevented from operating our business as planned and may be required to pay damages, to obtain a license, if available, or to use a non-infringing method, if possible, to accomplish our objectives. Any of these claims, with or without merit, could result in costly litigation and divert the attention of key personnel. If such claims are successful, they could result in costly judgments or settlements.

General economic conditions could have a material adverse effect on our business, operating results and financial condition.

Our business is subject to general economic conditions. Uncertainty or negative trends in U.S. or international economic and investment climates, including the impact of Brexit and recent developments in U.S.-China trade relations, could adversely affect our business. For example, customers or potential customers could reduce or delay orders, key suppliers and customers could become insolvent, which could result in production delays, and our customers may not be able to obtain credit. Any of these possible effects could impact our ability to effectively manage inventory levels and collect receivables, create unabsorbed costs due to lower net sales, and ultimately decrease our net sales and profitability including write-downs of assets.

We rely on distributors and resellers to sell our products and services.

We use a variety of distribution channels, including OEMs and distributors, to market and sell our products and services. We may be adversely impacted by any conflicts that could arise between and among our various sales channels.

Our dependence upon distributors and resellers exposes us to numerous risks, including:

- loss of channel and the ability to bring new products to market;
- concentration of credit risk, including disruption in distribution should the distributors and / or resellers' financial condition deteriorate;
- reduced visibility to end user demand and pricing issues which makes forecasting more difficult;
- distributors or resellers leveraging their buying power to change the terms of pricing, payment and product delivery schedules; and
- direct competition should a distributor or reseller decide to manufacture printers internally or source printers from a competitor.

We cannot guarantee that resellers will not reduce, delay or eliminate purchases from us, which could have a material adverse effect upon the business, consolidated results of operations and financial condition.

We have outsourced substantially all of the assembly of our printers and terminals to three contract manufacturers and will be dependent on them for the manufacturing of such products. A failure by these contract manufacturers, or any disruption in such manufacturing or the flow of product from these manufacturers, may adversely affect our business results.

In an effort to achieve additional cost savings and operation benefits, we have continued to outsource the manufacturing and assembly of our printers and terminals to contract manufacturers in Asia. Approximately 80% of our printer and terminal manufacturing is conducted by one third party manufacturer in Asia, and an additional 19% is conducted by two other third party manufacturers in Asia.

However, to the extent we rely on a third-party service provider for manufacturing services, we may incur increased business continuity risks. We will no longer be able to exercise control over the assembly of certain of our products or any related operations or processes, including the internal controls associated with operations and processes conducted and the quality of our products assembled by contract manufacturers. If we are unable to effectively manage and oversee our outsourcing strategy, we may not realize cost structure efficiencies and our operating and financial results could be materially adversely affected.

In addition, if any of our contract manufacturers experiences business difficulties or fails to meet our manufacturing needs, then we may be unable to meet production requirements, may lose revenue and may not be able to maintain relationships with our customers. Without the contract manufacturers continuing to manufacture our products and the continuing operation of the contract manufacturers' facilities, we will have limited means for the final assembly of a majority of our products until we are able to secure the manufacturing capability at another facility or develop an alternative manufacturing facility, which could be costly and time consuming and have a material adverse effect on our operating and financial results.

The increased elements of risk that arise from conducting certain operating processes in foreign jurisdictions may lead to an increase in reputational risk.

Although we carry business interruption insurance to cover lost revenue and profits in an amount we consider adequate, this insurance does not cover all possible situations. In addition, the business interruption insurance would not compensate us for the loss of opportunity and potential adverse impact, both short-term and long-term, on relations with our existing customers resulting from our inability to produce products for them.

The contract manufacturers have access to our intellectual property, which increases the risk of infringement or misappropriation of this intellectual property.

Political, social or economic instability in regions in which our manufacturers are located, could cause disruptions in trade, including exports to the U.S.

A significant portion of our printers and terminals are manufactured by contract manufacturers overseas and are exported to the U.S. Any such disruption in trade, including exports to the U.S., could adversely affect our business results. Events that could cause disruptions to such exports to the U.S. include:

- the imposition of additional trade law provisions or regulations;
- reliance on a limited number of shipping and air carriers who may experience capacity issues that adversely affect our ability to ship inventory in a timely manner or for an acceptable cost;
- the imposition of additional duties, tariffs and other charges on imports and exports;
- economic uncertainties and adverse economic conditions (including inflation and recession);
- fluctuations in the value of the U.S. Dollar against foreign currencies;
- significant labor disputes, such as dock strikes;
- significant delays in the delivery of cargo due to port security considerations;
- financial or political instability in any of the countries in which our printers and terminals are manufactured; and
- regulatory changes and economic conditions leading up to and following Brexit in those countries that are negatively affected by Brexit and in which our printers and terminals are manufactured.

We source some of our component parts and consumable products from sole source suppliers; any disruptions may impact our ability to manufacture and sell our products.

Our products rely on certain key components from third party or sole source suppliers. We do not have guaranteed supply contracts with any of our component suppliers, and our suppliers could delay shipments, increase prices or cease manufacturing such products or selling them to us at any time. A disruption in the supply of such component parts and consumable products could delay our production and/or the release of our new products and hinder our ability to meet our commitments to customers. If we are unable to obtain a sufficient quantity of these components on commercially reasonable terms or in a timely manner, or if we are unable to obtain alternative sources for the components, sales of our products could be delayed or halted entirely or we may be required to redesign our products. Any of these events could result in lost sales, reduced gross margins or damage to our end-customer relationships, which would have a material adverse effect on our operations and financial results.

We sell a significant portion of our products internationally and purchase important components from foreign suppliers. These circumstances create a number of risks.

We sell a significant amount of our products to customers outside the United States. Shipments to international customers are expected to continue to account for a material portion of net sales. Risks associated with sales and purchases outside the United States include:

- fluctuating foreign currency rates could restrict sales, or increase costs of purchasing, in foreign countries;

- foreign governments may impose burdensome tariffs, quotas, taxes, trade barriers or capital flow restrictions;

- political and economic instability may reduce demand for our products or put our foreign assets at risk;

- restrictions on the export or import of technology may reduce or eliminate the ability to sell in or purchase from certain markets;

- potentially limited intellectual property protection in certain countries, such as China, may limit recourse against infringing products or cause us to refrain from selling in certain geographic territories; and

- regulatory changes and economic conditions leading up to and following, Brexit, including uncertainties as to its effect on tradelaws, tariffs, instability and volatility in the global financial and currency markets, conflicting or redundant regulatory regimes inEurope and political stability.

If tariffs on imported steel and aluminum, such as those proposed by the President of the United States, are implemented, our cost of raw materials may increase, which could adversely affect our business, results of operations and financial condition.

We obtain raw materials, including stainless steel and aluminum, used in the production of some of our printer products from domestic, Asian affiliated and nonaffiliated sources. The implementation of more restrictive trade policies, including the imposition of tariffs, or the renegotiation of existing trade agreements by the U.S. or by countries where we sell large quantities of products and services or procure supplies and other materials incorporated into our products, could negatively impact our business, results of operations and financial condition. Because steel and aluminum are raw materials used in a wide-range of our printer products, a broad based cost increase would result in an increase in our cost of goods sold, which may require us to increase prices for some of our products. However, an inability by us to pass such price increases through to our customers, or an inability of our suppliers to meet our raw material requirements, may have a material adverse impact on our business, results of operations or financial condition.

The effect of comprehensive U.S. tax reform legislation on us, whether adverse or favorable, is uncertain.

In December of 2017, President Trump signed into law the Tax Cuts and Jobs Reform Act (the “Tax Reform Act”). Among a number of significant changes to the U.S. federal income tax rules, the Tax Reform Act reduces the marginal U.S. corporate income tax rate from 35% to 21%, limits the deduction for net interest expense, shifts the United States toward a more territorial tax system, and imposes new rules to combat erosion of the U.S. federal income tax base. While we have evaluated the effects of the Tax Reform Act on us, there are a number of uncertainties and ambiguities as to the interpretation and application of many of the provisions in the Tax Reform Act. In the absence of guidance on these issues, we will use what we believe are reasonable interpretations and assumptions in interpreting and applying the Tax Reform Act for purposes of determining our cash tax liabilities and results of operations, which may change as we receive additional clarification and implementation guidance and as the interpretation of the Tax Reform Act evolves over time. It is possible that the Internal Revenue Service (“IRS”) could issue subsequent guidance or take positions on audit that differ from the interpretations and assumptions that we previously made, which could have an adverse effect on our cash tax liabilities, results of operations and financial condition. As we collect and prepare necessary data, and interpret the Tax Reform Act and any additional guidance issued by the IRS or other standard-setting bodies, we may make adjustments to the provisional amounts that could materially affect our financial position and results of operations, as well as our effective tax rate in the period in which the adjustments are made. We recorded the impacts of the Tax Act on a provisional basis in 2017. As of December 22, 2018, our accounting for the impact of the Tax Act was complete. See Note 1, “Income Taxes” to our consolidated financial statements.

We face risks associated with manufacturing forecasts.

If we fail to predict our manufacturing requirements accurately, we could incur additional costs or experience manufacturing delays, which could cause us to lose orders or customers and result in lower net sales. We currently use a rolling 12-month forecast based primarily on our anticipated product orders and our product order history to help determine our requirements for components and materials. It is very important that we accurately predict both the demand for our products and the lead-time required to obtain the necessary components and raw materials.

Lead times for materials and components that we order vary significantly and depend on factors such as the specific supplier, the size of the order, contract terms, and demand for each component at a given time. If we underestimate our requirements, we may have inadequate manufacturing capacity or inventory, which could interrupt manufacturing of our products and result in delays in shipments and net sales. If we overestimate our requirements, we could have excess inventory of parts. In addition, delays in the manufacturing of our products could cause us to lose orders or customers.

Our success will depend on our ability to sustain and manage growth.

As part of our business strategy, we intend to pursue a growth strategy. Assuming this growth occurs, it will require the expansion of customer relationships in international markets, the successful development and marketing of new products for our existing and new markets, expanded internal sales, customer service and support, and the continued implementation and improvement of our operational, financial and management information systems.

To the extent that we seek growth through acquisitions, our ability to manage our growth will also depend on our ability to integrate businesses that have previously operated independently. We may not be able to achieve this integration without encountering difficulties or experiencing the loss of key employees, customers or suppliers. It may be difficult to design and implement effective financial controls for combined operations and differences in existing controls for each business may result in weaknesses that require remediation when the financial controls and reporting functions are combined. As we pursue acquisitions, we may incur legal, accounting and other transaction related expenses for unsuccessful acquisition attempts that could adversely affect our results of operations in the period in which they are incurred.

There can be no assurance that we will be able to successfully implement our growth strategy, or that we can successfully manage expanded operations, if they occur. As we expand, we may from time to time experience constraints that will adversely affect our ability to satisfy customer demand in a timely fashion. Failure to manage growth effectively could adversely affect our results of operations and financial condition.

We compete in highly competitive markets, which are likely to become more competitive. Competitors may be able to respond more quickly to new or emerging technology and changes in customer requirements.

