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

FORM 10-Q

(Mark One)

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

For the quarterly period ended June 30, 2020
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: 000-30269

PIXELWORKS, INC.
(Exact name of registrant as specified in its charter)

Oregon	**91-1761992**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
226 Airport Parkway, Suite 595	
San Jose , California	**95110**
(Address of principal executive offices)	**(Zip Code)**

(408) 200-9200
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.001 per share	PXLW	The Nasdaq Global Market

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 whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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 accounting 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 ☒

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

The number of outstanding shares of the registrant's common stock, par value $0.001 per share, was 40,411,149 as of July 31, 2020

PIXELWORKS, INC.
FORM 10-Q
FOR THE QUARTERLY PERIOD ENDED JUNE 30, 2020
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NOTE REGARDING COVID-19

In March 2020, the World Health Organization declared the COVID-19 outbreak a pandemic, and the virus continues to spread in areas where we operate and sell our products and services. Several public health organizations have recommended, and many local governments have implemented, certain measures to slow and limit the transmission of the virus, including shelter in place and social distancing ordinances, which has resulted in a significant deterioration of economic conditions in many of the countries in which we operate.

The spread of the COVID-19 virus has caused us to modify our business practices, including implementing work-from-home policies and restricting travel by our employees. Our China offices were the first to be impacted, in late January and most of February, but as our China team slowly came back from the COVID-19 disruption, we enabled all critical functions, from integrated circuit development to sales to algorithm and software development, to work remotely through virtual workspaces. Since the beginning of March, our Shanghai and Shenzhen offices have reopened and are at full staffing. Our offices and supply chain partners in Taiwan are fully functional and have not gone on lock down. As of today, our offices in Japan and North America are currently operating in office and remotely and are fully functional.

COVID-19 may also affect the operations of our suppliers and customers, as their own workforces and operations are disrupted by the pandemic, which could result in the interruption of our distribution system, temporary or long-term disruption in our supply chains, or delays in the delivery of our product. While we expect the impacts of COVID-19 to be temporary, the disruptions caused by the virus may negatively affect our revenue, results of operations, financial condition, liquidity, capital investments and financing arrangements in 2020. For example, we expect that our revenues for fiscal year 2020 will be lower than initially anticipated at the beginning of the year and travel restrictions and border closures could have a material impact on our ability to achieve our business goals.

In response to the outbreak of COVID-19, we have taken the following measures to date:

- Implemented work-from-home and social distancing policies throughout our organization
- Suspended all company travel other than business critical travel within China
- Drew down from our working capital-based revolving line of credit to help with liquidity
- Received a loan for $0.8 million pursuant to the Paycheck Protection Program to help with certain qualifying expenses, including payroll costs

Additionally, in preparation for a potentially prolonged economic recovery, we have taken the following cost-saving measures:

- Our CEO and the CFO have taken a 10% base salary reduction
- Our Board of Directors have agreed to take Restricted Stock Units (RSUs) in lieu of their director fees for the full year of 2020
- Our Executive staff have reduced their base salary by 10% in exchange for RSUs
- The Executive Bonus Program for 2020 has been eliminated
- Annual Merit increases for all employees have been delayed by one quarter
- All hiring has been put on hold other than a few critical hiring requisitions
- All employees have been given the opportunity to exchange up to 10% of their quarterly base salary for RSUs
- Adopted a restructuring plan that will result in an approximately 14% reduction in our workforce

The impact of the pandemic on our business, as well as the business of our suppliers and customers, and the additional measures that may be needed in the future in response to it, including additional cost-saving measures, will depend on many factors beyond our control and knowledge. We will continually monitor the situation to determine what actions may be necessary or appropriate to address the impact of the pandemic, which may include actions mandated or recommended by federal, state or local authorities.

PART I – FINANCIAL INFORMATION

Item 1. Financial Statements.

PIXELWORKS, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(In thousands)
(Unaudited)

	June 30, 2020	December 31, 2019
ASSETS		
Current assets:		
Cash and cash equivalents	$ 20,417	$ 7,257
Short-term marketable securities	992	6,975
Accounts receivable, net	5,925	10,915
Inventories	4,767	5,401
Prepaid expenses and other current assets	1,783	1,689
Total current assets	33,884	32,237
Property and equipment, net	6,138	4,608
Operating lease right of use assets	7,324	5,434
Other assets, net	1,264	1,267
Acquired intangible assets, net	1,955	2,704
Goodwill	18,407	18,407
Total assets	$ 68,972	$ 64,657
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 1,071	$ 818
Accrued liabilities and current portion of long-term liabilities	10,972	8,692
Short-term line of credit	4,329	—
Current portion of income taxes payable	219	164
Total current liabilities	16,591	9,674
Long-term liabilities, net of current portion	2,184	982
Operating lease liabilities, net of current portion	5,470	4,212
Income taxes payable, net of current portion	2,272	2,260
Total liabilities	26,517	17,128
Commitments and contingencies (Note 12)		
Shareholders' equity:		
Preferred stock	—	—
Common stock	442,998	436,122
Accumulated other comprehensive income	13	12
Accumulated deficit	(400,556)	(388,605)
Total shareholders' equity	42,455	47,529
Total liabilities and shareholders' equity	$ 68,972	$ 64,657

See accompanying notes to condensed consolidated financial statements.

PIXELWORKS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except per share data)
(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Revenue, net	$ 9,253	$ 18,027	$ 23,027	$ 34,675
Cost of revenue (1)	4,204	8,651	11,203	16,827
Gross profit	5,049	9,376	11,824	17,848
Operating expenses:				
Research and development (2)	6,314	6,364	12,581	12,836
Selling, general and administrative (3)	5,156	4,935	10,349	10,395
Restructuring	—	398	592	398
Total operating expenses	11,470	11,697	23,522	23,629
Loss from operations	(6,421)	(2,321)	(11,698)	(5,781)
Interest income (expense) and other, net	(24)	104	30	200
Gain on sale of patents	—	—	—	3,905
Total other income (expense), net	(24)	104	30	4,105
Loss before income taxes	(6,445)	(2,217)	(11,668)	(1,676)
Provision for income taxes	107	231	283	639
Net loss	$ (6,552)	$ (2,448)	$ (11,951)	$ (2,315)
Net loss per share - basic and diluted	$ (0.17)	$ (0.06)	$ (0.31)	$ (0.06)
Weighted average shares outstanding - basic and diluted	39,444	37,688	39,156	37,469
(1) Includes:				
Amortization of acquired intangible assets	298	298	596	596
Stock-based compensation	127	83	228	178
Inventory step-up and backlog amortization	—	—	—	12
(2) Includes stock-based compensation	806	703	1,454	1,364
(3) Includes:				
Stock-based compensation	1,310	879	2,383	1,812
Amortization of acquired intangible assets	76	76	152	160

See accompanying notes to condensed consolidated financial statements.

PIXELWORKS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(In thousands)
(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	**2019**	**2020**	**2019**
Net loss	$ (6,552)	$ (2,448)	$ (11,951)	$ (2,315)
Other comprehensive loss:				
Unrealized gain on available-for-sale securities	7	3	1	7
Total comprehensive loss	$ (6,545)	$ (2,445)	$ (11,950)	$ (2,308)

See accompanying notes to condensed consolidated financial statements.

PIXELWORKS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)
(Unaudited)

	Six Months Ended June 30,	
	2020	2019
Cash flows from operating activities:		
Net loss	$ (11,951)	$ (2,315)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Stock-based compensation	4,065	3,354
Depreciation and amortization	1,893	1,800
Amortization of acquired intangible assets	748	756
Reversal of uncertain tax positions	(10)	(31)
Accretion on short-term marketable securities	(10)	(52)
Deferred income tax benefit	4	—
Gain on sale of marketable securities	(4)	—
Gain on sale of patents	—	(3,905)
Inventory step-up and backlog amortization	—	12
Changes in operating assets and liabilities, net of acquisition:		
Accounts receivable, net	4,990	(371)
Inventories	634	100
Prepaid expenses and other current and long-term assets, net	1,343	207
Accounts payable	191	37
Accrued current and long-term liabilities	(1,804)	(2,230)
Income taxes payable	77	382
Net cash provided by (used in) operating activities	166	(2,256)
Cash flows from investing activities:		
Proceeds from sales and maturities of short-term marketable securities	7,498	5,600
Purchases of short-term marketable securities	(1,500)	(6,045)
Purchases of property and equipment	(612)	(1,859)
Proceeds from sale of patents	—	4,250
Purchases of licensed technology	—	(521)
Payment associated with sale of patents	—	(345)
Net cash provided by investing activities	5,386	1,080
Cash flows from financing activities:		
Proceeds from line of credit	4,329	—
Net proceeds from "at the market" equity offering	2,474	—
Proceeds from Paycheck Protection Program loan	796	—
Proceeds from issuance of common stock under employee equity incentive plans	337	315
Payments on asset financings	(328)	(337)
Net cash provided by (used in) financing activities	7,608	(22)
Net increase (decrease) in cash and cash equivalents	13,160	(1,198)
Cash and cash equivalents, beginning of period	7,257	17,944
Cash and cash equivalents, end of period	$ 20,417	$ 16,746
Supplemental disclosure of cash flow information:		
Cash paid for income taxes, net of refunds received	$ 211	$ 291
Cash paid during the period for interest	107	66
Non-cash investing and financing activities:		
Acquisitions of property and equipment and other assets under extended payment terms	1,392	—

See accompanying notes to condensed consolidated financial statements.

PIXELWORKS, INC.
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
(In thousands, except share data)
(Unaudited)

	Common Stock				Accumulated Other Comprehensive Income		Accumulated Deficit		Total Shareholders' Equity
2020	Shares		Amount						
Balance as of December 31, 2019	38,434,488	$	436,122	$	12	$	(388,605)	$	47,529
Stock issued under employee equity incentive plans	815,375		325		—		—		325
Stock-based compensation expense	—		1,822		—		—		1,822
Unrealized loss on available for sale securities	—		—		(6)		—		(6)
Net loss	—		—		—		(5,399)		(5,399)
Balance as of March 31, 2020	39,249,863	$	438,269	$	6	$	(394,004)	$	44,271
"At the market" equity offering	803,528		2,474		—		—		2,474
Stock issued under employee equity incentive plans	167,100		12		—		—		12
Stock-based compensation expense	—		2,243		—		—		2,243
Unrealized gain on available for sale securities	—		—		7		—		7
Net loss	—		—		—		(6,552)		(6,552)
Balance as of June 30, 2020	40,220,491	$	442,998	$	13	$	(400,556)	$	42,455
2019									
Balance as of December 31, 2018	36,937,458	$	428,903	$	15	$	(379,528)	$	49,390
Stock issued under employee equity incentive plans	605,911		315		—		—		315
Stock-based compensation expense	—		1,689		—		—		1,689
Unrealized gain on available for sale securities	—		—		4		—		4
Net income	—		—		—		133		133
Balance as of March 31, 2019	37,543,369	$	430,907	$	19	$	(379,395)	$	51,531
Stock issued under employee equity incentive plans	290,422		—		—		—		—
Stock-based compensation expense	—		1,665		—		—		1,665
Unrealized gain on available for sale securities	—		—		3		—		3
Net loss	—		—		—		(2,448)		(2,448)
Balance as of June 30, 2019	37,833,791	$	432,572	$	22	$	(381,843)	$	50,751

See accompanying notes to condensed consolidated financial statements.

PIXELWORKS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(In thousands, except share and per share data)
(Unaudited)

NOTE 1: BASIS OF PRESENTATION

Nature of Business

Pixelworks is a leading provider of high-performance and power-efficient visual processing solutions that bridge the gap between video content formats and rapidly advancing display capabilities. We develop and market semiconductor and software solutions that enable consistently high-quality, authentic viewing experiences in a wide variety of applications from cinema to smartphones. Our primary target markets include Mobile (smartphone, gaming and tablet), Home Entertainment (TV, personal video recorder ("PVR"), over-the-air ("OTA") and projector), Content (creation, remastering and delivery), and Business & Education (projector).

As of June 30, 2020, we had an intellectual property portfolio of 345 patents related to the visual display of digital image data. We focus our research and development efforts on developing video algorithms that improve quality, and architectures that reduce system power, cost, bandwidth and increase overall system performance and device functionality. We seek to expand our technology portfolio through internal development and co-development with business partners, and we continually evaluate acquisition opportunities and other ways to leverage our technology into other high-value markets.

Pixelworks was founded in 1997 and is incorporated under the laws of the state of Oregon. On August 2, 2017, we acquired ViXS Systems, Inc., a corporation organized in Canada ("ViXS").

Condensed Consolidated Financial Statements

The financial information included herein for the three and six month periods ended June 30, 2020 and 2019 is prepared in accordance with U.S. generally accepted accounting principles ("U.S. GAAP") and is unaudited. Such information reflects all adjustments, consisting of only normal recurring adjustments, except as discussed below, that are, in the opinion of management, necessary for a fair presentation of the Company's condensed consolidated financial statements for these interim periods. The financial information as of December 31, 2019 is derived from our audited consolidated financial statements and notes thereto for the fiscal year ended December 31, 2019, included in Item 8 of our Annual Report on Form 10-K, filed with the Securities and Exchange Commission on March 11, 2020, and should be read in conjunction with such consolidated financial statements.

The results of operations for the three month and six month periods ended June 30, 2020 and 2019 are not necessarily indicative of the results expected for future periods or for the entire fiscal year ending December 31, 2020.

Recent Accounting Pronouncements

In December 2019, the FASB issued Accounting Standards Update No. 2019-12, *Simplifying the Accounting for Income Taxes* ("ASU 2019-12"). ASU 2019-12 removes certain exceptions to the general principles in Accounting Standards Codification ("ASC") 740 and also clarifies and amends existing guidance to provide for more consistent application. ASU 2019-12 will become effective for us in the first quarter of fiscal 2021, and early adoption is permitted. We are evaluating the impact that the adoption of ASU 2019-12 will have on our financial position, results of operations and cash flows.

In November 2018, the FASB issued Accounting Standards Update No. 2018-18, *Collaborative Arrangements: Clarifying the Interaction Between Topic 808 and Topic 606* ("ASU 2018-18"). ASU 2018-18 requires transactions in collaborative arrangements to be accounted for under ASC 606 if the counterparty is a customer for a good or service (or bundle of goods and services) that is a distinct unit of account. The amendment also precludes entities from presenting consideration from transactions with a collaborator that is not a customer together with revenue recognized from contracts with customers. ASU 2018-18 became effective for us on January 1, 2020. The adoption of ASU 2018-18 did not have a material impact on our financial position, results of operations and cash flows.

Use of Estimates

The preparation of condensed consolidated financial statements in conformity with U.S. GAAP requires us to make estimates and judgments that affect amounts reported in the financial statements and accompanying notes. These estimates reflect considerations related to the impact of COVID-19. Our significant estimates and judgments include those related to revenue recognition, valuation of excess and obsolete inventory, lives and recoverability of equipment and other long-lived assets, valuation of goodwill, valuation of share-based payments, income taxes, litigation and other contingencies. The actual results experienced could differ materially from our estimates.

NOTE 2: BALANCE SHEET COMPONENTS

Accounts Receivable, Net

Accounts receivable are contract assets that arise from the performance of our performance obligation pursuant to our contracts with our customers and represent our unconditional right to payment for the satisfaction of our performance obligations. They are recorded at invoiced amount and do not bear interest when recorded or accrue interest when past due. Accounts receivable are stated net of an allowance for doubtful accounts, which is maintained for estimated losses that may result from the inability of our customers to make required payments.

Accounts receivable consists of the following:

	June 30, 2020	December 31, 2019
Accounts receivable, gross	$ 5,959	$ 10,938
Less: allowance for doubtful accounts	(34)	(23)
Accounts receivable, net	$ 5,925	$ 10,915

The following is the change in our allowance for doubtful accounts:

	Six Months Ended June 30,	
	2020	2019
Balance at beginning of period	$ 23	$ 21
Additions charged	11	24
Balance at end of period	$ 34	$ 45

Inventories

Inventories consist of finished goods and work-in-process, and are stated at the lower of standard cost (which approximates actual cost on a first-in, first-out basis) or market (net realizable value).

Inventories consist of the following:

	June 30, 2020	December 31, 2019
Finished goods	$ 2,913	$ 1,630
Work-in-process	1,854	3,771
Inventories	$ 4,767	$ 5,401

Property and Equipment, Net

Property and equipment consists of the following:

	June 30, 2020	December 31, 2019
Gross carrying amount	$ 26,117	$ 22,866
Less: accumulated depreciation and amortization	(19,979)	(18,258)
Property and equipment, net	$ 6,138	$ 4,608

Acquired Intangible Assets, Net

In connection with the acquisition of ViXS (the "Acquisition"), we recorded certain identifiable intangible assets. Acquired intangible assets resulting from this transaction were assigned to Pixelworks, Inc., and consist of the following:

	June 30, 2020	December 31, 2019
Developed technology	$ 5,050	$ 5,050
Customer relationships	1,270	1,270
Backlog and tradename	410	410
	6,730	6,730
Less: accumulated amortization	(4,775)	(4,026)
Acquired intangible assets, net	$ 1,955	$ 2,704

Developed technology and customer relationships are amortized over a useful life of 3 to 5 years. Backlog was fully amortized as of September 30, 2018 and tradename was fully amortized as of March 31, 2019.

Amortization expense for intangible assets was $374 and $748 for the three and six months ended June 30, 2020, respectively, $298 and $596 were included in cost of revenue for the three and six months ended June 30, 2020, respectively, and $76 and $152 were included in selling, general and administrative for the three and six months ended June 30, 2020, respectively, in the condensed consolidated statements of operations. As of June 30, 2020, future estimated amortization expense is as follows:

Six months ending December 31:	
2020	$ 748
Years ending December 31:	
2021	1,117
2022	90
	$ 1,955

Acquired intangible assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Conditions that would trigger an impairment assessment include, but are not limited to, past, current, or expected cash flow or operating losses associated with the asset. There were no such triggering events requiring an impairment assessment of other intangible assets during the six months ended June 30, 2020.

Goodwill

Goodwill resulted from the Acquisition, whereby we recorded goodwill of $18,407.

Goodwill is not amortized; however, we review goodwill for impairment annually and whenever events or changes in circumstances indicate that the fair value of the reporting unit may be less than it's carrying value. Conditions that would trigger an impairment assessment include, but are not limited to, a significant adverse change in our business climate or a current period operating or cash flow loss combined with a history of operating or cash flow losses or a projection or forecast that demonstrates continued losses or adverse changes in legal factors, regulation or business environment. There were no such triggering events requiring a goodwill impairment assessment during the six months ended June 30, 2020. We perform our annual impairment assessment for goodwill on November 30 of each year.

Accrued Liabilities and Current Portion of Long-Term Liabilities

Accrued liabilities and current portion of long-term liabilities consist of the following:

	June 30, 2020	December 31, 2019
Accrued payroll and related liabilities	$ 3,002	$ 3,440
Operating lease liabilities, current	1,940	1,545
Current portion of accrued liabilities for asset financings	1,056	483
Accrued commissions and royalties	559	663
Accrued interest payable	415	397
Deferred revenue	76	146
Accrued costs related to restructuring	—	66
Other	3,924	1,952
Accrued liabilities and current portion of long-term liabilities	$ 10,972	$ 8,692

Deferred revenues are contract liabilities that arise when cash payments are received or due in advance of the satisfaction of our performance obligations. Any increase in deferred revenues is driven by cash payments received or due in advance of satisfying our performance obligation pursuant to the contract with the customer. Any decrease in deferred revenues is due to the recognition of revenue related to satisfying our performance obligation.

The change in deferred revenue is as follows:

	Six Months Ended June 30,	
	2020	2019
Deferred revenue:		
Balance at beginning of period	$ 146	$ 96
Revenue deferred	585	335
Revenue recognized	(655)	(275)
Balance at end of period	$ 76	$ 156

Short-Term Line of Credit

On December 21, 2010, we entered into a Loan and Security Agreement with Silicon Valley Bank (the "Bank"), which was amended on December 14, 2012, December 4, 2013, December 18, 2015, December 15, 2016, July 21, 2017, December 21, 2017, December 18, 2018, December 18, 2019 and April 17, 2020 (as amended, the "Revolving Loan Agreement"). The Revolving Loan Agreement provides a secured working capital-based revolving line of credit (the "Revolving Line") in an aggregate amount of up to the lesser of (i) $10,000, or (ii) $2,500 plus 80% of eligible domestic accounts receivable and certain foreign accounts receivable of both Pixelworks and ViXS Systems, Inc., subject to certain limitations on the amount of accounts receivables attributable to ViXS. The Revolving Line has a maturity date of December 27, 2020. In addition, the Revolving Loan Agreement provides for non-formula advances of up to $10,000 which may be made solely during the last five business days of any fiscal month or quarter and which must be repaid by us on or before the fifth business day after the applicable fiscal month or quarter end. Due to their repayment terms, non-formula advances do not provide us with usable liquidity.

The Revolving Loan Agreement, as amended, contains customary affirmative and negative covenants as well as customary events of default. The occurrence of an event of default could result in the acceleration of our obligations under the Revolving Loan Agreement, as amended, and an increase to the applicable interest rate, and would permit the Bank to exercise remedies with respect to its security interest. As of June 30, 2020, we were in compliance with all of the terms of the Revolving Loan Agreement, as amended.