We face significant competition in developing and selling our printers, terminals, software, transaction supplies and services. Our principal competitors have substantial marketing, financial, development and personnel resources. To remain competitive, we believe we must continue to provide:

- technologically advanced products that satisfy the user demands;
- superior customer service;
- high levels of quality and reliability; and
- dependable and efficient distribution networks.

We cannot ensure we will be able to compete successfully against current or future competitors. Increased competition may result in price reductions, lower gross profit margins and loss of market share, and could require increased spending on research and development, sales and marketing and customer support. Some competitors may make strategic acquisitions or establish cooperative relationships with suppliers or companies that produce complementary products. Any of these factors could reduce our earnings.

We depend on key personnel, the loss of which could materially impact our business.

Our future success will depend in significant part upon the continued service of certain key management and other personnel and our continuing ability to attract and retain highly qualified managerial, technical and sales and marketing personnel. There can be no assurance that we will be able to recruit and retain such personnel. The loss of either Bart C. Shuldman, the Company's Chairman of the Board and Chief Executive Officer, or Steven A. DeMartino, the Company's President, Chief Financial Officer, Treasurer and Secretary, or the loss of certain groups of key employees, could have a material adverse effect on our results of operations.

If we are unable to enforce our patents or if it is determined that we infringe patents held by others it could damage our business.

Prosecuting and defending patent lawsuits is very expensive. We are committed to aggressively asserting and defending our technology and related intellectual property, which we have spent a significant amount of money to develop. These factors could cause us to become involved in new patent litigation in the future. The expense of prosecuting or defending these future lawsuits could also have a material adverse effect on our business, financial condition and results of operations.

If we were to lose a patent lawsuit in which another party is asserting that our products infringe its patents, we would likely be prohibited from marketing those products and could also be liable for significant damages. Either or both of these results may have a material adverse effect on our business, financial condition and results of operations. If we lose a patent lawsuit in which we are claiming that another party's products are infringing our patents and thus, are unable to enforce our patents, it may have a material adverse effect on our business, financial condition and results of operations. In addition to disputes relating to the validity or alleged infringement of other parties' rights, we may become involved in disputes relating to our assertion of our own intellectual property rights. Whether we are defending the assertion of intellectual property rights against us or asserting our intellectual property rights against others, intellectual property litigation can be complex, costly, protracted, and highly disruptive to business operations by diverting the attention and energies of management and key technical personnel. Plaintiffs in intellectual property cases often seek injunctive relief, and the measures of damages in intellectual property litigation are complex and often subjective or uncertain. Thus, any adverse determinations in this type of litigation could subject us to significant liabilities and costs. During the course of these lawsuits there may be public announcements of the results of hearings, motions, and other interim proceedings or developments in the litigation. If securities analysts or investors perceive these results to be negative, it could harm the market price of our stock.

The inability to protect intellectual property could harm our reputation, and our competitive position may be materially damaged.

Our intellectual property is valuable and provides us with certain competitive advantages. Copyrights, patents, trademarks, service marks, trade secrets, nondisclosure agreements and contracts are used to protect these proprietary rights. Despite these precautions, it may be possible for third parties to copy aspects of our products or, without authorization, to obtain and use information which we regard as trade secrets.

Our stock price may fluctuate significantly.

The market price of our common stock could fluctuate significantly in response to variations in quarterly operating results and other factors, such as:

- changes in our business, operations or prospects;
- developments in our relationships with our customers;
- announcements of new products or services by us or by our competitors;
- announcement or completion of acquisitions by us or by our competitors;
- changes in existing or adoption of additional government regulations;
- unfavorable or reduced analyst coverage; and
- prevailing domestic and international market and economic conditions.

In addition, the stock market may experience significant price fluctuations year-to-year. Broad market fluctuations, general economic conditions and specific conditions in the industries in which we operate may adversely affect the market price of our common stock.

Limited trading volume and a reduction in analyst coverage of our common stock may contribute to its price volatility.

Our common stock is traded on the Nasdaq Global Market. During the year ended December 31, 2018 the average daily trading volume for our common stock as reported by the Nasdaq Global Market was approximately 25,000 shares. We are uncertain whether a more active trading market in our common stock will develop. In addition, many investment banks no longer find it profitable to provide securities research on micro-cap and small-cap companies. As a result, relatively small trades may have a significant impact on the market price of our common stock, which could increase the volatility and depress the price of our common stock.

Future sales of our common stock may cause our stock price to decline.

In the future, we may sell additional shares of our common stock in public or private offerings, and we may also issue additional shares of our common stock to finance future acquisitions. Shares of our common stock are also available for future sale pursuant to stock options and other equity awards that we have granted to our employees, and in the future we may grant additional stock options and other forms of equity compensation to our employees. Sales of our common stock or the perception that such sales could occur may adversely affect prevailing market prices for shares of our common stock and could impair our ability to raise capital through future offerings.

If market conditions deteriorate or future results of operations are less than expected, a valuation allowance may be required for all or a portion of our deferred tax assets.

We currently have deferred tax assets, which may be used to reduce taxable income in the future. We assess the realization of these deferred tax assets on a quarterly basis, and if we determine that it is more likely than not that some portion of these assets will not be realized, an income tax valuation allowance is recorded. If market conditions deteriorate or future results of operations are less than expected, or there is a change to applicable tax rules, future assessments may result in a determination that it is more likely than not that some or all of our net deferred tax assets are not realizable. As a result, we may need to establish a valuation allowance for all or a portion of our net deferred tax assets, which may have a material adverse effect on our business, results of operations and financial condition.

We cannot provide any assurance that current laws, or any laws enacted in the future, will not have a material adverse effect on our business.

Our operations are subject to laws, rules, regulations, including environmental regulations, government policies and other requirements in each of the jurisdictions in which we conduct business. Changes in laws, rules, regulations, policies or requirements could result in the need to modify our products and could affect the demand for our products, which may have an adverse impact on our future operating results. If we do not comply with applicable laws, rules and regulations we could be subject to costs and liabilities and our business may be adversely impacted.

Our business could be adversely affected by actual or threatened terrorist attacks or the related heightened security measures, military actions and other efforts to combat terrorism.

Our business could be adversely affected by actual or threatened terrorist attacks or the related heightened security measures, military actions and other efforts to combat terrorism. It is possible that terrorist attacks could be directed at important locations for the gaming industry. Heightened security measures and other efforts to combat terrorism may also have an adverse effect on the gaming industry by reducing tourism. Any of these developments could also negatively affect the general economy and consumer confidence. Any downturn in the economy in general, or in the gaming industry in particular could result in a reduced demand for our products and could adversely affect our business and results of operations. In addition, heightened security measures may cause certain governments to restrict the import or export of goods, which may have an adverse effect on our ability to buy and sell goods.

Fluctuations in oil and gas prices could adversely affect drilling and exploration activities by oil and gas companies and our revenue in our Printrex market. If oil and gas prices remain volatile, or if oil or gas prices remain low or decline further, the demand for our Printrex products could be adversely affected.

The demand for our Printrex products depends on the level of spending by oil and gas companies for drilling and exploratory activities, which are affected by short-term and long-term trends in oil and gas prices, including current and anticipated oil and gas prices. Oil and gas prices, as well as the level of drilling and exploration, historically have been extremely volatile and are expected to continue to be highly volatile. If oil and gas prices continue to remain low or decline further, or if there is a further reduction in drilling and exploration activities, the demand for our Printrex products could be materially and adversely affected.

Cyber-security and privacy breaches, cyber-attacks, or other disruptions could expose us to liability, affect our business, and damage our reputation.

We are increasingly dependent on our information technology systems and infrastructure for our business. We collect, store, and transmit sensitive information including intellectual property, proprietary business information and personal information in connection with business operations. The secure maintenance of this information is critical to our operations and business strategy. Some of this information could be an attractive target of criminal attack by third parties with a wide range of motives and expertise, including organized criminal groups, disgruntled current or former employees, and others. Cyber-attacks are of ever-increasing levels of sophistication, and despite our extensive security measures, our information technology and infrastructure may be vulnerable to such attacks or may be breached, including due to employee error or malfeasance. Any such breach could compromise our networks and the information stored there could be accessed, publicly disclosed, lost or stolen. If our systems become compromised, we may not promptly discover the intrusion. Like other companies in our industry, we have experienced attacks to our data and systems, including malware and computer viruses that we have been able to detect and eliminate. If our systems fail or are breached or disrupted, we could lose product sales, and suffer reputational damage and loss of customer confidence. Such incidents would require notification to affected individuals and may result in legal claims or proceedings and liability under federal and state laws that protect the privacy and security of personal information. Any one of these events could cause our business to be materially harmed and our results of operations to be adversely impacted.

Material weaknesses in our internal control over financial reporting have been identified, and if we are unable to implement and maintain effective internal control over financial reporting, or our independent registered public accounting firm is unable to provide an unqualified report thereon, we could be materially adversely affected.

Material weaknesses in our internal control over financial reporting existed as of December 31, 2018 regarding our internal controls over user access to ensure appropriate segregation of duties and to adequately restrict user access to appropriate personnel. Specifically, the provisioning and user recertification controls are not designed to ensure users maintain proper segregation of duties and therefore could have inappropriate access rights. Additionally, we identified a material weakness in controls over key spreadsheets supporting our accounting records. Specifically, we did not design adequate controls to address the completeness and accuracy of information included in key spreadsheets. As a result of these material weaknesses, management concluded that our internal control over financial reporting was not effective as of December 31, 2018.

Unless and until these material weaknesses have been remediated or should new material weaknesses arise or be discovered in the future, a material misstatement could occur and go undetected in our interim or annual consolidated financial statements. As a result, we may experience delays in fulfilling our reporting obligations or complying with the Securities Act of 1933, as amended, and the Securities Exchange Act of 1934, as amended, among other federal regulations, which could result in investigations and sanctions by regulatory authorities, including, but not limited to, the Securities and Exchange Commission (the “SEC”), and may result in defaults or accelerations under our credit facility in the event that we are unable to timely file reports with the SEC, to the extent that in such an event, we are unable to obtain waivers from our lender. Any of these results could adversely affect our business and the value of our common stock.

Additional risks and uncertainties may affect our business

Additional risks and uncertainties not presently known to us or that we currently believe to be immaterial also may adversely impact our business. Should any risks or uncertainties develop into actual events, these developments could have material adverse effects on our business, financial condition, and results of operations.

PART II

Item 8. Financial Statements and Supplementary Data.

The financial statements of the Company are annexed to this Form 10-K/A as pages F-3 through F-19 The Report of Independent Registered Public Accounting Firm is annexed to this Form 10-K/A as page F-2. An index to such materials appears on page F-1.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

We have performed an evaluation under the supervision and with the participation of our management, including our Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO"), of the effectiveness of our disclosure controls and procedures, as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"). In our Annual Report on Form 10-K for the year ended December 31, 2018 as filed with the Securities and Exchange Commission (the "SEC") on March 18, 2019 (the "2018 Form 10-K"), our management, including our CEO and CFO, concluded that our disclosure controls and procedures were effective as of December 31, 2018 to provide reasonable assurance that information required to be disclosed in the reports filed or submitted by us under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the applicable rules and forms as promulgated by the SEC, and that such information is accumulated and communicated to management, including our CEO and CFO, as appropriate to allow timely decisions regarding required disclosure. Subsequent to that evaluation, our management, including our CEO and CFO, concluded that our disclosure controls and procedures were not effective as of December 31, 2018, due to material weaknesses in our internal control over financial reporting as described below.

Notwithstanding these material weaknesses, our management, including our CEO and CFO, has concluded that our consolidated financial statements, included in the 2018 Form 10-K (and also included herein), fairly present, in all material respects, our financial condition, results of operations and cash flows for the periods presented in conformity with generally accepted accounting principles, and that they can still be relied upon.

Management's Annual Report on Internal Control Over Financial Reporting (Restated)

Our management is responsible for establishing and maintaining adequate internal control over financial reporting to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the Company; (ii) 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 (iii) 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.

Our management assessed our internal control over financial reporting as of December 31, 2018. Our management based its assessment on criteria established in *Internal Control–Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission ("2013 COSO"). In Management's Annual Report on Internal Control Over Financial Reporting included in the 2018 Form 10-K, our management concluded that we maintained effective internal control over financial reporting as of December 31, 2018. Subsequent to that conclusion, management conducted a reassessment and subsequently concluded that the material weaknesses described below existed as of December 31, 2018, and that we did not maintain effective internal control over financial reporting as of December 31, 2018.

We identified the following control deficiencies that constituted material weaknesses in our internal control over financial reporting as of December 31, 2018. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim consolidated financial statements will not be prevented or detected on a timely basis.

- We did not design and maintain effective controls over user access within the Company's ERP system, Oracle, to ensure appropriate segregation of duties and to adequately restrict user access to appropriate personnel. Specifically, the provisioning and user recertification controls are not designed to ensure users maintain proper segregation of duties and therefore could have inappropriate access rights. (the "Access Control Weakness").

- We did not design and maintain effective controls over the completeness and accuracy of information included in key spreadsheets supporting our accounting records (the "Spreadsheet Control Weakness").

The control deficiencies constituted material weaknesses, but did not result in a material misstatement of our annual or interim consolidated financial statements. However, if these material weaknesses are not remediated, a material misstatement of account balances or disclosures may not be prevented, and may go undetected, which could result in a material misstatement of future annual or interim consolidated financial statements.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2018 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears on page F-2 hereof.

Remediation Plan

We have commenced developing and implementing a plan to enhance the design and operating effectiveness of our internal control over financial reporting, which includes taking the following steps to remediate the identified control deficiencies and material weaknesses:

- To address the Access Control Weakness, we are utilizing the services of an Oracle consulting firm and an accounting firm unrelated to PwC, to assist us in analyzing and reviewing Oracle access for all users. Upon completion of this analysis, we plan to modify the designated Oracle responsibilities for each employee for which a conflict has been identified to remove any Oracle transactional responsibilities that we believe are conflicting and reassign those responsibilities to a different employee to ensure proper segregation of duties. In addition, we plan to enhance and implement provisioning and user certification controls to ensure we maintain the appropriate segregation of duties within Oracle following the analysis.

- To address the Spreadsheet Control Weakness, for each key spreadsheet using Oracle data, we plan to evaluate and determine (1) if a standard Oracle report exists containing the same information as the spreadsheet, and if so, we would utilize the standard Oracle report (without modification) instead of the spreadsheet to support our accounting records and (2) if a standard Oracle report cannot be used, we will implement a new key control whereby an employee performs a formal validation that the information from Oracle is completely and accurately transferred (automatically or manually) to a spreadsheet by verifying totals and other information on a test basis. For all other key spreadsheets, we plan to design and implement a new key control to validate completeness and accuracy of information supporting our accounting records.

We believe these steps will address the material weaknesses described above.

Changes in Internal Control over Financial Reporting

There has been no change in our internal control over financial reporting that occurred during the quarter ended December 31, 2018 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART IV

Item 15. Exhibits and Financial Statement Schedules.

Index to Exhibits

3.1(a)	Certificate of Incorporation of TransAct Technologies Incorporated ("TransAct" or the "Company"), filed with the Secretary of State of Delaware on June 17, 1996.	(2)
3.1(b)	Certificate of Amendment of Certificate of Incorporation of the Company, filed with the Secretary of State of Delaware on June 4, 1997.	(3)
3.1(c)	Certificate of Designation, Series A Preferred Stock, filed with the Secretary of State of Delaware on December 2, 1997.	(6)
3.1(d)	Certificate of Designation, Series B Preferred Stock, filed with the Secretary of State of Delaware on April 6, 2000.	(8)
3.2	Amended and Restated By-laws of the Company.	(7)
4	Specimen Common Stock Certificate.	(2)
10.1(x)	2005 Equity Incentive Plan.	(11)
10.2(x)	2014 Equity Incentive Plan.	(4)
10.3(x)	Amendment to 2014 Equity Incentive Plan approved by Shareholders on May 22, 2017	(26)
10.4(x)	2014 Equity Incentive Plan Time-based Restricted Unit Agreement	(23)
10.5(x)	2014 Equity Incentive Plan Performance-based Restricted Stock Unit Agreement	(24)
10.6(x)	Employment Agreement, dated July 31, 1996, by and between TransAct and Bart C. Shuldman.	(2)
10.7(x)	Severance Agreement by and between TransAct and Steven A. DeMartino, dated June 1, 2004.	(10)
10.8(x)	Severance Agreement by and between TransAct and Tracey S. Chernay, dated July 29, 2005.	(14)
10.9(x)	Amendment to Employment Agreement, effective January 1, 2008, by and between TransAct and Bart C. Shuldman.	(15)
10.10(x)	Amendment to Severance Agreement by and between TransAct and Steven A. DeMartino, effective January 1, 2008.	(15)
10.11(x)	Amendment to Severance Agreement by and between TransAct and Tracey S. Chernay, effective January 1, 2008.	(15)
10.12	Lease Agreement by and between Bomax Properties and Ithaca, dated as of March 23, 1992.	(2)
10.13	Second Amendment to Lease Agreement by and between Bomax Properties and Ithaca, dated December 2, 1996.	(5)
10.14	Agreement regarding the Continuation and Renewal of Lease by and between Bomax Properties, LLC and TransAct, dated July 18, 2001.	(9)
10.15	Amendment No. 1 to Lease Agreement between Bomax Properties, LLC and TransAct.	(18)
10.16	Amendment No. 2 to Lease Agreement between Bomax Properties, LLC and TransAct, dated January 14, 2016.	(22)
10.17	Lease Agreement by and between Las Vegas Airport Properties LLC and TransAct dated December 2, 2004.	(10)
10.18	First Amendment to Lease Agreement by and between Las Vegas Airport Properties LLC and TransAct dated August 31, 2009.	(16)
10.19	Second Amendment to Lease Agreement by and between The Realty Associates Fund IX LP and TransAct dated June 30, 2015.	(21)
10.20	Lease Agreement by and between 2319 Hamden Center I, L.L.C. and TransAct dated November 27, 2006.	(12)
10.21	First Amendment to Lease by and between 2319 Hamden Center I, L.L.C. and TransAct dated January 3, 2017	(25)
10.22	OEM Purchase Agreement by and between IGT (f/k/a GTECH Corporation) and TransAct, dated May 29, 2015. (Pursuant to Rule 24-b-2 under the Exchange Act, the Company has requested confidential treatment of portions of this exhibit deleted from the filed copy).	(21)
10.23	Amended and Restated Revolving Credit and Security Agreement between TransAct and TD Banknorth, N.A. dated November 28, 2006.	(12)
10.24	First Amendment to Amended and Restated Revolving Credit and Security Agreement between TransAct and TD Banknorth, N.A. effective September 30, 2007.	(13)
10.25	Second Amendment to Amended and Restated Revolving Credit and Security Agreement between TransAct and TD Bank, N.A. effective November 22, 2011.	(17)
10.26	Third Amendment to Amended and Restated Revolving Credit and Security Agreement effective September 7, 2012.	(19)
10.27	Fourth Amendment to Amended and Restated Revolving Credit and Security Agreement effective November 26, 2014.	(20)
10.28	Fifth Amendment to Amended and Restated Revolving Credit and Security Agreement effective November 21, 2017.	(27)
21.1	Subsidiaries of the Company	(1)
23.1	Consent of PricewaterhouseCoopers LLP.	(28)
31.1	Rule 13a-14(a) Certification of Chief Executive Officer in accordance with Section 302 of the Sarbanes-Oxley Act of 2002.	(28)
31.2	Rule 13a-14(a) Certification of Chief Financial Officer in accordance with Section 302 of the Sarbanes-Oxley Act of 2002.	(28)
32.1	Certification of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	(28)
101.INS	XBRL Instance Document.	(1)
101.SCH	XBRL Taxonomy Extension Schema Document.	(1)
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.	(1)
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.	(1)
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.	(1)
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.	(1)

(1) These exhibits, which were previously filed with the Company's Annual Report on Form 10-K (SEC File No. 000-21121) filed with the SEC on March 18, 2019, are incorporated by reference.
(2) These exhibits, which were previously filed with the Company's Registration Statement on Form S-1 (No. 333-06895), are incorporated by reference.
(3) Incorporated by reference to Exhibit 3.1(b) of the Company's Current Report on Form 8-K (SEC File No. 000-21121) filed with the SEC on May 19, 2014.
(4) Incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K (SEC File No. 000-21121) filed with the SEC on May 19, 2014.
(5) Incorporated by reference to Exhibit 10.27 of the Company's Annual Report on Form 10-K (SEC File No. 000-21121) filed with the SEC on March 31, 1998.
(6) Incorporated by reference to Exhibit C of the Company's Current Report on Form 8-K (SEC File No. 000-21121) filed with the SEC on February 18 , 1999.
(7) Incorporated by reference to Exhibit 3.2 of the Company's Annual Report on Form 10-K (SEC File No. 000-21121) filed with the SEC on March 29, 1999.
(8) Incorporated by reference to Exhibit 3.1(c) of the Company's Quarterly Report on Form 10-Q (SEC File No. 000-21121) filed with the SEC on May 8, 2000.
(9) Incorporated by reference to Exhibit 10.8 of the Company's Annual Report on Form 10-K (SEC File No. 000-21121) filed with the SEC on March 29, 2002.
(10) These exhibits, which were previously filed with the Company's Annual Report on Form 10-K for the year ended December 31, 2004, are incorporated by reference (No. 000-21121).
(11) Incorporated by reference to Exhibit 99.1 of the Company's Current Report on Form 8-K (SEC File No. 000-21121) filed with the SEC on June 1, 2005.
(12) These exhibits, which were previously filed with the Company's Annual Report on Form 10-K for the year ended December 31, 2006, are incorporated by reference (No. 000-21121).
(13) Incorporated by reference to Exhibit 10.20 of the Company's Quarterly Report on Form 10-Q (SEC File No. 000-21121) filed with the SEC on November 9, 2007.
(14) Incorporated by reference to Exhibit 10.9 of the Company's Annual Report on Form 10-K (SEC File No. 000-21121) filed with the SEC on March 14, 2009.
(15) This exhibit, which was previously filed with the Company's Annual Report on Form 10-K for the year ended December 31, 2008, is incorporated by reference (No. 000-21121).
(16) Incorporated by reference to Exhibit 10.19 of the Company's Annual Report on Form 10-K (SEC File No. 000-21121) filed with the SEC on March 16, 2010.
(17) Incorporated by reference to Exhibit 10.25 of the Company's Annual Report on Form 10-K (SEC File No. 000-21121) filed with the SEC on March 12, 2012.
(18) Incorporated by reference to Exhibit 10.16 of the Company's Quarterly Report on Form 10-Q (SEC File No. 000-21121) filed with the SEC on May 10, 2012.
(19) Incorporated by reference to Exhibit 10.26 of the Company's Current Report on Form 8-K (SEC File No. 000-21121) filed with the SEC on September 11, 2012.
(20) Incorporated by reference to Exhibit 99.1 of the Company's Current Report on Form 8-K (SEC File No. 000-21121) filed with the SEC on December 1, 2014.
(21) This exhibit, which was previously filed with the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2015, is incorporated by reference
(22) Incorporated by reference to Exhibit 10.13 of the Company's Annual Report on Form 10-K (SEC File No. 000-21121) filed with the SEC on March 11, 2016.
(23) Incorporated by reference to Exhibit 10.2 of the Company's Quarterly Report on Form 10-Q (SEC File No. 000-21121) filed with the SEC on May 6, 2016.
(24) Incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q (SEC File No. 000-211121) filed with the SEC on August 8, 2016.
(25) Incorporated by reference to Exhibit 10.20 of the Company's Annual Report on Form 10-K (SEC File No. 000-21121).
(26) Incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q (SEC File No. 000-21121) filed with the SEC on August 9, 2017.
(27) Incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K (SEC File No. 000-21121) filed with the SEC on November 22, 2017.
(28) Filed herewith.
(x) Management contract or compensatory plan or arrangement.