As of June 30, 2020, short-term borrowings outstanding under the Revolving Line consisted of $4,329. The weighted-average interest rate on short-term borrowings outstanding as of June 30, 2020 was 3.5%.

As of December 31, 2019, we had no outstanding borrowings under the Revolving Line.

Paycheck Protection Program Loan

On April 25, 2020, we entered into a loan with Silicon Valley Bank as the lender in an aggregate principal amount of $796 (the “Loan”) pursuant to the Paycheck Protection Program (the “PPP”) under the Coronavirus Aid, Relief, and Economic Security Act (the “CARES Act”).

The Loan is evidenced by a promissory note (the “Note”) dated April 25, 2020, and matures 2 years from the disbursement date. The Note bears interest at a rate of 1.000% per annum, with the first six months of interest deferred. Principal and interest are payable monthly commencing 6 months after the disbursement date and may be prepaid by the Company at any time prior to maturity with no prepayment penalties. The Note contains customary events of default relating to, among other things, payment defaults or breaches of the terms of the Note. Upon the occurrence of an event of default, the Lender may require immediate repayment of all amounts outstanding under the Note.

Under the terms of the CARES Act, PPP loan recipients can apply for and be granted forgiveness for all or a portion of loans granted under the PPP. The Loan is subject to forgiveness to the extent proceeds are used for payroll costs, including payments required to continue group health care benefits, and certain rent, utility, and mortgage interest expenses (collectively, “Qualifying Expenses”), pursuant to the terms and limitations of the PPP. The Company intends to use the Loan amount for Qualifying Expenses and we intend to apply for forgiveness, however, no assurance is provided that the Company will obtain forgiveness of the Loan in whole or in part.

We have elected to account for the Loan as Debt under ASC 470. The Loan proceeds are included within other long-term liabilities, net of current portion in our condensed consolidated balance sheets and we recognize interest expense at 1% per annum within interest income (expense) and other, net in our condensed consolidated statements of operations.

At the Market Offering

On June 5, 2020, we entered into a sales agreement (the "Sales Agreement") with Cowen and Company, LLC ("Cowen"), pursuant to which we may issue and sell shares of the Company's common stock, par value $0.001 per share, having an aggregate offering price of up to $25,000, from time to time, through an "at the market" equity offering program under which Cowen will act as sales agent. Under the Sales Agreement, Cowen may sell the shares by methods deemed to be an "at the market offering" as defined in Rule 415(a)(4) promulgated under the Securities Act of 1933, as amended, including sales made by means of ordinary brokers’ transactions on the Nasdaq Global Market or on any other existing trading market for the common stock or otherwise at market prices prevailing at the time of sale, in block transactions, or as otherwise directed by the Company. We pay Cowen a commission equal to three percent (3.0%) of the gross sales proceeds of any common stock sold through Cowen under the Sales Agreement. The Sales Agreement may be terminated by us upon prior notice to Cowen or by Cowen upon prior notice to us, or at any time under certain circumstances, including but not limited to the occurrence of a material adverse change in the Company. We are not obligated to sell any shares under the Sales Agreement.

As of June 30, 2020 and during the three months ended June 30, 2020, we sold an aggregate of 803,528 shares of our common stock under this at the market offering, resulting in aggregate net proceeds to us of approximately $2,474, and gross proceeds of approximately $2,812, and paid Cowen commissions and fees of approximately $144, and other expenses of $194. As of June 30, 2020, the remaining availability under the at the market offering is $22,188.

NOTE 3: MARKETABLE SECURITIES AND FAIR VALUE MEASUREMENTS

Marketable Securities

As of June 30, 2020 and December 31, 2019, all of our marketable securities are classified as available-for-sale, have contractual maturities of one year or less and consist of the following:

	Cost	Unrealized Gain (Loss)	Fair Value
Short-term marketable securities:			
As of June 30, 2020:			
Corporate debt securities	$ 735	$ 7	$ 742
Commercial paper	250	—	250
	$ 985	$ 7	$ 992
As of December 31, 2019:			
Commercial paper	$ 2,487	$ —	$ 2,487
U.S. government treasury bills	2,249	1	2,250
Corporate debt securities	2,236	2	2,238
	$ 6,972	$ 3	$ 6,975

Unrealized holding gains and losses are recorded in accumulated other comprehensive income, a component of shareholders' equity, in the condensed consolidated balance sheets.

Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Three levels of inputs may be used to measure fair value:

Level 1:	Valuations based on quoted prices in active markets for identical assets and liabilities.
Level 2:	Valuations based on inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.
Level 3:	Valuations based on unobservable inputs in which there is little or no market data available, which require the reporting entity to develop its own assumptions.

The following table presents information about our assets measured at fair value on a recurring basis in the condensed consolidated balance sheets as of June 30, 2020 and December 31, 2019:

	Level 1	Level 2	Level 3	Total
As of June 30, 2020:				
Assets:				
Cash equivalents:				
Money market funds	$ 13,897	$ —	$ —	$ 13,897
Short-term marketable securities:				
Corporate debt securities	—	742	—	742
Commercial paper	—	250	—	250
As of December 31, 2019:				
Assets:				
Cash equivalents:				
Money market funds	$ 1,307	$ —	$ —	$ 1,307
Short-term marketable securities:				
U.S. government treasury bills	2,250	—	—	2,250
Commercial paper	—	2,487	—	2,487
Corporate debt securities	—	2,238	—	2,238

We primarily use the market approach to determine the fair value of our financial assets. The fair value of our current assets and liabilities, including accounts receivable and accounts payable approximates the carrying value due to the short-term nature of these balances. We have currently chosen not to elect the fair value option for any items that are not already required to be measured at fair value in accordance with U.S. GAAP.

NOTE 4: RESTRUCTURINGS

In January 2020, we executed a restructuring plan to make the operation of the Company more efficient (the "2020 Plan"). The 2020 Plan included an approximately 4% reduction in workforce, primarily in the areas of research and development and sales.

In June 2019, we executed a restructuring plan to make the operation of the Company more efficient (the "2019 Plan"). The 2019 Plan included an approximately 2% reduction in workforce, primarily in the areas of sales and operations.

Total restructuring expense included in our statement of operations for the three and six month periods ended June 30, 2020 and 2019 is comprised of the following:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Operating expenses — restructuring:				
Employee severance and benefits	$ —	$ 398	$ 592	$ 398
Total restructuring expense	$ —	$ 398	$ 592	$ 398

During the three months ended June 30, 2020, we did not record any restructuring expense. During the six months ended June 30, 2020 we recorded $592 in restructuring expense related to the 2020 Plan. During the three and six months ended June 30, 2019, we recorded $398 in restructuring expense related to the 2019 Plan.

The following is a rollforward of the accrued liabilities related to restructuring for the six month period ended June 30, 2020:

	Balance as of December 31, 2019	Expensed	Payments	Balance as of June 30, 2020
Employee severance and benefits	$ 66	$ 592	$ (658)	$ —
Accrued costs related to restructuring	$ 66	$ 592	$ (658)	$ —

NOTE 5: LEASES

In February 2016, the FASB issued Accounting Standards Update No. 2016-02, *Leases (Topic 842)* ("ASC 842"), which requires lessees to recognize leases on the balance sheet and disclose key information about leasing arrangements. Topic 842 was subsequently amended by ASU No. 2018-01, *Land Easement Practical Expedient for Transition to Topic 842*; ASU No. 2018-10, *Codification Improvements to Topic 842*; and ASU No. 2018-11, *Targeted Improvements*. The standard establishes a right-of-use model ("ROU") that requires a lessee to recognize a ROU asset and lease liability on the balance sheet for all leases with a term longer than 12 months. Leases are classified as finance or operating, with classification affecting the pattern and classification of expense recognition in the income statement.

We adopted the standard on January 1, 2019 and used the effective date as our date of initial application under the modified retrospective approach. Under the effective date method, financial information and disclosures prior to January 1, 2019 are not required to be restated.

We elected the "practical expedient package," which permits us not to reassess under the new standard our prior conclusions about lease identification, lease classification and initial direct costs. We did not elect the use-of-hindsight or the practical expedient pertaining to land easements; the latter not being applicable to us. We elected the short-term lease recognition exemption for all leases that qualify. This means, for those leases that qualify, we will not recognize ROU assets or lease liabilities, and this includes not recognizing ROU assets or lease liabilities for existing short-term leases of those assets in transition. We also elected the practical expedient to not separate lease and non-lease components for all of our leases.

Upon adoption, we recognized operating lease liabilities of $6,847 based on the present value of the remaining minimum rental payments under current leasing standards for existing operating leases. We also recognized ROU assets of $6,224 which represents the operating lease liability adjusted for accrued rent and cease-use liabilities. The adoption did not have a material impact on our condensed consolidated statements of operations or cash flows. The most significant impact relates to (1) the recognition of new ROU assets and lease liabilities on our balance sheet for our office operating leases; and (2) providing significant new disclosures about our leasing activities.

We determine if an arrangement is a lease at inception. Operating leases are included in operating lease right-of-use ("ROU") assets, other current liabilities, and operating lease liabilities in our condensed consolidated balance sheets.

ROU assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. As most of our leases do not provide an implicit rate, we use our incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments. Operating lease ROU assets also exclude lease incentives received. For purposes of calculating operating lease liabilities, lease terms may be deemed to include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option.

We have operating leases for office buildings and one vehicle. Our leases have remaining lease terms of 1 year to 7 years. Supplemental information related to lease expense and valuation of the ROU assets and lease liabilities was as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Operating lease cost:	$ 676	$ 657	$ 1,323	$ 1,286

	Six Months Ended June 30,	
	2020	2019
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	$ 1,434	$ 1,339
Leased assets obtained in exchange for new operating lease liabilities	3,052	1,226
Weighted average remaining lease term (in years)	4.01	3.58
Weighted average discount rate	5.07 %	5.75 %

Future minimum lease payments under non-cancellable leases as of June 30, 2020 were as follows:

Operating Lease Payments	
Six months ending December 31, 2020	$ 1,148
Years ending December 31:	
2021	2,221
2022	2,193
2023	1,211
2024	807
2025	294
Thereafter	370
Total operating lease payments	8,244
Less imputed interest	(834)
Total operating lease liabilities	$ 7,410

As of June 30, 2020, the Company had no operating lease liabilities that had not commenced.

NOTE 6: REVENUE

Revenue is recognized when control of the promised good or service is transferred to our customers, in an amount that reflects the consideration we expect to be entitled to in exchange for those goods or services. Our principal revenue generating activities consist of the following:

Product Sales - We sell integrated circuit products, also known as “chips” or “ICs”, based upon a customer purchase order, which includes a fixed price per unit. We have elected to account for shipping and handling as activities to fulfill the promise to transfer the goods, and not evaluate whether these activities are promised services to the customer. We generally satisfy our single performance obligation upon shipment of the goods to the customer and recognize revenue at a point in time upon shipment of the underlying product.

Our shipments are subject to limited return rights subject to our limited warranty for our products sold. In addition, we may provide other credits to certain customers pursuant to price protection and stock rotation rights, all of which are considered variable consideration when estimating the amount of revenue to recognize. We use the “most likely amount” method to determine the amount of consideration to which we are entitled. Our estimate of variable consideration is reassessed at the end of each reporting period based on changes in facts and circumstances. Historically, returns and credits have not been material.

Engineering Services - We enter into contracts for professional engineering services that include software development and customization. We identify each performance obligation in our engineering services agreements (“ESAs”) at contract inception. The ESA generally includes project deliverables specified by the customer. The performance obligations in the ESA are generally combined into one deliverable, with the pricing for services stated at a fixed amount. Services provided under the ESA generally result in the transfer of control over time. We recognize revenue on ESAs based on the proportion of labor hours expended to the total hours expected to complete the contract performance obligation. ESAs could include substantive customer acceptance provisions. In ESAs that include substantive customer acceptance provisions, we recognize revenue upon customer acceptance.

License Revenue - On occasion, we derive revenue from the license of our internally developed intellectual property ("IP"). IP licensing agreements that we enter into generally provide licensees the right to incorporate our IP components in their products with terms and conditions that vary by licensee. Fees under these agreements generally include license fees relating to our IP and support service fees, resulting in two performance obligations. We evaluate each performance obligation, which generally results in the transfer of control at a point in time for the license fee and over time for support services.

Other - From time-to-time, we enter into arrangements for other revenue generating activities, such as providing technical support services to customers through technical support agreements. In each circumstance, we evaluate such arrangements for our performance obligations which generally results in the transfer of control for such services over time. Historically, such arrangements have not been material to our operating results.

The following table provides information about disaggregated revenue based on the preceding categories for the three and six months ended June 30, 2020 and 2019:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
IC sales	$ 8,840	$ 17,588	$ 21,958	$ 32,662
Engineering services, license and other	413	439	1,069	2,013
Total revenues	$ 9,253	$ 18,027	$ 23,027	$ 34,675

For segment information, including revenue by geographic region, see "Note 10: Segment Information".

Our contract balances include accounts receivable and deferred revenue. For information concerning these contract balances, see "Note 2: Balance Sheet Components".

Payment terms and conditions for goods and services provided vary by contract; however, payment is generally required within 30 to 60 days of invoicing.

We have not identified any material costs incurred associated with obtaining a contract with a customer which would meet the criteria to be capitalized, therefore, these costs are expensed as incurred.

The aggregate amount of the transaction price allocated to unsatisfied performance obligations with an original expected duration of greater than one year is $210, which we expect to recognize ratably over the next 21 months.

NOTE 7: INTEREST INCOME (EXPENSE) AND OTHER, NET

Interest income (expense) and other, consists of the following:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Interest income	$ 21	$ 85	$ 71	$ 185
Other income	37	53	81	97
Interest expense	(82)	(34)	(122)	(82)
Total interest income (expense) and other, net	$ (24)	$ 104	$ 30	$ 200

NOTE 8: INCOME TAXES

The provision for income taxes during the 2020 and 2019 periods is primarily comprised of current and deferred tax expense in profitable cost-plus foreign jurisdictions, accruals for tax contingencies in foreign jurisdictions and benefits for the reversal of previously recorded foreign tax contingencies due to the expiration of the applicable statutes of limitation. We recorded a benefit for the reversal of previously recorded foreign tax contingencies of $10 and $31 during the first six months of 2020 and 2019, respectively.

As we do not believe that it is more likely than not that we will realize a benefit from our U.S. net deferred tax assets, including our U.S. net operating losses, we continue to provide a full valuation allowance against essentially all of those assets, therefore, we do not incur significant U.S. income tax expense or benefit. We have not recorded a valuation allowance against our other foreign net deferred tax assets, with the exception of Canada, as we believe that it is more likely than not that we will realize a benefit from those assets.

As of June 30, 2020 and December 31, 2019, the amount of our uncertain tax positions was a liability of $1,537 and $1,554, respectively, as well as a contra deferred tax asset of $1,244 and $1,100, respectively. A number of years may elapse before an uncertain tax position is resolved by settlement or statute of limitation. Settlement of any particular position could require the use of cash. If the uncertain tax positions we have accrued for are sustained by the taxing authorities in our favor or if the statute of limitation expires, the reduction of the liability will reduce our effective tax rate. We reasonably expect reductions in the liability for unrecognized tax benefits and interest and penalties of approximately $79 within the next twelve months due to the expiration of statutes of limitation in foreign jurisdictions. We recognize interest and penalties related to uncertain tax positions in income tax expense in our condensed consolidated statements of operations.

NOTE 9: EARNINGS (LOSS) PER SHARE

The following table sets forth the computation of basic and diluted net loss per share (in thousands, except per share data):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Net loss	$ (6,552)	$ (2,448)	$ (11,951)	$ (2,315)
Weighted average shares outstanding - basic and diluted	39,444	37,688	39,156	37,469
Net loss per share - basic and diluted	$ (0.17)	$ (0.06)	$ (0.31)	$ (0.06)

The following shares were excluded from the calculation of diluted net loss per share as their effect would have been anti-dilutive (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Employee equity incentive plans	4,023	3,423	3,979	3,353

Potentially dilutive common shares from employee equity incentive plans are determined by applying the treasury stock method to the assumed exercise of outstanding stock options, the assumed vesting of outstanding restricted stock units, and the assumed issuance of common stock under the employee stock purchase plan.

NOTE 10: SEGMENT INFORMATION

We function as a single operating segment: the design and development of integrated circuits for use in electronic display devices. The majority of our assets are located in the United States.

Geographic Information

Revenue by geographic region, is as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Japan	$ 7,515	$ 15,234	$ 16,001	$ 28,694
China	959	1,686	3,805	3,548
United States	433	623	2,099	1,337
Europe	185	71	190	104
Taiwan	161	380	899	899
Korea	—	33	33	93
	$ 9,253	$ 18,027	$ 23,027	$ 34,675

Significant Customers

The percentage of revenue attributable to our distributors, top five end customers, and individual distributors or end customers that represented 10% or more of revenue in at least one of the periods presented, is as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Distributors:				
All distributors	65 %	45 %	51 %	36 %
Distributor A	54 %	37 %	29 %	30 %
End customers: [1]				
Top five end customers	73 %	81 %	61 %	80 %
End customer A	25 %	45 %	37 %	50 %
End customer B	14 %	7 %	7 %	5 %
End customer C	13 %	7 %	5 %	5 %
End customer D	11 %	9 %	6 %	6 %
End customer E	10 %	12 %	5 %	14 %

[1] End customers include customers who purchase directly from us, as well as customers who purchase our products indirectly through distributors.

The following accounts represented 10% or more of total accounts receivable in at least one of the periods presented:

	June 30, 2020	December 31, 2019
Account X	63 %	24 %
Account Y	15 %	42 %
Account Z	— %	26 %

NOTE 11: RISKS AND UNCERTAINTIES

Concentration of Suppliers

We do not own or operate a semiconductor fabrication facility and do not have the resources to manufacture our products internally. We rely on a limited number of foundries and assembly and test vendors to produce all of our wafers and for completion of finished products. We do not have any long-term agreements with any of these suppliers. In light of these dependencies, it is reasonably possible that failure to perform by one of these suppliers could have a severe impact on our results of operations. Additionally, the concentration of these vendors within Taiwan and the People's Republic of China increases our risk of supply disruption due to natural disasters, economic instability, political unrest or other regional disturbances.

Risk of Technological Change

The markets in which we compete, or seek to compete, are subject to rapid technological change, frequent new product introductions, changing customer requirements for new products and features, and evolving industry standards. The introduction of new technologies and the emergence of new industry standards could render our products less desirable or obsolete, which could harm our business.

Concentrations of Credit Risk

Financial instruments that potentially subject us to concentrations of credit risk consist of cash equivalents and accounts receivable. We limit our exposure to credit risk associated with cash equivalent balances by holding our funds in high quality, highly liquid money market accounts. We limit our exposure to credit risk associated with accounts receivable by carefully evaluating creditworthiness before offering terms to customers.

NOTE 12: COMMITMENTS AND CONTINGENCIES

Indemnifications

Certain of our agreements include indemnification provisions for claims from third-parties relating to our intellectual property. It is not possible for us to predict the maximum potential amount of future payments or indemnification costs under these or similar agreements due to the conditional nature of our obligations and the unique facts and circumstances involved in each particular agreement. We have not made any payments under these agreements in the past, and as of March 31, 2020, we have not incurred any material liabilities arising from these indemnification obligations. In the future, however, such obligations could materially impact our results of operations.

Legal Proceedings

We are subject to legal matters that arise from time to time in the ordinary course of our business. Although we currently believe that resolving such matters, individually or in the aggregate, will not have a material adverse effect on our financial position, our results of operations, or our cash flows, these matters are subject to inherent uncertainties and our view of these matters may change in the future.

Other Contractual Obligation

As part of the Acquisition, we acquired debt associated with an agreement with the Government of Canada called Technology Partnerships Canada ("TPC"). As part of the TPC agreement, ViXS Systems Inc. was provided funding to assist in research and development expenses of which a portion was later required to be repaid because the conditions for repayment were met. The scheduled payments are made on a quarterly basis and end in January 2024. As of June 30, 2020, $463 is included in accrued liabilities and current portion of long-term liabilities in our condensed consolidated balance sheets and $339 is included in long-term liabilities, net of current portion in our condensed consolidated balance sheets.

NOTE 13: SUBSEQUENT EVENTS

On August 7, 2020, the Board of Directors (the “Board”) of the Company approved a restructuring plan to make the operation of the Company more efficient and which would result in an approximately 14% reduction in workforce, primarily in the areas of operations, research and development, sales, and marketing. The Board believes adoption of this restructuring plan will help streamline the Company’s operations and workforce, and more appropriately align the Company’s operating expenses with current revenue levels. The Company expects the restructuring to be substantially completed by the end of the third quarter ending September 30, 2020 and expects to incur total estimated restructuring charges of approximately $1,500 related to employee severance and benefits. The Company expects that these charges will largely be recorded in the third quarter of 2020.

As a result of the restructuring, the Company expects to realize annualized savings of approximately $3,200.

Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations.