EXHIBIT LIST

The following exhibits are filed herewith.

Exhibit	
23.1	Consent of PricewaterhouseCoopers LLP.
31.1	Rule 13a-14(a) Certification of Chief Executive Officer in accordance with Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Rule 13a-14(a) Certification of Chief Financial Officer in accordance with Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

TRANSACT TECHNOLOGIES INCORPORATED

By:	/s/ Steven A. DeMartino
Name:	**Steven A. DeMartino**
Title:	**President, Chief Financial Officer, Treasurer and Secretary**

Date: November 21, 2019

TRANSACT TECHNOLOGIES INCORPORATED
INDEX TO FINANCIAL STATEMENTS

Financial Statements

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of TransAct Technologies Incorporated

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of TransAct Technologies Incorporated and its subsidiaries (the "Company") as of December 31, 2018 and 2017, and the related consolidated statements of income, comprehensive income, changes in shareholders' equity and cash flows for each of the three years in the period ended December 31, 2018, including the related notes (collectively referred to as 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 (COSO).

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 three years in the period ended December 31, 2018 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company did not maintain, 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 COSO because material weaknesses in internal control over financial reporting existed as of that date related to the Company not designing and maintaining effective controls over (i) user access within the Company's ERP system, Oracle, to ensure appropriate segregation of duties and to adequately restrict user access to appropriate personnel, and (ii) the completeness and accuracy of information included in key spreadsheets supporting the Company's accounting records.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the annual or interim financial statements will not be prevented or detected on a timely basis. The material weaknesses referred to above are described in Management's Annual Report on Internal Control Over Financial Reporting appearing under Item 9A. We considered these material weaknesses in determining the nature, timing, and extent of audit tests applied in our audit of the 2018 consolidated financial statements, and our opinion regarding the effectiveness of the Company's internal control over financial reporting does not affect our opinion on those consolidated financial statements.

Restatement of Management's Conclusion Regarding Internal Control over Financial Reporting

Management and we previously concluded that the Company maintained effective internal control over financial reporting as of December 31, 2018. However, management has subsequently determined that material weaknesses in internal control over financial reporting related to the design and maintenance of effective controls over certain aspects of its information technology, including related access and segregation of duties, and controls over key spreadsheets as of that date. Accordingly, management's report has been restated and our present opinion on internal control over financial reporting, as presented herein, is different from that expressed in our previous report.

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 management's report referred to above. Our responsibility is to express opinions on the Company's consolidated financial statements and 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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) 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/PricewaterhouseCoopers LLP
Hartford, Connecticut

March 18, 2019, except with respect to our opinion on internal control over financial reporting insofar as it relates to the effects of the matter described in the second paragraph of Management's Annual Report on Internal Control Over Financial Reporting, as to which the date is November 21, 2019

We have served as the Company's auditor since 1996.

TRANSACT TECHNOLOGIES INCORPORATED

CONSOLIDATED BALANCE SHEETS
(In thousands, except share data)

	December 31, 2018	December 31, 2017
Assets:		
Current assets:		
Cash and cash equivalents	$ 4,691	$ 5,507
Accounts receivable, net	8,025	10,948
Inventories, net	12,835	8,875
Prepaid income taxes	809	514
Other current assets	677	517
Total current assets	27,037	26,361
Fixed assets, net	2,272	2,169
Goodwill	2,621	2,621
Deferred tax assets	2,198	2,308
Intangible assets, net	797	458
Other assets	31	33
	7,919	7,589
Total assets	34,956	33,950
Liabilities and Shareholders' Equity:		
Current liabilities:		
Accounts payable	$ 3,483	$ 3,841
Accrued liabilities	2,765	3,339
Deferred revenue	384	169
Total current liabilities	6,632	7,349
Deferred revenue, net of current portion	265	69
Deferred rent, net of current portion	250	271
Other liabilities	242	247
	757	587
Total liabilities	7,389	7,936
Commitments and contingencies (Note 9)		
Shareholders' equity:		
Preferred stock, $0.01 value, 4,800,000 authorized, none issued and outstanding	–	–
Preferred stock, Series A, $0.01 par value, 200,000 authorized, none issued and outstanding	–	–
Common stock, $0.01 par value, 20,000,000 authorized at December 31, 2018 and 2017; 11,463,141 and 11,366,526 shares issued; 7,418,299 and 7,478,094 shares outstanding, at December 31, 2018 and 2017, respectively	115	114
Additional paid-in capital	32,129	31,353
Retained earnings	27,515	24,756
Accumulated other comprehensive loss, net of tax	(82)	(99)
Treasury stock, 4,044,842 and 3,888,432 shares, at cost	(32,110)	(30,110)
Total shareholders' equity	27,567	26,014
Total liabilities and shareholders' equity	$ 34,956	$ 33,950

See accompanying notes to Consolidated Financial Statements.

TRANSACT TECHNOLOGIES INCORPORATED
CONSOLIDATED STATEMENTS OF INCOME
(In thousands, except per share data)

	Year Ended December 31,		
	2018	2017	2016
Net sales	$ 54,587	$ 56,311	$ 57,235
Cost of sales	27,844	29,649	33,436
Gross profit	26,743	26,662	23,799
Operating expenses:			
Engineering, design and product development	4,576	4,303	4,425
Selling and marketing	7,203	7,561	6,907
General and administrative	8,205	7,984	7,267
	19,984	19,848	18,599
Operating income	6,759	6,814	5,200
Interest and other income (expense):			
Interest expense	(27)	(33)	(33)
Interest income	–	–	7
Other, net	(266)	(9)	(4)
	(293)	(42)	(30)
Income before income taxes	6,466	6,772	5,170
Income tax provision	1,040	3,561	1,553
Net income	$ 5,426	$ 3,211	$ 3,617
Net income per common share:			
Basic	$ 0.73	$ 0.43	$ 0.48
Diluted	$ 0.70	$ 0.42	$ 0.47
Shares used in per-share calculation:			
Basic	7,444	7,423	7,610
Diluted	7,759	7,592	7,655
Dividends declared and paid per common share:	$ 0.36	$ 0.35	$ 0.32

See accompanying notes to Consolidated Financial Statements.

TRANSACT TECHNOLOGIES INCORPORATED
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In thousands, except share data)

	Year Ended December 31,		
	2018	2017	2016
Net income	$ 5,426	$ 3,211	$ 3,617
Foreign currency translation adjustment, net of tax	17	10	(29)
Comprehensive income	$ 5,443	$ 3,221	$ 3,588

See accompanying notes to Consolidated Financial Statements.

TRANSACT TECHNOLOGIES INCORPORATED
CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY
(In thousands, except share data)

	Common Stock		Additional Paid-in	Retained	Treasury	Accumulated Other Comprehensive	Total
	Shares	Amount	Capital	Earnings	Stock	Income (Loss)	Equity
Balance, December 31, 2015	7,782,292	$ 112	$ 28,921	$ 22,956	$ (26,181)	$ (80)	$ 25,728
Issuance of shares from exercise of stock options	3,750	–	23	–	–	–	23
Issuance of deferred stock units	–	–	202	–	–	–	202
Issuance of common stock on deferred stock units, net of relinquishments	10,700	–	(51)	–	–	–	(51)
Tax shortfall related to employee stock sales	–	–	1	–	–	–	1
Purchase of treasury stock	(463,378)	–	–	–	(3,571)	–	(3,571)
Dividends declared and paid on common stock	–	–	–	(2,416)	–	–	(2,416)
Share-based compensation expense	–	–	611	–	–	–	611
Reversal of deferred tax asset in connection with stock options forfeited	–	–	(6)	–	–	–	(6)
Foreign currency translation adjustment, net of tax	–	–	–	–	–	(29)	(29)
Net income	–	–	–	3,617	–	–	3,617
Balance, December 31, 2016	7,333,364	$ 112	$ 29,701	$ 24,157	$ (29,752)	$ (109)	$ 24,109
Issuance of shares from exercise of stock options	166,600	2	1,041	–	–	–	1,043
Issuance of common stock on restricted stock units	8,300	–	–	–	–	–	–
Issuance of common stock on deferred stock units	8,663	–	–	–	–	–	–
Relinquishment of stock awards and deferred stock units to pay withholding taxes	(2,368)	–	(29)	–	–	–	(29)
Purchase of treasury stock	(36,465)	–	–	–	(358)	–	(358)
Dividends declared and paid on common stock	–	–	–	(2,581)	–	–	(2,581)
Share-based compensation expense	–	–	609	–	–	–	609
Adjustment upon adoption of ASU 2016-09	–	–	31	(31)	–	–	–
Foreign currency translation adjustment, net of tax	–	–	–	–	–	10	10
Net income	–	–	–	3,211	–	–	3,211
Balance, December 31, 2017	7,478,094	$ 114	$ 31,353	$ 24,756	$ (30,110)	$ (99)	$ 26,014
Issuance of shares from exercise of stock options	58,146	1	415	–	–	–	416
Issuance of common stock on restricted stock units	33,935	–	–	–	–	–	–
Issuance of common stock on deferred stock units	23,578	–	–	–	–	–	–
Relinquishment of stock awards and deferred stock units to pay withholding taxes	(19,044)	–	(268)	–	–	–	(268)
Purchase of treasury stock	(156,410)	–	–	–	(2,000)	–	(2,000)
Dividends declared and paid on common stock	–	–	–	(2,667)	–	–	(2,667)
Share-based compensation expense	–	–	629	–	–	–	629
Foreign currency translation adjustment, net of tax	–	–	–	–	–	17	17
Net income	–	–	–	5,426	–	–	5,426
Balance, December 31, 2018	7,418,299	$ 115	$ 32,129	$ 27,515	$ (32,110)	$ (82)	$ 27,567

See accompanying notes to Consolidated Financial Statements.