Forward-looking Statements

This Quarterly Report on Form 10-Q contains "forward-looking statements" that are based on current expectations, estimates, beliefs, assumptions and projections about our business. Words such as "may," "will," "appears," "predicts," "continue," "expects," "anticipates," "intends," "plans," "believes," "seeks," "estimates" and the negative or other variations of such words and similar expressions are intended to identify such forward-looking statements. These forward-looking statements include, but are not limited to, statements regarding: the impact of the COVID-19 pandemic (including any changes in laws or regulations in reaction to same) on Company personnel, on revenue, on Company suppliers, and on Company customers and their respective end markets; the Company’s restructuring plan, its expectations and estimates regarding the workforce reduction, the objectives of the restructuring plan and the timing thereof, amounts and timing of the charges and savings to be incurred in connection with the restructuring plan, and the potential impact of the restructuring plan; the anticipated features, benefits and market opportunities for our products; our technologies and intellectual property; our international operations; our strategy, including with respect to our intellectual property portfolio, research and development efforts and acquisition and investment opportunities; our gross profit margin; our restructuring programs, including estimates, timing and impact thereof, as well as any future restructuring programs; our liquidity, capital resources and the sufficiency of our working capital and need for, or ability to secure, additional financing and the potential impact thereof; our obtaining forgiveness of our PPP loan in whole or in part; our contractual obligations, exchange rate and interest rate risks; our income taxes, including our ability to realize the benefit of net deferred tax assets, our uncertain tax position liability; accounting policies and use of estimates and potential impact of changes thereto; our revenue, the potential impact on our business of certain risks, including the concentration of our suppliers, risks of technological change, concentration of credit risk, changes in the markets in which we operate, our international operations, including in Asia and our exchange rate risks, our indemnification obligations and litigation risks. These statements are not guarantees of future performance and involve certain risks and uncertainties that are difficult to predict and which may cause actual outcomes and results to differ materially from what is expressed or forecasted in such forward-looking statements. A detailed discussion of risks and uncertainties that could cause actual results and events to differ materially from such forward-looking statements, including risks related to COVID-19, risks related to our business, risks related to our industry and risks related to our common stock, is included in Part II, Item 1A of this Quarterly Report on Form 10-Q. These forward-looking statements speak only as of the date on which they are made, and we do not intend to update any forward-looking statement to reflect events or circumstances after the date of this Quarterly Report on Form 10-Q. If we do update or correct one or more forward-looking statements, you should not conclude that we will make additional updates or corrections with respect thereto or with respect to other forward-looking statements. Except where the context otherwise requires, in this Quarterly Report on Form 10-Q, the "Company," "Pixelworks," "we," "us" and "our" refer to Pixelworks, Inc., an Oregon corporation, and its wholly-owned subsidiaries.

COVID-19

In March 2020, the World Health Organization declared the COVID-19 outbreak a pandemic, and the virus continues to spread in areas where we operate and sell our products and services. Several public health organizations have recommended, and many local governments have implemented, certain measures to slow and limit the transmission of the virus, including shelter in place and social distancing ordinances, which has resulted in a significant deterioration of economic conditions in many of the countries in which we operate.

The impact of COVID-19 and the related disruptions caused to the global economy and our business did not have a material adverse impact on our business during the quarter ended March 31, 2020. However, the spread of the COVID-19 virus caused us to modify our business practices, including implementing work-from-home policies and restricting travel by our employees. We also took certain actions in response to the pandemic, which are set forth above in “Note Regarding COVID-19.”

Looking forward, the impact of the pandemic on the global economy and on our business, as well as on the business of our suppliers and customers, and the additional measures that may be needed in the future in response to it, will depend on many factors beyond our control and knowledge. We will continually monitor the situation to determine what actions may be necessary or appropriate to address the impact of the pandemic, which may include actions mandated or recommended by federal, state or local authorities. While we expect the impacts of COVID-19 to be temporary, the disruptions caused by the virus may negatively affect our revenue, results of operations, financial condition, liquidity capital investments and financing arrangements in 2020. For example, we expect that our revenues for fiscal year 2020 will be lower than initially anticipated at the beginning of the year and travel restrictions and border closures could have a material impact on our ability to achieve our business goals.

Overview

Pixelworks is a leading provider of high-performance and power-efficient visual processing solutions that bridge the gap between video content formats and rapidly advancing display capabilities. We develop and market semiconductor and software solutions that enable consistently high-quality, authentic viewing experiences in a wide variety of applications from cinema to smartphones. Our primary target markets include Mobile (smartphone, gaming and tablet), Home Entertainment (TV, personal video recorder ("PVR"), over-the-air ("OTA") and projector), Content (creation, remastering and delivery), and Business & Education (projector).

We were one of the first companies to commercially launch a video System on Chip ("SoC") capable of deinterlacing 1080i HDTV signals and one of the first companies with a commercial dual-channel 1080i deinterlacer integrated circuit. Our Topaz product line was one of the industry’s first single-chip SoC for digital projection. We first introduced our motion estimation / motion compensation technology ("MEMC") for TVs and in recent years introduced a mobile-optimized MEMC solution for smartphones, one of several unique features in the mobile-optimized Iris visual processor. In 2019, we introduced our Hollywood award-winning TrueCut® video platform, the industry’s first motion grading technology that allows fine tuning of motion appearance in cinematic content for a wide range of frame rates, shutter angles and display types.

Our solutions enable worldwide manufacturers to offer leading-edge consumer electronics and professional display products, as well as video delivery and streaming solutions for content service providers. Our core visual display processing technology intelligently processes digital images and video from a variety of sources and optimizes the content for a superior viewing experience. Our video coding technology reduces storage requirements, significantly reduces bandwidth constraint issues and converts content between multiple formats to enable seamless delivery of video, including OTA streaming, while also maintaining end-to-end content security.

Rapid growth in video consumption, combined with the move towards high frame rate / refresh rate displays, especially in mobile, is increasing the demand for our visual processing and video delivery solutions. Our technologies can be applied to a wide range of devices from large-screen projectors to cinematic big screens, to low-power mobile tablets, smartphones, high-quality video infrastructure equipment and streaming devices. Our products are architected and optimized for power, cost, bandwidth, and overall system performance, according to the requirements of the specific application. On occasion, we have also licensed our technology.

As of June 30, 2020, we had an intellectual property portfolio of 345 patents related to the visual display of digital image data. We focus our research and development efforts on developing video algorithms that improve quality, and architectures that reduce system power, cost and bandwidth and increase overall system performance and device functionality. We seek to expand our technology portfolio through internal development and co-development with business partners, and we continually evaluate acquisition opportunities and other ways to leverage our technology into other high-value markets.

Results of Operations

Revenue, net

Net revenue for the three and six month periods ended June 30, 2020 and 2019, was as follows (dollars in thousands):

	Three Months Ended June 30,			Six Months Ended June 30,		
	2020	2019	% Change	2020	2019	% Change
Revenue, net	$ 9,253	$ 18,027	(49)%	$ 23,027	$ 34,675	(34)%

Net revenue decreased $8.8 million, or 49%, in the second quarter of 2020 compared to the second quarter of 2019 and decreased $11.6 million, or 34% in the first half of 2020 compared to the first half of 2019.

Revenue recorded in the second quarter of 2020 consisted of $8.8 million in revenue from the sale of integrated circuit ("IC") products and $0.4 million in revenue related to engineering services, license revenue and other. Revenue recorded in the second quarter of 2019 consisted of $17.6 million in revenue from the sale of IC products and $0.4 million in revenue related to engineering services, license revenue and other. Revenue recorded in the first half of 2020 consisted of $21.9 million in revenue from the sale of IC products and $1.1 million in revenue related to engineering services, license revenue and other. Revenue recorded in the first half of 2019 consisted of $32.7 million in revenue from the sale of IC products and $2.0 million in revenue related to engineering services, license revenue and other.

The decrease in IC revenue in both periods presented is primarily due to decreased unit sales into the digital projector and video delivery markets as a result of customers continuing to correct their inventory levels and the disruptions caused by COVID-19 to our revenue. The decrease in revenue related to engineering services, license revenue and other is primarily due to the recognition of license revenue during the first quarter of 2019.

We expect that the disruptions caused by COVID-19 to our revenue will continue into the second half of 2020.

Cost of revenue and gross profit

Cost of revenue and gross profit for the three and six month periods ended June 30, 2020 and 2019, were as follows (dollars in thousands):

	Three Months Ended June 30,				Six Months Ended June 30,			
	2020	% of revenue	2019	% of revenue	2020	% of revenue	2019	% of revenue
Direct product costs and related overhead [1]	$ 3,783	41 %	$ 8,151	45 %	$ 10,294	45 %	$ 15,945	46 %
Amortization of acquired intangible assets	298	3	298	2	596	3	596	2
Stock-based compensation	127	1	83	0	228	1	178	1
Inventory charges [2]	(4)	0	119	1	85	0	96	0
Inventory step-up and backlog amortization	—	0	—	0	—	0	12	0
Total cost of revenue	$ 4,204	45 %	$ 8,651	48 %	$ 11,203	49 %	$ 16,827	49 %
Gross profit	$ 5,049	55 %	$ 9,376	52 %	$ 11,824	51 %	$ 17,848	51 %

1 Includes purchased materials, assembly, test, labor, employee benefits and royalties.

2 Includes charges to reduce inventory to lower of cost or market and a benefit for sales of previously written down inventory.

Gross profit margin was 55% in the second quarter of 2020 compared to 52% in the second quarter of 2019 and was 51% in the first half of 2020 compared to 51% in the first half of 2019. The increase in gross profit margin in the second quarter of 2020 compared to the second quarter of 2019 was primarily due to a more favorable mix of sales into the digital projector market. The consistent gross profit margin in the first half of 2020 compared to the first half of 2019 is primarily due to a more favorable mix of sales into the digital projector market offset by high margin license revenue recorded in the first half of 2019.

Pixelworks' gross profit margin is subject to variability based on changes in revenue levels, product mix, average selling prices, startup costs, restructuring charges, amortization related to acquired intangible assets, inventory step-up and backlog, and the timing and execution of manufacturing ramps as well as other factors.

Research and development

Research and development expense includes compensation and related costs for personnel, development-related expenses, including non-recurring engineering expenses and fees for outside services, depreciation and amortization, expensed equipment, facilities and information technology expense allocations and travel and related expenses.

Research and development expense for the three and six month periods ended June 30, 2020 and 2019, was as follows (dollars in thousands):

	Three Months Ended June 30,			Six Months Ended June 30,		
	2020	2019	% Change	2020	2019	% Change
Research and development	$ 6,314	$ 6,364	(1)%	$ 12,581	$ 12,836	(2)%

Research and development expense decreased $0.1 million, or 1% in the second quarter of 2020 compared to the second quarter of 2019 and decreased $0.3 million, or 2% in the first half of 2020 compared to the first half of 2019. The decreases in the 2020 periods compared to the 2019 periods were primarily due to a general decrease across multiple expense categories as we focused on cost management in response to the effects of COVID-19. These decreases were partially offset by an increase in non-recurring engineering expense due to the timing of development activities.

Selling, general and administrative

Selling, general and administrative expense includes compensation and related costs for personnel, sales commissions, facilities and information technology expense allocations, travel, outside services and other general expenses incurred in our sales, marketing, customer support, management, legal and other professional and administrative support functions.