TRANSACT TECHNOLOGIES INCORPORATED
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Year Ended December 31, 2018	2017	2016
Cash flows from operating activities:			
Net income	$ 5,426	$ 3,211	$ 3,617
Adjustments to reconcile net income to net cash provided by operating activities:			
Share-based compensation expense	629	609	611
Depreciation and amortization	997	1,081	1,331
Deferred income tax (benefit) provision	(107)	1,117	(295)
Provision for doubtful accounts	105	50	–
Gain on sale of fixed assets	–	–	(5)
Foreign currency transaction losses	199	11	4
Changes in operating assets and liabilities:			
Accounts receivable	2,688	(405)	(3,434)
Inventories	(4,049)	834	1,580
Prepaid income taxes	(100)	(518)	(5)
Other current and long term assets	(161)	(137)	53
Accounts payable	(332)	(988)	2,255
Accrued liabilities and other liabilities	(186)	1,053	(1,088)
Net cash provided by operating activities	5,109	5,918	4,624
Cash flows from investing activities:			
Capital expenditures	(1,007)	(835)	(608)
Additions to capitalized software	(466)	(150)	–
Proceeds from sale of fixed assets	–	–	8
Net cash used in investing activities	(1,473)	(985)	(600)
Cash flows from financing activities:			
Proceeds from stock option exercises	416	1,043	23
Purchases of common stock for treasury	(2,000)	(358)	(3,571)
Payment of dividends on common stock	(2,667)	(2,581)	(2,416)
Withholding taxes paid on stock issuances	(265)	(23)	–
Net cash used in financing activities	(4,516)	(1,919)	(5,964)
Effect of exchange rate changes on cash and cash equivalents	64	(10)	(30)
Increase (decrease) in cash and cash equivalents	(816)	3,004	(1,970)
Cash and cash equivalents, beginning of period	5,507	2,503	4,473
Cash and cash equivalents, end of period	$ 4,691	$ 5,507	$ 2,503
Supplemental cash flow information:			
Interest paid	$ 25	$ 30	$ 31
Income taxes paid	1,249	2,991	2,065
Non-cash capital expenditure items	21	44	113

See accompanying notes to Consolidated Financial Statements.

1. Description of business

TransAct Technologies Incorporated ("TransAct" or the "Company"), which has its headquarters in Hamden, CT and its primary operating facility in Ithaca, New York, operates in one operating segment: software-driven technology and printing solutions for high growth markets including restaurant solutions, casino and gaming, lottery, POS automation and banking, and oil and gas markets. Our solutions are designed from the ground up based on market and customer requirements and are sold under the AccuDate™ Ithaca®, Epic, EPICENTRAL™ and Printrex® product brands. We sell our products to original equipment manufacturers, value-added resellers, select distributors, and directly to end-users. Our product distribution spans across the Americas, Europe, the Middle East, Africa, Asia, Australia, the Caribbean Islands and the South Pacific. TransAct also provides world-class service, spare parts, accessories and printing supplies to its growing worldwide installed base of products. We also generate revenue from the after-market side of the business, providing printer and terminal service, supplies and spare parts in addition to revenue from our software solution, the EPICENTRAL™ Print System ("EPICENTRAL™"), that enables casino operators to create promotional coupons and marketing messages and print them in real-time at the slot machine.

2. Summary of significant accounting policies

Principles of consolidation: The accompanying Consolidated Financial Statements include the accounts of TransAct and its wholly-owned subsidiaries, which require consolidation, after the elimination of intercompany accounts, transactions and unrealized profit.

***Use of estimates*:** The preparations of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America ("GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue and expenses, and disclosure of contingent assets and liabilities as of the date of the Consolidated Financial Statements and the reported amounts of sales and expenses during the reporting period. Actual results could differ from those estimates.

***Segment reporting*:** We apply the provisions of the Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") 280, "Segment Reporting." We view our operations and manage our business as one segment: the design, development and marketing of software-driven technology and printing solutions and providing printer and terminal related software, services, supplies and spare parts. Factors used to identify TransAct's single operating segment include the organizational structure of the Company and the financial information available for evaluation by the chief operating decision-maker in making decisions about how to allocate resources and assess performance.

***Cash and cash equivalents*:** We consider all highly liquid investments with a maturity date of three months or less at date of purchase to be cash equivalents.

***Allowance for doubtful accounts*:** We establish an allowance for doubtful accounts to ensure trade receivables are valued appropriately. We maintain an allowance for doubtful accounts based on a variety of factors, including the length of time receivables are past due, significant one-time events and historical experience. We record a specific allowance for individual accounts when we become aware of a customer's inability to meet its financial obligations, such as in the case of bankruptcy filings or deterioration in the customer's operating results or financial position. If circumstances related to customers change, we would further adjust estimates of the recoverability of receivables. Allowances for doubtful accounts on accounts receivable balances were $205 thousand and $100 thousand as of December 31, 2018 and 2017, respectively.

The following table summarizes the activity recorded in the valuation account for accounts receivable:

	Year Ended December 31,		
(In thousands)	2018	2017	2016
Balance, beginning of period	$ 100	$ 50	$ 50
Additions charged to costs and expenses	105	50	–
Balance, end of period	$ 205	$ 100	$ 50

Inventories: Inventories are stated at the lower of cost (principally standard cost, which approximates actual cost on a first-in, first-out basis) or net realizable value. We review net realizable value based on estimated selling prices in the ordinary course of business less estimated costs of completions, disposal and transportation, historical usage and estimates of future demand. Based on these reviews, inventory write-downs are recorded, as necessary, to reflect estimated obsolescence, excess quantities and net realizable value.

Fixed assets: Fixed assets are stated at cost. Depreciation is recorded using the straight-line method over the estimated useful lives. The estimated useful life of tooling is five years; machinery and equipment is ten years; furniture and office equipment is five to ten years; and computer software and equipment is three to seven years. Leasehold improvements are amortized over the shorter of the term of the lease or the useful life of the asset. Costs related to repairs and maintenance are expensed as incurred. The costs of sold or retired assets are removed from the related asset and accumulated depreciation accounts and any gain or loss is recognized. Depreciation expense was $870 thousand, $844 thousand and $987 thousand in 2018, 2017, and 2016, respectively.

Leases: Rent expense under non-cancelable operating leases with scheduled rent increases or free rent periods are accounted for on a straight-line basis over the lease term, beginning on the date of control of physical use of the asset or of initial possession. The amount of the excess of straight-line rent expense over scheduled payments is recorded as a deferred liability. Construction allowances and other such lease incentives are recorded as deferred credits, and are amortized on a straight-line basis as a reduction of rent expense beginning in the period they are deemed to be earned, which generally coincides with the occupancy date.

***Goodwill and Intangible assets*:** We acquire businesses in purchase transactions that result in the recognition of goodwill and intangible assets. The determination of the value of intangible assets requires management to make estimates and assumptions. In accordance with ASC 350-20 "Goodwill", acquired goodwill is not amortized but is subject to impairment testing at least annually and when an event occurs or circumstances change, that indicate it is more likely than not an impairment exists. Factors considered that may trigger an impairment review of either acquired goodwill or intangible assets are: significant underperformance relative to expected historical or projected future operating results; significant changes in the manner of use of acquired assets or the strategy for the overall business; significant negative industry or economic trends; and significant decline in market capitalization relative to net book value. Finite lived intangible assets are amortized and are tested for impairment when appropriate. We have determined that no goodwill or intangible asset impairment has occurred and the fair value of goodwill was substantially higher than our carrying value based on our assessment as of December 31, 2018 when the impairment review is performed.

Revenue recognition: ASU No. 2014-09, "Revenue from Contracts with Customers" and its related amendments (collectively, ASC 606) are effective for reporting periods beginning after December 15, 2017, and interim periods therein. This ASU is intended to clarify the principles for recognizing revenue by removing inconsistencies in revenue requirements; providing a more robust framework for addressing revenue issues; improving comparability of revenue recognition practices across entities, industries, jurisdictions and capital markets; and providing more useful information to users of financial statements through improved revenue disclosure requirements. Entities have the option of using either a full retrospective approach or modified retrospective approach to adopt the amended guidance. We adopted ASC 606 effective January 1, 2018 and elected the modified retrospective approach. The results for periods before 2018 were not adjusted for the new standard and there was no cumulative effect for the change in accounting at the date of adoption.

In accordance with ASC 606, a performance obligation is a promise in a contract with a customer to transfer a distinct good or service to the customer. Some of our contracts with customers contain a single performance obligation, while other contracts contain multiple performance obligations (most commonly when contracts include product and extended warranties). A contract's transaction price is allocated to each distinct performance obligation and recognized as revenue when, or as, the performance obligation is satisfied. When there are multiple performance obligations within a contract, we allocate the transaction price to each performance obligation based on its standalone selling price.

The transaction price is determined based on the consideration to which the Company will be entitled in exchange for transferring services to the customer. To the extent the transaction price includes variable consideration, such as price protection, reserves for returns and other allowances, 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.

For a majority of our revenue, which consists of printers, terminals, consumables, and replacement parts, the Company recognizes revenue as of a point of time. The transaction price is recognized upon shipment of the order when control of the goods is transferred to the customer and at the time the performance obligation is fulfilled. We also sell a software solution, EPICENTRAL™, that enables casino operators to create promotional coupons and marketing messages and to print them in real-time at the slot machine. EPICENTRAL™ is primarily comprised of both a software component, which is licensed to the customer, and a hardware component. EPICENTRAL™ software and hardware are integrated to deliver the system's full functionality. The transaction prices from EPICENTRAL™ software license and hardware are recognized upon installation and formal acceptance by the customer when control of the license is transferred to the customer. For out-of-warranty repairs, the transaction price is recognized after completion of the repair work is completed and the printer or terminal is returned to the customer, as control of the product is transferred to the customer and our performance obligation is completed.

Performance obligations are satisfied over time if the customer receives the benefits as we perform work, if the customer controls the asset as it is being produced, or if the product being produced for the customer has no alternative use and we have a contractual right to payment. For our separately priced extended warranty, technical support for our restaurant solution terminals and maintenance agreements (including free one-year maintenance received by the customers upon completion of EPICENTRAL™ installation) revenue is recognized over time as the customer receives the benefit. The transaction price from the maintenance services is recognized ratably over time, using output methods, as control of the services is transferred to the customer. For extended warranties, the transaction price is recognized ratably over the warranty period, using output methods, as control of the services is transferred to the customer.

In the cases where there is more than one performance obligation in a customer arrangement, the Company typically uses the "standalone selling price" method to determine the transaction price to allocate to each performance obligation. The Company sells the performance obligations separately and has established standalone selling prices for its products and services. In the case of an overall price discount, the discount is applied to each performance obligation proportionately based on standalone selling price. To determine the standalone selling price for initial EPICENTRAL™ installations, the Company uses the adjusted market assessment approach.

Disaggregation of revenue
The following table disaggregates our revenue by market-type, as we believe it best depicts how the nature, amount, timing and uncertainty of our revenue and cash flows are affected by economic factors. Sales and usage-based taxes are excluded from revenues.

	Year Ended December 31, 2018		
	United States	International	Total
		(In thousands)	
Restaurant solutions	$ 4,133	$ 446	$ 4,579
POS Automation and Banking	7,122	151	7,273
Casino and Gaming	17,518	9,075	26,593
Lottery	3,046	47	3,093
Printrex	1,028	269	1,297
TransAct Services Group	10,671	1,081	11,752
Total net sales	$ 43,518	$ 11,069	$ 54,587

Changes in accounting policies and financial statement impact of adopting ASC 606
Except for the changes below, we have consistently applied the accounting policies to all periods presented in the consolidated financial statements. As noted above, we adopted ASC 606 using the modified retrospective approach which allows the Company to record any changes using the cumulative effect. The adoption of ASC 606 did not require the Company to record an adjustment to retained earnings at January 1, 2018, and did not have an impact on the consolidated income statement during the year ended December 31, 2018, basic or diluted earnings per share, consolidated statement of cash flows, consolidated statement of shareholder's equity or consolidated balance sheet at December 31, 2018.

Costs to Obtain a Contract **–** Costs to obtain a contract, such as sales commissions, were previously expensed as incurred. The Company applied the practical expedient for contracts with customers for a term of twelve months or less, in accordance with ASC 340-40-25-4, which allows TransAct to continue to expense sales commissions as incurred, since the expected amortization period of the cost to obtain a contract is less than 12 months. No amounts were capitalized as of the adoption of ASC 606 or as of December 31, 2018.

Contract balances
Our contract liabilities consist of customer pre-payments and deferred revenue. Customer prepayments are reported as "Accrued Liabilities" in current liabilities in the Condensed Consolidated Balance Sheets and represent customer payments made in advance of performance obligations in instances where credit has not been extended and is recognized as revenue when the performance obligation is complete. Deferred revenue is reported separately in current liabilities and non-current liabilities and consists of our extended warranty contracts, technical support for our restaurant solution terminals, EPICENTRAL™ maintenance contracts and testing service contracts, and is recognized as revenue as (or when) we perform under the contract. The increase in current and non-current deferred revenue is due to the sale of extended warranties and technical support for our restaurant solution terminals. We do not have any contract asset balances as of December 31, 2018 or 2017. During the year ended December 31, 2018, we recognized revenue of $1.2 million related to our contract liabilities at January 1, 2018. Total contract liabilities consist of the following:

	December 31, 2018	**January 1, 2018**
	(In thousands)	
Customer pre-payments	**$ 50**	$ 79
Deferred revenue, current	**384**	169
Deferred revenue, non-current	**265**	69
Total contract liabilities	**$ 699**	$ 317

Remaining performance obligations
Remaining performance obligations represent the transaction price of firm orders for which a good or service has not been delivered to our customer. As of December 31, 2018, the aggregate amount of the transaction price allocated to remaining performance obligations was $5.6 million. The Company expects to recognize revenue on $4.1 million of our remaining performance obligations within the next 12 months, $1.4 million within the next 24 months and the balance of these remaining performance obligations recognized within the next 36 months.

Concentration of credit risk: Financial instruments that potentially expose us to concentrations of credit risk are limited to cash and cash equivalents held by our banks in excess of insured limits and accounts receivable.

Accounts receivable from customers representing 10% or more of total accounts receivable were as follows:

	December 31,	
	2018	2017
International Gaming Technology ("IGT")	21%	48%
Suzo-Happ	0%	13%

Sales to customers representing 10% or more of total net sales were as follows:

	Year Ended December 31,		
	2018	2017	2016
IGT	18%	35%	26%
Suzo-Happ	1%	8%	15%

Warranty: We generally warrant our products for up to 24 months and record the estimated cost of such product warranties at the time the sale is recorded. Estimated warranty costs are based upon actual past experience of product repairs and the related estimated cost of labor and material to make the necessary repairs.

The following table summarizes the activity recorded in the accrued product warranty liability:

	Year Ended December 31,		
(In thousands)	2018	2017	2016
Balance, beginning of period	$ 267	$ 267	$ 277
Warranties issued	269	259	254
Warranty settlements	(263)	(259)	(264)
Balance, end of period	$ 273	$ 267	$ 267

$192 thousand and $186 thousand of the accrued product warranty liability were classified as current in Accrued liabilities at December 31, 2018 and 2017, respectively. The remaining $81 thousand of the accrued product warranty liability as of December 31, 2018 and 2017 is classified as long-term in Other liabilities.

Engineering, design and product development: Research and development ("R&D") expenses include expenses incurred in connection with specialized engineering and design to introduce new products and to customize existing products, and are expensed as a component of operating expenses as incurred. We recorded $4.6 million, $4.3 million and $4.4 million of research and development expenses in 2018, 2017, and 2016, respectively.

Costs incurred in researching and developing a computer software product are charged to expense until technological feasibility has been established, at which point all material software costs are capitalized within Intangible assets in our Consolidated Balance Sheet until the product is available for general release to customers. While judgment is required in determining when technological feasibility of a product is established, we have determined that it is reached after all high-risk development issues have been documented in a formal detailed plan design. The amortization of these costs have been included in cost of sales over the estimated life of the product. During 2018, we contracted several third parties to develop software for our restaurant solutions products. Unamortized development costs for such software were $586 thousand as of December 31, 2018. The total amount charged to cost of sales for capitalized software development costs was $30 thousand, $2 thousand and $29 thousand in 2018, 2017, and 2016, respectively.

Advertising: Advertising costs are expensed as incurred. Advertising expenses, which are included in selling and marketing expense on the accompanying Consolidated Statements of Income, for 2018, 2017, and 2016 totaled $1.0 million, $1.0 million and $0.7 million, respectively. These expenses include items such as consulting and professional services, tradeshows, and print advertising.

Income taxes: The income tax amounts reflected in the accompanying Consolidated Financial Statements are accounted for under the liability method in accordance with ASC 740, "Income Taxes." Deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates in effect for the year in which those temporary differences are expected to be recovered or settled. We assess the likelihood that net deferred tax assets will be realized from future taxable income, and to the extent that we believe that realization is not likely, we establish a valuation allowance. In accordance with ASC 740, we identified, evaluated and measured the amount of benefits to be recognized for our tax return positions. See Note 11 for information regarding our accounting for income taxes and additional provision items recorded in regards to the Tax Reform Act.

Foreign currency translation: The financial position and results of operations of our foreign subsidiary in the UK are measured using local currency as the functional currency. Assets and liabilities of such subsidiary have been translated into U.S. dollars at the year-end exchange rate, related sales and expenses have been translated at the exchange rate as of the date the transaction was recognized, and shareholders' equity has been translated at historical exchange rates. The resulting translation gains or losses, net of tax, are recorded in shareholders' equity as a cumulative translation adjustment, which is a component of accumulated other comprehensive income. Foreign currency transaction gains and losses, including those related to intercompany balances, are recognized in Other, net on the Consolidated Statements of Income.

Share-based payments: At December 31, 2018, we have share-based employee compensation plans, which are described more fully in Note 10 - Stock incentive plans. We account for those plans under the recognition and measurement principles of ASC 718, "Compensation – Stock Compensation." Share-based compensation expense is measured at the grant date, based on the estimated fair value of the award, and is recognized as expense over the employee's requisite service period.

We use the Black-Scholes option-pricing model to calculate the fair value of share based awards. The key assumptions for this valuation method include the expected term of the option, stock price volatility, risk-free interest rate, dividend yield, market price of our underlying stock and exercise price. Many of these assumptions are judgmental and highly sensitive in the determination of compensation expense. Beginning in the first quarter of 2017, we recognize forfeitures as they occur.

In May 2017, the FASB issued ASU No. 2017-09, "Compensation-Stock Compensation: Scope of modification accounting". ASU 2017-09 provides 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. ASU No. 2017-09 is effective for fiscal years beginning after December 15, 2017. The amendments are applied prospectively to an award modified on or after the adoption date. We adopted this guidance in the first quarter of 2018 and the adoption has not resulted in a change to our financial statements.

Net income and loss per share: We report net income or loss per share in accordance with ASC 260, "Earnings per Share (EPS)." Under this guidance, basic EPS, which excludes dilution, is computed by dividing income or loss available to common shareholders by the weighted average number of common shares outstanding for the period. Diluted EPS reflects the potential dilution that could occur if securities or other contracts to issue common stock were exercised or converted into common stock. Diluted EPS includes in-the-money stock options using the treasury stock method. During a loss period, the assumed exercise of in-the-money stock options has an anti-dilutive effect, and therefore, these instruments are excluded from the computation of dilutive EPS. See Note 12 - Earnings per share.

3. Inventories, net

The components of inventories are:

	December 31,	
(In thousands)	2018	2017
Raw materials and purchased component parts	$ 6,593	$ 6,322
Work-in-process	29	–
Finished goods	6,213	2,553
	$ 12,835	$ 8,875

4. Fixed assets

The components of fixed assets, net are:

	December 31,	
(In thousands)	2018	2017
Tooling, machinery and equipment	$ 11,177	$ 11,019
Furniture and office equipment	1,690	1,651
Computer software and equipment	6,930	6,503
Leasehold improvements	2,666	2,475
	22,463	21,648
Less: Accumulated depreciation and amortization	(20,518)	(19,752)
	1,945	1,896
Construction in-process	327	273
	$ 2,272	$ 2,169

5. Intangible assets

Identifiable intangible assets are recorded in Intangible assets in the accompanying Consolidated Balance Sheets and are comprised of the following:

	December 31,			
	2018		2017	
(In thousands)	Gross Amount	Accumulated Amortization	Gross Amount	Accumulated Amortization
Purchased technology	$ 2,221	$ (1,558)	$ 1,754	$ (1,481)
Customer relationships	1,300	(1,300)	1,300	(1,300)
Trademark	480	(354)	480	(306)
Covenant not to compete	146	(146)	146	(146)
Patents	57	(49)	57	(46)
Other	80	(80)	80	(80)
Total	$ 4,284	$ (3,487)	$ 3,817	$ (3,359)

Amortization expense was $128 thousand, $237 thousand and $343 thousand in 2018, 2017 and 2016, respectively. Amortization expense for each of the next five years ending December 31 is expected to be as follows: $289 thousand in 2019; $175 thousand in 2020; $124 thousand in 2021; $93 thousand in 2022; $93 thousand in 2023; and $23 thousand thereafter.

6. Accrued liabilities

The components of accrued liabilities are:

	December 31,	
(In thousands)	2018	2017
Salaries and compensation related	$ 1,817	$ 2,288
Warranty	192	186
Professional and consulting	231	209
Other	525	656
	$ 2,765	$ 3,339

7. Retirement savings plan

We maintain a 401(k) plan under which all full-time employees are eligible to participate at the beginning of each month immediately following their date of hire. We match employees' contributions at a rate of 50% of employees' contributions up to the first 6% of the employees' compensation contributed to the 401(k) plan. Our matching contributions were $237 thousand, $264 thousand and $295 thousand in 2018, 2017, and 2016, respectively.