Selling, general and administrative expense for the three and six month periods ended June 30, 2020 and 2019, was as follows (dollars in thousands):

	Three Months Ended June 30,			Six Months Ended June 30,		
	2020	2019	% Change	2020	2019	% Change
Selling, general and administrative	$ 5,156	$ 4,935	4 %	$ 10,349	$ 10,395	0 %

Selling, general and administrative expense increased $0.2 million, or 4%, in the second quarter of 2020 compared to the second quarter of 2019 and decreased $0.1 million, or 0% in the first half of 2020 compared to the first half of 2019. There were no individually significant increases or decreases contributing to the overall changes in the 2020 periods compared to the 2019 periods.

Restructurings

In January 2020, we executed a restructuring plan to make the operation of the Company more efficient (the "2020 Plan"). The 2020 Plan included an approximately 4% reduction in workforce, primarily in the areas of research and development and sales.

In June 2019, we executed a restructuring plan to make the operation of the Company more efficient (the "2019 Plan"). The 2019 Plan included an approximately 2% reduction in workforce, primarily in the areas of sales and operations.

Restructuring expense for the three and six month periods ended June 30, 2020 and 2019, was as follows and was included in operating expenses (dollars in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Employee severance and benefits	$ —	$ 398	$ 592	$ 398
Total restructuring expense	$ —	$ 398	$ 592	$ 398

During the three months ended June 30, 2020, we did not record any restructuring expense. During the six months ended June 30, 2020 we recorded $0.6 million in restructuring expense related to the 2020 Plan. The 2020 Plan was complete in the first quarter of 2020 and we do not expect to incur any further expenses related to the 2020 Plan. During the three and six months ended June 30, 2019, we recorded $0.4 million in restructuring expense related to the 2019 Plan. The 2019 Plan was complete as of the second quarter of 2019.

On August 6, 2020, the Board approved an additional restructuring plan which would result in an approximately 14% reduction in workforce. For additional information, see “Note 13: Subsequent Events”.

Provision for income taxes

The provision for income taxes during the 2020 and 2019 periods is primarily comprised of current and deferred tax expense in profitable cost-plus foreign jurisdictions, accruals for tax contingencies in foreign jurisdictions and benefits for the reversal of previously recorded foreign tax contingencies due to the expiration of the applicable statutes of limitation. We recorded a negligible benefit for the reversal of previously recorded foreign tax contingencies during the first half of 2020 and during the first half of 2019.

Liquidity and Capital Resources

Cash, cash equivalents and short-term marketable securities

Total cash and cash equivalents increased $13.1 million to $20.4 million at June 30, 2020 from $7.3 million at December 31, 2019. Short-term marketable securities decreased $6.0 million to $1.0 million at June 30, 2020 from $7.0 million at December 31, 2019. The net increase in cash, cash equivalents and short-term marketable securities of $7.1 million during the first half of 2020 was the result of $4.3 million in proceeds from our short-term line of credit, $2.5 million in net proceeds from our "at the market" equity offering, $0.8 million in proceeds from a Paycheck Protection Program loan, $0.3 million in proceeds from the issuances of common stock under our employee equity incentive plans and $0.2 million provided by operating activities. These increases were partially offset by $0.6 million used for purchases of property and equipment and $0.3 million used for payments on other asset financings.

As of June 30, 2020, our cash, cash equivalents and short-term marketable securities balance consisted of $13.9 million in cash equivalents held in U.S. dollar denominated money market funds, $6.5 million in cash, $0.7 million in corporate debt securities and $0.3 million in commercial paper. Our investment policy requires that our portfolio maintain a weighted average maturity of less than 12 months. Additionally, no maturities can extend beyond 24 months and concentrations with individual securities are limited. At the time of purchase, the short-term credit rating must be rated at least A-2 / P-2 / F-2 by at least two Nationally Recognized Statistical Rating Organizations ("NRSRO") and securities of issuers with a long-term credit rating must be rated at least A or A3 by at least two NRSRO. Our investment policy is reviewed at least annually by our Audit Committee.

Accounts receivable, net

Accounts receivable, net decreased to $5.9 million as of June 30, 2020 from $10.9 million as of December 31, 2019. The average number of days sales outstanding decreased to 58 days as of June 30, 2020 from 61 days as of December 31, 2019. The decrease in accounts receivable and days sales outstanding was due to normal fluctuations in the timing of sales and customer receipts within the second quarter of 2020, and the fourth quarter of 2019.

Inventories

Inventories were $4.8 million as of June 30, 2020 and $5.4 million at December 31, 2019. Inventory turnover decreased to 3.1 as of June 30, 2020 from 7.9 as of December 31, 2019 primarily due to lower cost of goods sold during the second quarter of 2020 compared to the fourth quarter of 2019. Inventory turnover is calculated based on annualized quarterly operating results and average inventory balances during the quarter.

Capital resources

Short-term line of credit

On December 21, 2010, we entered into a Loan and Security Agreement with Silicon Valley Bank (the "Bank"), which was amended on December 14, 2012, December 4, 2013, December 18, 2015, December 15, 2016, July 21, 2017, December 21, 2017, December 18, 2018, December 18, 2019 and April 17, 2020 (as amended, the "Revolving Loan Agreement"). The Revolving Loan Agreement provides a secured working capital-based revolving line of credit (the "Revolving Line") in an aggregate amount of up to the lesser of (i) $10.0 million, or (ii) $2.5 million plus 80% of eligible domestic accounts receivable and certain foreign accounts receivable of both Pixelworks and ViXS Systems, Inc., subject to certain limitations on the amount of accounts receivables attributable to ViXS. The Revolving Line has a maturity date of December 27, 2020. In addition, the Revolving Loan Agreement provides for non-formula advances of up to $10.0 million which may be made solely during the last five business days of any fiscal month or quarter and which must be repaid by us on or before the fifth business day after the applicable fiscal month or quarter end. Due to their repayment terms, non-formula advances do not provide us with usable liquidity.

The Revolving Loan Agreement contains customary affirmative and negative covenants as well as customary events of default. The occurrence of an event of default could result in the acceleration of our obligations under the Revolving Loan Agreement, and an increase to the applicable interest rate, and would permit the Bank to exercise remedies with respect to its security interest. As of June 30, 2020, we were in compliance with all of the terms of the Revolving Loan Agreement.

As of June 30, 2020, short-term borrowings outstanding under the Revolving Line consisted of $4.3 million. The weighted-average interest rate on short-term borrowings outstanding as of June 30, 2020 was 3.5%.

As of December 31, 2019, we had no outstanding borrowings under the Revolving Line.

Paycheck Protection Program Loan

On April 25, 2020, we entered into a loan with Silicon Valley Bank as the lender in an aggregate principal amount of $0.8 million (the “Loan”) pursuant to the Paycheck Protection Program (the “PPP”) under the Coronavirus Aid, Relief, and Economic Security Act (the “CARES Act”).

The Loan is evidenced by a promissory note (the “Note”) dated April 25, 2020, and matures 2 years from the disbursement date. The Note bears interest at a rate of 1.000% per annum, with the first six months of interest deferred. Principal and interest are payable monthly commencing 6 months after the disbursement date and may be prepaid by the Company at any time prior to maturity with no prepayment penalties. The Note contains customary events of default relating to, among other things, payment defaults or breaches of the terms of the Note. Upon the occurrence of an event of default, the Lender may require immediate repayment of all amounts outstanding under the Note.

Under the terms of the CARES Act, PPP loan recipients can apply for and be granted forgiveness for all or a portion of loans granted under the PPP. The Loan is subject to forgiveness to the extent proceeds are used for payroll costs, including payments required to continue group health care benefits, and certain rent, utility, and mortgage interest expenses (collectively, “Qualifying Expenses”), pursuant to the terms and limitations of the PPP. The Company intends to use the Loan amount for Qualifying Expenses and we intend to apply for forgiveness, however, no assurance is provided that the Company will obtain forgiveness of the Loan in whole or in part.

At the Market Offering

On June 5, 2020, we entered into a sales agreement (the "Sales Agreement") with Cowen and Company, LLC ("Cowen"), pursuant to which we may issue and sell shares of the Company's common stock, par value $0.001 per share, having an aggregate offering price of up to $25 million from time to time, through an "at the market" equity offering program under which Cowen will act as sales agent. Under the Sales Agreement, Cowen may sell the shares by methods deemed to be an "at the market offering" as defined in Rule 415(a)(4) promulgated under the Securities Act of 1933, as amended, including sales made by means of ordinary brokers’ transactions on the Nasdaq Global Market or on any other existing trading market for the common stock or otherwise at market prices prevailing at the time of sale, in block transactions, or as otherwise directed by the Company. We pay Cowen a commission equal to three percent (3.0%) of the gross sales proceeds of any common stock sold through Cowen under the Sales Agreement. The Sales Agreement may be terminated by us upon prior notice to Cowen or by Cowen upon prior notice to us, or at any time under certain circumstances, including but not limited to the occurrence of a material adverse change in the Company. We are not obligated to sell any shares under the Sales Agreement.

As of June 30, 2020 and during the three months ended June 30, 2020, we sold an aggregate of 803,528 shares of our common stock under this at the market offering, resulting in aggregate net proceeds to us of approximately $2.5 million, and gross proceeds of approximately $2.8 million and paid Cowen commissions and fees of approximately $0.1 million, and other expenses of $0.2 million. As of June 30, 2020, the remaining availability under the at the market offering is $22.2 million.

Liquidity

As of June 30, 2020, our cash, cash equivalents and short-term marketable securities balance of $21.4 million was highly liquid. We anticipate that our existing working capital will be adequate to fund our operating, investing and financing needs for at least the next twelve months. We may pursue financing arrangements including the issuance of debt or equity securities or reduce expenditures, or both, to meet our cash requirements, including in the longer term. There is no assurance that, if required, we will be able to raise additional capital or reduce discretionary spending to provide the required liquidity which, in turn, may have an adverse effect on our financial position, results of operations and cash flows. In addition, the impact of COVID-19 has affected our ability to pursue such financing arrangements and we are uncertain about when that will change.

From time to time, we evaluate acquisitions of businesses, products or technologies that complement our business. Any transactions, if consummated, may consume a material portion of our working capital or require the issuance of equity securities that may result in dilution to existing shareholders. Our ability to generate cash from operations is also subject to substantial risks described in Part II, “Item 1A., Risk Factors.” If any of these risks occur, we may be unable to generate or sustain positive cash flow from operating activities. We would then be required to use existing cash and cash equivalents to support our working capital and other cash requirements. If additional funds are required to support our working capital requirements, acquisitions or other purposes, we may seek to raise funds through debt financing, equity financing or from other sources. If we raise additional funds through the issuance of equity or convertible debt securities, the percentage ownership of our shareholders could be significantly diluted, and these newly-issued securities may have rights, preferences or privileges senior to those of existing shareholders. If we raise additional funds by obtaining loans from third parties, the terms of those financing arrangements may include negative covenants or other restrictions on our business that could impair our operating flexibility and would also require us to incur interest expense. We can provide no assurance that additional financing will be available at all or, if available, that we would be able to obtain additional financing on terms favorable to us.