8. Borrowings

We maintain a credit facility (the "TD Bank Credit Facility") with TD Bank N.A. ("TD Bank) which provides for a $20 million revolving credit line. On November 21, 2017, we signed an amendment extending the term to the TD Bank Credit Facility through November 28, 2022. Borrowings under the revolving credit line bear a floating rate of interest at the prime rate minus one percent and are secured by a lien on all of our assets. We also pay a fee of 0.125% on unused borrowings under the revolving credit line. The amendment increased the amount of revolving credit loans we may use to fund future cash dividend payments or treasury share buybacks to $12.5 million from $10 million.

The TD Bank Credit Facility imposes certain quarterly financial covenants on us and restricts, among other things, our ability to incur additional indebtedness and the creation of other liens. We were in compliance with all financial covenants of the TD Bank Credit Facility at December 31, 2018.

As of December 31, 2018, undrawn commitments under the TD Bank Credit facility were $20 million.

9. Commitments and contingencies

At December 31, 2018, we were the lessee on operating leases for equipment and real property. Rent expense was $1.1 million, $1.1 million and $1.0 million in 2018, 2017, and 2016, respectively. Minimum aggregate rental payments required under operating leases that have initial or remaining non-cancelable lease terms in excess of one year as of December 31, 2018 are as follows: $1.0 million in 2019; $1.0 million in 2020; $0.7 million in 2021; $0.4 million in 2022, $0.3 million in 2023 and $0.9 million thereafter.

10. Stock incentive plans

Stock incentive plans. We currently have two primary stock incentive plans: the 2005 Equity Incentive Plan and 2014 Equity Incentive Plan, which provide for awards to executives, key employees, directors and consultants. The plans generally provide for awards in the form of: (i) incentive stock options, (ii) non-qualified stock options, (iii) restricted stock, (iv) restricted stock units (which may include performance-based vesting), (v) stock appreciation rights or (vi) limited stock appreciation rights. Awards granted under these plans have exercise prices equal to 100% of the fair market value of the common stock at the date of grant. Awards granted have a ten-year term and generally vest over a two- to five-year period, unless automatically accelerated for certain defined events. As of May 2014, no new awards were made under the 2005 Equity Incentive Plan. Under our 2014 Equity Incentive Plan, we may authorize awards for up to 1,400,000 shares of TransAct common stock. At December 31, 2018, 495,291 shares of common stock remained available for issuance under the 2014 Equity Incentive Plan.

Under the assumptions indicated below, the weighted-average per share fair value of stock option grants for 2018, 2017, and 2016 was $4.38, $1.95 and $1.70, respectively. We also issued restricted share units for certain executives and directors that vest over a specified period of time, and in some instances require achieving certain performance metrics. The weighted-average per share fair value of these restricted share units was $12.91, $7.53, and $7.31 in 2018, 2017 and 2016 respectively. No restricted share units were issued in 2016.

The table below indicates the key assumptions used in the option valuation calculations for options granted in 2018, 2017, and 2016 and a discussion of our methodology for developing each of the assumptions used in the valuation model:

	Year Ended December 31,		
	2018	2017	2016
Expected option term (in years)	6.8	6.8	6.9
Expected volatility	38.0%	36.2%	38.8%
Risk-free interest rate	2.7%	2.1%	1.2%
Dividend yield	2.6%	4.3%	4.5%

Expected Option Term - This is the weighted average period of time over which the options granted are expected to remain outstanding giving consideration to our historical exercise patterns. Options granted have a maximum term of ten years and an increase in the expected term will increase compensation expense.

Expected Volatility – The stock volatility for each grant is measured using the weighted average of historical daily price changes of our common stock over the most recent period approximately equal to the expected option term of the grant. An increase in the expected volatility factor will increase compensation expense.

Risk-Free Interest Rate - This is the U.S. Treasury rate in effect at the time of grant having a term approximately equal to the expected term of the option. An increase in the risk-free interest rate will increase compensation expense.

Dividend Yield –The dividend yield is calculated by dividing the annual dividend declared per common share by the weighted average market value of our common stock on the date of grant. An increase in the dividend yield will decrease compensation expense.

For 2018, 2017, and 2016, we recorded $629 thousand, $609 thousand, and $611 thousand of share-based compensation expense, respectively, included primarily in general and administrative expense in our Consolidated Statements of Income. We also recorded income tax benefits of $138 thousand, $134 thousand, and $184 thousand in 2018, 2017, and 2016 respectively, related to such share-based compensation. At December 31, 2018, these benefits are recorded as a deferred tax asset in the Consolidated Balance Sheets.

Equity award activity in the 2005 Equity Incentive Plan and 2014 Equity Incentive Plan is summarized below:

	Stock Options		Restricted Share Units	
	Number of Shares	Average Price*	Number of Units	Average Price**
Outstanding at December 31, 2017	919,639	$ 8.13	101,275	$ 8.21
Granted	147,300	13.65	37,400	13.69
Exercised	(58,146)	7.16	(33,935)	8.31
Forfeited	(2,000)	7.63	(6,140)	8.64
Expired	(2,500)	5.24	–	–
Outstanding at December 31, 2018	1,004,293	$ 9.00	98,600	$ 9.82

* weighted average exercise price per share

** weighted-average grant stock price per share

The following summarizes information about equity awards outstanding that are vested and expect to vest and equity awards that are exercisable at December 31, 2018:

	Equity Awards Vested and Expected to Vest				Equity Awards That Are Exercisable			
	Awards	Average Price*	Aggregate Intrinsic Value	Remaining Term**	Awards	Average Price*	Aggregate Intrinsic Value	Remaining Term**
Stock Options	1,004,293	$ 9.00	$ 1,051	6.1	562,252	$ 8.38	$ 656	4.7
Restricted stock units	82,692	–	743	1.9	–	–	–	–

* weighted average exercise price per share

** weighted-average contractual remaining term in years

Shares that are issued upon exercise of employee stock awards are newly issued shares and not issued from treasury stock. As of December 31, 2018, unrecognized compensation cost related to non-vested equity awards granted under our stock incentive plans is approximately $1.2 million, which is expected to be recognized over a weighted average period of 2.2 years.

The total fair value of awards vested during the years ended December 31, 2018, 2017, and 2016 was $1.1 million, $1.1 million, and $1.0 million, respectively. The total intrinsic value (which is the amount by which the stock price exceeded the exercise price on the date of exercise) of stock options exercised during the years ended December 31, 2018, 2017, and 2016 was $280 thousand, $958 thousand and $6 thousand, respectively. Cash received from option exercises was $416 thousand, $1.0 million and $23 thousand for 2018, 2017, and 2016, respectively. We recorded a realized tax benefit in 2018, 2017, and 2016 from equity-based awards of $17 thousand, $150 thousand and $1 thousand, respectively, related to options exercised. Upon adoption of ASU 2016-09 in 2017 tax benefits realized on stock options exercises are included in income tax expense and are no longer included as a component of cash flows.

Restricted stock:

We paid a portion of the 2015 incentive bonus for the chief executive officer and chief financial officer in the form of 28,231 deferred stock units, respectively, with a corresponding credit recorded to Additional Paid in Capital (net of share relinquishments) in the amount of $151 thousand in 2016. Such deferred stock units were granted in February 2016 and were fully vested at the time of grant. These units will be converted three years from the grant date to shares of the Company’s common stock on a one-for-one basis. The weighted average exercise price of the deferred stock units was $7.17. Starting with the 2016 incentive bonus program, all incentive bonus payments are made in cash with no portion of the award paid in deferred stock units.

11. Income taxes

The components of the income tax provision are as follows:

	Year Ended December 31,		
(In thousands)	2018	2017	2016
Current:			
Federal	$ 1,049	$ 2,379	$ 1,776
State	85	114	70
Foreign	13	(49)	2
	1,147	2,444	1,848
Deferred:			
Federal	(117)	1,097	(257)
State	10	20	(38)
Foreign	–	–	–
	(107)	1,117	(295)
Income tax provision	$ 1,040	$ 3,561	$ 1,553

On December 22, 2017, the United States enacted significant changes to U.S. tax law following the passage and signing of the Tax Reform Act. The legislation significantly changes U.S. tax law by, among other things, lowering corporate income tax rates, implementing a territorial tax system and imposing a one-time repatriation tax on undistributed foreign earnings. The Tax Reform Act permanently reduces the U.S. corporate income tax rate from a maximum of 35% to a flat 21% rate, effective January 1, 2018. Income tax effects resulting from changes in tax laws are accounted for by the Company in accordance with authoritative guidance, which requires that these tax effects be recognized in the period in which the law is enacted.

On December 22, 2017, the Securities and Exchange Commission ("SEC") staff issued Staff Accounting Bulletin No. 118 ("SAB 118") to address the application of U.S. GAAP in situations where a registrant does not have the necessary information available, prepared, or analyzed in reasonable detail to complete the accounting for certain income tax effects of the Tax Reform Act. SAB 118 provides a measurement period, not to exceed one year from the enactment of the Tax Reform Act. In accordance with SAB 118, the Company has recognized provisional tax impacts related to the revaluation of deferred tax assets and liabilities and included these amounts in its consolidated financial statements for the year ended December 31, 2017, and no changes were made to these provisional amounts during the year ended December 31, 2018. As of December 22, 2018 our accounting for the impact of the Tax Reform Act was complete.

The Company uses the asset and liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are recognized for future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis. 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 reverse. As a result of the reduction of TransAct's U.S. corporate income tax rate from 34% to 21% under the Tax Reform Act, the Company revalued its ending net deferred tax assets at December 31, 2017 and recognized a provisional $1.3 million charge to income tax expense in the Company's consolidated statement of income for the year ended December 31, 2017.

The Tax Reform Act also provided for a one-time deemed mandatory repatriation of post-1986 undistributed foreign subsidiary earnings and profits ("E&P") through the year ended December 31, 2017. The Company had no undistributed foreign E&P subject to the one-time mandatory repatriation and, therefore, did not recognize any income tax expense related to undistributed foreign subsidiary E&P for the year ended December 31, 2017.

While the Tax Reform Act provides for a territorial tax system, beginning in 2018, it includes two new U.S. tax base erosion provisions, the global intangible low-taxed income ("GILTI") provisions and the base-erosion and anti-abuse tax ("BEAT") provisions. The GILTI provisions require the Company to include in its U.S. income tax return foreign subsidiary earnings in excess of an allowable return on the foreign subsidiary's tangible assets. The BEAT provisions in the Tax Reform Act eliminate the deduction of certain base-erosion payments made to related foreign corporations, and impose a minimum tax if greater than regular tax. The Company is not currently subject to these taxes and therefore has not included any tax impacts of GILTI or BEAT in its consolidated financial statements for the year ended December 31, 2018 or 2017.

Our effective tax rates were 16.1%, 52.6%, and 30.0% for 2018, 2017, and 2016, respectively. The effective tax rate in 2018 was significantly lower due to the impact of the Tax Reform Act. In addition to the lowering of the corporate from 34% to 21%, the Tax Reform Act also provided the Company with a new deduction, the foreign-derived intangible income deduction. The effective tax rate in 2017 was unusually high due to the initial impact of the Tax Reform Act as we recognized a provisional $1.3 million charge to income tax expense for the year ended December 31, 2017 as a result of revaluing our net deferred tax assets using the new U.S. corporate tax rate of 21%.