Contractual Payment Obligations

Our contractual obligations for 2020 and beyond are included in our Quarterly Report on Form 10-Q for the quarter ended March 31, 2020, filed with the Securities and Exchange Commission on May 8, 2020. Our obligations for 2020 and beyond have not changed materially as of June 30, 2020.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements that have, or are reasonably likely to have, a material current or future effect on our financial condition, results of operations, liquidity, capital expenditures or capital resources.

Item 3. Quantitative and Qualitative Disclosure About Market Risk.

Not applicable.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Based on management’s evaluation (with the participation of our Chief Executive Officer (our Principal Executive Officer) and Chief Financial Officer (our Principal Financial Officer)), our Chief Executive Officer and Chief Financial Officer have evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, (the "Exchange Act")) to determine if they provide reasonable assurance that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms and is accumulated and communicated to management, including our Principal Executive Officer and Principal Financial Officer, as appropriate to allow timely decisions regarding required disclosure. Based on this evaluation, the Chief Executive Officer and Chief Financial Officer have concluded that, as of the end of the period covered by this report, the Company’s disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

There were no changes to our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the period covered by this report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations on Effectiveness of Controls

Our management, including the Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls or our internal control over financial reporting will prevent or detect all error and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system’s objectives will be met. The design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Further, because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, have been detected. The design of any system of controls is based in part on certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Projections of any evaluation of the effectiveness of controls to future periods are subject to risks. Over time, controls may become inadequate because of changes in conditions or deterioration in the degree of compliance with policies or procedures.

PART II – OTHER INFORMATION

Item 1A. Risk Factors.

The following risks could materially and adversely affect our business, financial condition, and results of operations, and the trading price of our common stock could decline. These risk factors do not identify all of the risks that we face. Our business operations could also be affected by factors that we currently consider to be immaterial or that are unknown to us at the present time. Investors should also refer to the other information contained in this Quarterly Report on Form 10-Q and our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, including our consolidated financial statements and related notes, and our other filings made from time to time with the Securities and Exchange Commission ("SEC").

Risks Related to COVID-19

The ongoing effects of the COVID-19 pandemic could disrupt our business or the business of our customers or suppliers, and as such, may adversely affect our financial condition.

Our business, the businesses of our customers, and the businesses of our suppliers could be materially and adversely affected by the effects of the COVID-19 pandemic and the related governmental, business and community responses to it. Additionally, the economies and financial markets of many countries have been impacted by the pandemic, and the longevity and significance of the resulting economic impact is currently unknown. A significant economic downturn could materially and adversely affect our end customers, and thus could negatively impact demand for our products and our operating results.

Many state governments in the U.S. have issued “shelter in place” or “stay at home” orders that generally require residents remain in their homes, subject to certain exceptions for essential services. For example, in California, where our corporate headquarters are, a “stay at home” order is currently in effect that requires our employees to work from home until further notice. Additionally, our employees in Japan and in the rest of North America are working from home under similar orders from local governments. The continuing impact of these, and similar orders may adversely impact the efficiency and effectiveness of our organization, as well as the operations of our suppliers and customers. We face additional risks and challenges related to having a portion of our workforce working from home, including added pressure on our IT systems and the security of our network, and new challenges as our team adjusts to online collaboration. Additionally, our sales team may not be able to make sales calls to current and potential customers at the same volume as they did prior to the stay at home orders as they juggle varying competing interests. Also, our ability to make in-person sales calls may be affected in areas with stay at home orders in place, which may, in turn, affect our revenues.

The outbreak of COVID-19 may put additional pressures on our supply chain, including temporary or long-term disruption or delays. If the impact of an outbreak continues for an extended period, it could adversely impact our supply chain and the growth of our revenues. COVID-19 may result in supply shortages of our products or our ability to import, export or sell product to customers in both the U.S. and international markets. Any decrease, limitations or delays on our ability to import, export, or sell our products would harm our business.

The continued uncertain global economic environment and volatility in global credit and financial markets could materially and adversely affect our business and results of operations.

The state of the global economy continues to be uncertain. As a result of these conditions, our manufacturers, vendors and customers might experience deterioration of their businesses, cash flow shortages and difficulty obtaining financing which could result in interruptions or delays in the performance of any contracts, reductions and delays in customer purchases, delays in or the inability of customers to obtain financing to purchase our products, and bankruptcy of customers. Furthermore, the constraints in the capital and credit markets, may limit the ability of our customers to meet their liquidity needs, which could result in an impairment of their ability to make timely payments to us and reduce their demand for our products, adversely impacting our results of operations and cash flows. This environment has also made it difficult for us to accurately forecast and plan future business activities.

Company Specific Risks

If we fail to meet the evolving needs of our markets, identify new products, services or technologies, or successfully compete in our target markets, our revenue and financial results will be adversely impacted.

Pixelworks designs, develops and markets visual processing and advanced media processing solutions in the mobile video, digital projection and video delivery markets. Our success depends to a significant extent on our ability to meet the evolving needs of these markets and to enhance our existing products, solutions and technologies. In addition, our success depends on our ability to identify emerging industry trends and to develop new products, solutions and technologies. Our existing markets and products and new markets and products may require a considerable investment of technical, financial, compliance, sales and marketing resources. We are currently devoting significant resources to the development of technologies and business offerings in markets where our operating history is less extensive, such as the video delivery market where our acquisition of ViXS has allowed us to expand our market presence and product portfolio.

We cannot assure you that our strategic direction will result in innovative products and technologies that provide value to our customers and partners. If we fail to anticipate the changing needs of our target markets and emerging technology trends, or adapt that strategy as market conditions evolve, in a timely manner to exploit potential market opportunities our business will be harmed. In addition, if demand for products and solutions from these markets is below our expectations, if we fail to achieve consumer or market acceptance of them or if we are not able to develop these products and solutions in a cost effective or efficient manner, we may not realize benefits from our strategy.

Our target markets remain extremely competitive, and we expect competition to intensify as current competitors expand their product and/or service offerings, industry standards continue to evolve and new competitors enter these markets. If we are unable to successfully compete in our target markets, demand for our products, solutions and technologies could decrease, which would cause our revenue to decline and our financial results to suffer.

Our product strategy, which is targeted at markets demanding superior video and digital image quality as well as efficient video delivery, may not address the demands of our target customers and may not lead to increased revenue in a timely manner or at all, which could materially adversely affect our results of operations and limit our ability to grow.

We have adopted a product strategy that focuses on our core competencies in visual display processing and delivering high levels of video and digital image quality. With this strategy, we continue to make further investments in the development of our image processor architecture for the digital projector market, with particular focus on adding increased performance and functionality. For the mobile device market, our strategy focuses on implementing our intellectual property ("IP") to improve the video performance of our customers’ image processors through the use of our MotionEngine® advanced video co-processor integrated circuits. This strategy is designed to address the needs of the high-resolution and high-quality segment of these markets. Such markets may not develop or may take longer to develop than we expect. We cannot assure you that the products we are developing will adequately address the demands of our target customers, or that we will be able to produce our new products at costs that enable us to price these products competitively.

Achieving design wins involves lengthy competitive selection processes that require us to incur significant expenditures prior to generating any revenue or without any guarantee of any revenue related to this business. If we fail to generate revenue after incurring substantial expenses to develop our products, our business and operating results would suffer.

We must achieve "design wins" that enable us to sell our semiconductor solutions for use in our customers’ products. These competitive selection processes typically are lengthy and can require us to incur significant research and development expenditures and dedicate scarce engineering resources in pursuit of a single customer opportunity. We may not achieve a design win and may never generate any revenue despite incurring significant research and development expenditures. This could cause us to lose revenue and require us to write off obsolete inventory and could weaken our position in future competitive selection processes.

Even if our product strategy is properly targeted, we cannot assure you that the products we are developing will lead to an increase in revenue from new design wins. To achieve design wins, we must design and deliver cost-effective, innovative and integrated semiconductors that overcome the significant costs associated with qualifying a new supplier and which make developers reluctant to change component sources. Additionally, potential developers may be unwilling to select our products due to concerns over our financial strength. Further, design wins do not necessarily result in developers ordering large volumes of our products. Developers can choose at any time to discontinue using our products in their designs or product development efforts. A design win is not a binding commitment by a developer to purchase our products, but rather a decision by a developer to use our products in its design process. Even if our products are chosen to be incorporated into a developer’s products, we may still not realize significant revenue from the developer if its products are not commercially successful or it chooses to qualify, or incorporate the products, of a second source. Additionally, even if our product strategy is successful at achieving design wins and increasing our revenue, we may continue to incur operating losses due to the significant research and development costs that are required to develop competitive products for the digital projection market and mobile market.

System security and data protection breaches, as well as cyber-attacks, could disrupt our operations, reduce our expected revenue and increase our expenses, which could adversely affect our stock price and damage our reputation.

Security breaches, computer malware and cyber-attacks have become more prevalent and sophisticated in recent years. These attacks have occurred on our systems in the past and are expected to occur in the future. Experienced computer programmers, hackers and employees may be able to penetrate our security controls and misappropriate or compromise our confidential information, or that of our employees or third parties. These attacks may create system disruptions or cause shutdowns. For portions of our IT infrastructure, including business management and communication software products, we rely on products and services provided by third parties. These providers may also experience breaches and attacks to their products which may impact our systems. Data security breaches may also result from non-technical means, such as actions by an employee with access to our systems.

Actual or perceived breaches of our security measures or the accidental loss, inadvertent disclosure or unapproved dissemination of proprietary information or sensitive or confidential data about us, our partners, our customers or third parties could expose the parties affected to a risk of loss, or misuse of this information, resulting in litigation and potential liability, damage to our brand and reputation or other harm to our business. Our efforts to prevent and overcome these challenges could increase our expenses and may not be successful. We may experience interruptions, delays, cessation of service and loss of existing or potential customers. Such disruptions could adversely impact our ability to fulfill orders and interrupt other critical functions. Delayed sales, lower margins or lost customers as a result of these disruptions could adversely affect our financial results, stock price and reputation.

If we fail to retain or attract the specialized technical and management personnel required to successfully operate our business, it could harm our business and may result in lost sales and diversion of management resources.