At December 31, 2018, we have no federal or state net operating loss carryforwards, no R&D credit carryforwards, and no state tax credit carryforwards. Foreign loss before taxes was $286 thousand, $563 thousand, and $235 thousand in 2018, 2017, and 2016, respectively.

Deferred income taxes arise from temporary differences between the tax basis of assets and liabilities and their reported amounts in the Consolidated Financial Statements. Our deferred tax assets and liabilities were comprised of the following:

	December 31,	
(In thousands)	2018	2017
Deferred tax assets:		
Foreign net operating losses	$ 390	$ 328
Depreciation	71	107
Inventory reserves	879	845
Deferred revenue	16	16
Warranty reserve	60	59
Stock compensation expense	682	694
Other accrued compensation	233	363
Other liabilities and reserves	278	246
Gross deferred tax assets	2,609	2,658
Valuation allowance	(390)	(328)
Net deferred tax assets	2,219	2,330
Deferred tax liabilities:		
Other	21	22
Net deferred tax liabilities	21	22
Total net deferred tax assets	$ 2,198	$ 2,308

As of December 31, 2018 a valuation allowance of $390 thousand has been established for foreign net operating loss carryforwards that are not expected to be used. The following table summarizes the activity recorded in the valuation allowance on the deferred tax assets:

	Year Ended December 31,		
(In thousands)	2018	2017	2016
Balance, beginning of period	$ 328	$ 423	$ 340
Additions charged to income tax provision	62	67	83
Reductions credited to income tax provision	–	(162)	–
Balance, end of period	$ 390	$ 328	$ 423

Differences between the U.S. statutory federal income tax rate and our effective income tax rate are analyzed below:

	Year Ended December 31,		
	2018	2017	2016
Federal statutory tax rate	21.0%	34.0%	34.0%
State income taxes, net of federal income taxes	1.2	1.3	0.4
Valuation allowance and tax accruals	1.0	1.6	1.6
Miscellaneous permanent items	0.07	(0.5)	(1.2)
U.S. corporate tax rate change	0.0	19.4	0.0
Stock option cancellations	0.0	1.7	0.0
Uncertain tax positions	0.0	(0.1)	(0.1)
Stock award excess tax benefit	(1.5)	(1.4)	0.0
Foreign-derived intangible income deduction	(1.5)	0.0	0.0
R&D credit	(4.9)	(3.3)	(4.6)
Other	0.1	(0.1)	(0.1)
Effective tax rate	16.1%	52.6%	30.0%

At both December 31, 2018 and 2017, we had $104 thousand of total gross unrecognized tax benefits that, if recognized, would favorably affect the effective income tax rate in any future periods. We are not aware of any events that could occur within the next twelve months that could cause a significant change in the total amount of unrecognized tax benefits. A tabular reconciliation of the gross amounts of unrecognized tax benefits at the beginning and end of the year is as follows:

	December 31,	
(In thousands)	2018	2017
Unrecognized tax benefits as of January 1	$ 104	$ 111
Tax positions taken during the current period	28	24
Lapse of statute of limitations	(28)	(31)
Unrecognized tax benefits as of December 31	$ 104	$ 104

We expect $25 thousand of the $104 thousand of unrecognized tax benefits will reverse in 2019 upon the expiration of the statute of limitations.

We recognize interest and penalties related to uncertain tax positions in the income tax provision. We have accrued interest and penalties related to uncertain tax positions of $17 thousand as of December 31, 2018 and 2017.

We are subject to U.S. federal income tax as well as income tax of certain state and foreign jurisdictions. We have substantially concluded all U.S. federal income tax, state and local, and foreign tax matters through 2014. However, our federal tax returns for the years 2015 through 2017 remain open to examination. Various state and foreign tax jurisdiction tax years remain open to examination as well, though we believe that any additional assessment would be immaterial to the Consolidated Financial Statements.

12. Earnings per share

For 2018, 2017, and 2016, earnings per share was computed as follows (in thousands, except per share amounts):

	Year Ended December 31,		
	2018	2017	2016
Net income	$ 5,426	$ 3,211	$ 3,617
Shares:			
Basic: Weighted average common shares outstanding	7,444	7,423	7,610
Add: Dilutive effect of outstanding equity awards as determined by the treasury stock method	315	169	45
Diluted: Weighted average common and common equivalent shares outstanding	7,759	7,592	7,655
Net income per common share:			
Basic	$ 0.73	$ 0.43	$ 0.48
Diluted	0.70	0.42	0.47

The computation of diluted earnings per share excludes the effect of the potential exercise of stock awards, including stock options, restricted stock units and performance stock awards, when the average market price of the common stock is lower than the exercise price of the related stock award during the period. These outstanding stock awards are not included in the computation of diluted earnings per share because the effect would be anti-dilutive. Anti-dilutive stock awards excluded from the computation of earnings per dilutive share were 149,000, and 341,000, at December 31, 2018 and 2017 respectively.

13. Stock repurchase program

On March 1, 2018, our Board of Directors approved a new stock repurchase program (the "2018 Stock Repurchase Program"). Under the 2018 Stock Repurchase Program, we are authorized to repurchase up to $5 million of our outstanding shares of common stock from time to time in the open market at prevailing market prices based on market conditions, share price and other factors. The 2018 Stock Repurchase Program expires on December 31, 2019, if we do not discontinue the repurchase program prior to such time. We use the cost method to account for treasury stock purchases, under which the price paid for the stock is charged to the treasury stock account. Repurchases of our common stock are accounted for as of the settlement date. From the start of the 2018 Stock Repurchase Program on March 1, 2018 through December 31, 2018, we repurchased 156,410 shares of our common stock for approximately $2.0 million at an average price per share of $12.79.

During 2016 and 2017, under a prior repurchase program that was in place from February 25, 2016 through December 31, 2017, we purchased 499,843 shares of our common stock for $3.9 million at an average price of $7.86 per share. From January 1, 2005 through December 31, 2018, we repurchased a total of 4,044,842 shares of common stock for $32.1 million, at an average price of $7.94 per share.

14. Geographic area information

Information regarding our operations by geographic area is contained in the following table. These amounts in the geographic area table are based on the location of the customer and asset.

	Year Ended December 31,		
(In thousands)	2018	2017	2016
Net sales:			
United States	$ 43,518	$ 48,720	$ 45,542
International	11,069	7,591	11,693
Total	$ 54,587	$ 56,311	$ 57,235
Fixed assets, net:			
United States	$ 1,767	$ 1,548	$ 1,581
International	505	621	660
Total	$ 2,272	$ 2,169	$ 2,241

Sales to international customers were 20%, 14%, and 20% of total sales in 2018, 2017, and 2016 respectively. Sales to Europe represented 56%, 44%, and 56%, sales to the Pacific Rim (which includes Australia and Asia) represented 36%, 32%, and 34%, and sales to Canada represented 6%, 18%, and 8% of total international sales in 2018, 2017, and 2016 respectively. International long-lived assets consist of net fixed assets located at our foreign subsidiary in the UK as well as our contract manufacturers in China, Thailand, Malaysia and Mexico.

15. Quarterly results of operations (unaudited)

Our quarterly results of operations for 2018 and 2017 are as follows:

	Quarter Ended			
(In thousands, except per share amounts)	March 31	June 30	September 30	December 31
2018:				
Net sales	$ 12,243	$ 14,751	$ 15,838	$ 11,755
Gross profit	5,862	6,991	8,004	5,886
Net income	680	1,210	2,574	962
Net income per common share:				
Basic	0.09	0.16	0.35	0.13
Diluted	0.09	0.16	0.33	0.12
2017:				
Net sales	$ 13,997	$ 13,596	$ 15,524	$ 13,194
Gross profit	6,093	6,430	7,519	6,620
Net income (loss)	943	867	1,813	(412)
Net income (loss) per common share:				
Basic	0.13	0.12	0.24	(0.06)
Diluted	0.13	0.12	0.24	(0.06)

16. Accounting pronouncements

In February 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2016-02, *Leases (Topic 842*), which sets out the principles for the recognition, measurement, presentation and disclosure of leases for both parties to a contract (i.e., lessees and lessors). The new standard requires lessees to apply a dual approach, classifying leases as either finance or operating leases based on the principle of whether or not the lease is effectively a financed purchase by the lessee. This classification will determine whether lease expense is recognized based on an effective interest method or on a straight-line basis over the term of the lease, respectively. A lessee is also required to record a right-of-use asset and a lease liability for all leases with a term of greater than 12 months regardless of their classification. Leases with a term of 12 months or less will be accounted for similar to existing guidance for operating leases today. ASU 2016-02 supersedes the previous leases standard, ASC 840, *Leases*, and is effective for public entities for annual periods beginning after December 15, 2018 and for interim periods within those fiscal years. Early adoption is permitted. The Company does have leases for equipment and real property which exceed 12 months and we are in the process of finalizing our evaluation of the impact of Topic 842. The Company intends to elect the package of practical expedients and currently expects that most of its operating lease commitments will be subject to the new standard and recognized as operating lease liabilities and right-of-use assets upon adoption of Topic 842. While we expect to record material right-of-use assets and corresponding lease liability upon adoption of Topic 482, we do not expect adoption of the guidance will result in a material impact on the Company's results of operations or cash flows.

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (Nos. 333-203184, 333-132624, 333-170515 and 333-221514) of TransAct Technologies Incorporated of our report dated March 18, 2019, except with respect to our opinion on internal control over financial reporting insofar as it relates to the effects of the matter described in the second paragraph of Management's Annual Report on Internal Control Over Financial Reporting, as to which the date is November 21, 2019, relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 10-K/A.

/s/ PricewaterhouseCoopers LLP
Hartford, Connecticut

November 21, 2019

Exhibit 31.1

RULE 13a-14(a) CERTIFICATION OF CHIEF EXECUTIVE OFFICER
IN ACCORDANCE WITH SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Bart C. Shuldman, certify that:

1. I have reviewed this report on Form 10-K/A of TransAct Technologies Incorporated;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;

   (c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 21, 2019

/s/ Bart C. Shuldman
Bart C. Shuldman
Chairman and Chief Executive Officer

Exhibit 31.2

RULE 13a-14(a) CERTIFICATION OF CHIEF FINANCIAL OFFICER
IN ACCORDANCE WITH SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Steven A. DeMartino, certify that:

1. I have reviewed this report on Form 10-K/A of TransAct Technologies Incorporated;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 21, 2019

/s/ Steven A. DeMartino

Steven A. DeMartino
President, Chief Financial Officer, Treasurer and Secretary

Exhibit 32.1

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of TransAct Technologies Incorporated (the "Company") on Form 10-K/A for the period ending December 31, 2018, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 21, 2019

/s/ Bart C. Shuldman
Bart C. Shuldman
Chairman and Chief Executive Officer

Date: November 21, 2019

/s/ Steven A. DeMartino
Steven A. DeMartino
President, Chief Financial Officer, Treasurer and Secretary