Our success depends on the continued services of our executive officers and other key management, engineering, and sales and marketing personnel and on our ability to continue to attract, retain and motivate qualified personnel. Competition for skilled engineers and management personnel is intense within our industry, and we may not be successful in hiring and retaining qualified individuals. For example, we have experienced, and may continue to experience, difficulty and increased compensation expense in order to hire and retain qualified engineering personnel in our Shanghai design center. The loss of, or inability to hire, key personnel could limit our ability to develop new products and adapt existing products to our customers’ requirements, and may result in lost sales and a diversion of management resources. Any transition in our senior management team may involve a diversion of resources and management attention, be disruptive to our daily operations or impact public or market perception, any of which could have a negative impact on our business or stock price.

We may not fully realize the estimated savings from our restructurings in a timely manner or at all, and our restructuring programs may result in business disruptions and decrease productivity. Any of the foregoing would negatively affect our financial condition and results of operations.

In each of 2020, 2019 and 2018, we executed restructuring plans to make the operation of the Company more efficient. While these restructuring plans were complete as of June 30, 2020, we may not be able to implement future restructuring programs as planned, and we may need to take additional measures to fulfill the objectives of our restructuring. The anticipated expenses associated with our restructuring programs may differ from or exceed our expectations, and we might not be able to realize the full amount of estimated savings from the restructuring programs, in a timely manner, or at all. Additionally, our restructuring plans may result in business disruptions or decreases in productivity. As a result, our restructuring plans could have an adverse impact on our financial condition or results of operations.

We have significantly fewer financial resources than most of our competitors, which limits our ability to implement new products or enhancements to our current products and may require us to implement additional future restructuring plans, which in turn could adversely affect our future sales and financial condition.

Financial resource constraints could limit our ability to execute our product strategy or require us to implement additional restructuring plans, particularly if we are unable to generate sufficient cash from operations or obtain additional sources of financing. Any future restructuring actions may slow our development of new or enhanced products by limiting our research and development and engineering activities. Our cash balances are also lower than those of our competitors, which may limit our ability to develop competitive new products on a timely basis or at all. If we are unable to successfully introduce new or enhanced products, our sales, operating results and financial condition will be adversely affected.

If we are not profitable in the future, we may be unable to continue our operations.

We have incurred operating losses each fiscal year since 2010 and have an accumulated deficit of $388.6 million as of December 31, 2019. If and when we achieve profitability depends upon a number of factors, including our ability to develop and market innovative products, accurately estimate inventory needs, contract effectively for manufacturing capacity and maintain sufficient funds to finance our activities. We cannot assure our investors that we will ever achieve annual profitability, or that we will be able to maintain profitability if achieved. If we are not profitable in the future, we may be unable to continue our operations.

A significant amount of our revenue comes from a limited number of customers and distributors and from time to time we may enter into exclusive deals with customers, exposing us to increased credit risk and subjecting our cash flow to the risk that any of our customers or distributors could decrease or cancel its orders.

The display manufacturing market is highly concentrated and we are, and will continue to be, dependent on a limited number of customers and distributors for a substantial portion of our revenue. Sales to our top distributor represented 29%, 28% and 34% of revenue for the six months ended June 30, 2020 and the years ended December 31, 2019 and 2018, respectively. If any of our distributors ceases to do business with us, it may be difficult for us to find adequate replacements, and even if we do, it may take some time. The loss of any of our top distributors could negatively affect our results of operations. Additionally, revenue attributable to our top five end customers represented 61%, 77% and 82% of revenue for the six months ended June 30, 2020 and the years ended December 31, 2019 and 2018, respectively. As of June 30, 2020 we had two accounts that each represented 10% or more of accounts receivable. As of December 31, 2019, we had three accounts that each represented 10% or more of accounts receivable. All of the orders included in our backlog are cancelable. A reduction, delay or cancellation of orders from one or more of our significant customers, or a decision by one or more of our significant customers to select products manufactured by a competitor or to use its own internally-developed semiconductors, would significantly and negatively impact our revenue. Further, the concentration of our accounts receivable with a limited number of customers increases our credit risk. The failure of these customers to pay their balances, or any customer to pay future outstanding balances, would result in an operating expense and reduce our cash flows.

We generally do not have long-term purchase commitments from our customers and if our customers cancel or change their purchase commitments, our revenue and operating results could suffer.

Substantially all of our sales to date have been made on a purchase order basis. We generally do not have long-term commitments with our customers. As a result, our customers may cancel, change or delay product purchase commitments with little or no notice to us and without penalty. This, in turn, could cause our revenue to decline and materially and adversely affect our results of operations.

Our revenue and operating results can fluctuate from period to period, which could cause our share price to decline.

Our revenue and operating results have fluctuated in the past and may fluctuate from period to period in the future due to a variety of factors, many of which are beyond our control. Factors that may contribute to these fluctuations include those described in this "Risk Factors" section of this report, such as the timing, changes in or cancellation of orders by customers, market acceptance of our products and our customers’ products and the timing and extent of product development costs. Additionally, our business is subject to seasonality related to the markets we serve and the location of our customers. For example, we have historically experienced higher revenue from the digital projector market in the third quarter of the year, and lower revenue in the first quarter of the year. As a result of these and other factors, the results of any prior quarterly or annual periods should not be relied upon as indications of our future revenue or operating performance. Fluctuations in our revenue and operating results could cause our share price to decline.

We may not be able to borrow funds under our credit facility or secure future financing which could affect our ability to fund fluctuations in our working capital requirements.

In December 2010, we entered into a Loan and Security Agreement with Silicon Valley Bank, which was later amended on December 14, 2012, December 4, 2013, December 18, 2015, December 15, 2016, July 21, 2017, December 21, 2017, December 18, 2018, December 18, 2019 and April 17, 2020 (as amended, the "Revolving Loan Agreement"). The Revolving Loan Agreement provides a secured working capital-based revolving line of credit (the "Revolving Line") in an aggregate amount of up to the lesser of (i) $10.0 million or (ii) $2.5 million plus 80% of eligible domestic accounts receivable and certain foreign accounts receivable of both Pixelworks and ViXS Systems, Inc., subject to certain limitations on the amount of accounts receivables attributable to ViXS. The Revolving Line has a maturity date of December 27, 2020. We view this line of credit as a source of available liquidity to fund fluctuations in our working capital requirements; however, all credit extensions are subject to the bank’s sole discretion. If we experience an increase in order activity from our customers, our cash balance may decrease due to the need to purchase inventories to fulfill those orders. If this occurs, we may need to draw on this facility in order to maintain our liquidity.

This facility contains various conditions, covenants and representations with which we must be in compliance in order to borrow funds. We cannot assure you that we will be in compliance with these conditions, covenants and representations when we may need to borrow funds under this facility, nor can we assure you that the bank will consent to such borrowings, in which case we may need to seek alternative sources of funding, which may not be available quickly or which may be available only on less favorable terms. Our inability to raise the necessary funding in the event we need it could negatively affect our business. In addition, the amount available to us under this facility depends in part on our accounts receivable balance which could decrease due to a decrease in revenue.

This facility expires on December 27, 2020, after which time we may need to secure new financing to continue funding fluctuations in our working capital requirements. We cannot assure you that we will be able to secure new financing in a timely manner or at all, or secure financing on terms that are acceptable to us.

If we are unable to generate sufficient cash from operations and are forced to seek additional financing alternatives, or in the event we acquire or make an investment in companies that complement our business, our working capital may be adversely affected and our shareholders may experience dilution or our operations may be impaired.

We may be unable to generate or sustain positive cash flow from operating activities and would then be required to use existing cash and cash equivalents to support our working capital and other cash requirements. Additionally, from time to time, we may evaluate acquisitions of, or investments in, businesses, products or technologies that complement our business. For example, on August 2, 2017 we completed the acquisition of ViXS and issued approximately 3.7 million shares of our common stock as consideration. Any additional transactions, if consummated, may consume a material portion of our working capital or require the issuance of equity securities that may result in dilution to existing shareholders. If additional funds are required to support our working capital requirements, acquisitions or other purposes, we may seek to raise funds through debt and equity financing or from other sources. If we raise additional funds through the issuance of equity or convertible debt securities, the percentage ownership of our shareholders could be significantly diluted, and these newly-issued securities may have rights, preferences or privileges senior to those of existing shareholders. If we raise additional funds by obtaining loans from third parties, the terms of those financing arrangements may include negative covenants or other restrictions on our business that could impair our operating flexibility, and would also require us to incur interest expense. We can provide no assurance that additional financing will be available at all or, if available, that we would be able to obtain additional financing on terms favorable to us.

We face risks related to the Paycheck Protection Program loan, which could negatively impact our financial position.

We face risks related to the Paycheck Protection Program loan, which could negatively impact our financial position. On April 25, 2020, the Company entered into a loan with Silicon Valley Bank as the lender in an aggregate principal amount of $796,242 (the "Loan") pursuant to the Paycheck Protection Program (the "PPP") under the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act"). The Loan is evidenced by a promissory note (the "Note") dated April 25, 2020, and matures 2 years from the disbursement date. The Note bears interest at a rate of 1.000% per annum, with the first six months of interest deferred. Principal and interest are payable monthly commencing 6 months after the disbursement date and may be prepaid by the Company at any time prior to maturity with no prepayment penalties. Under the terms of the CARES Act, PPP loan recipients can apply for and be granted forgiveness for all or a portion of loans granted under the PPP. The Loan is subject to forgiveness to the extent proceeds are used for payroll costs, including payments required to continue group health care benefits, and certain rent, utility, and mortgage interest expenses (collectively, "Qualifying Expenses"), pursuant to the terms and limitations of the PPP. The Company intends to use the Loan amount for Qualifying Expenses and intends to apply for forgiveness, however, no assurance is provided that the Company will obtain forgiveness of the Loan in whole or in part. If forgiveness is not granted, the PPP Loan, in whole or in part, will need to be repaid by the Company, which could have an adverse effect on our future cash flows and financial position.

We license our intellectual property, which exposes us to risks of infringement or misappropriation, and may cause fluctuations in our operating results.

We have licensed certain intellectual property to third parties and may enter into additional license arrangements in the future. We cannot assure you, however, that others will be interested in licensing our intellectual property on commercially favorable terms or at all. We also cannot ensure that licensees will honor agreed-upon market restrictions, not infringe upon or misappropriate our intellectual property or maintain the confidentiality of our proprietary information.

IP license agreements are complex and earning and recognizing revenue under these agreements depends upon many factors, including completion of milestones, allocation of values to delivered items and customer acceptances. Many of these factors require significant judgments. Also, generating revenue from these arrangements is a lengthy and complex process that may last beyond the period in which efforts begin and, once an agreement is in place, the timing of revenue recognition may depend on events such as customer acceptance of deliverables, achievement of milestones, our ability to track and report progress on contracts, customer commercialization of the licensed technology and other factors, any or all of which may or may not be achieved. The accounting rules associated with recognizing revenue from these transactions are complex and subject to interpretation. Due to these factors, the amount of licensing revenue recognized in any period, if any, and our results of operations, may differ significantly from our expectations.

Finally, because licensing revenue typically has a higher margin compared to product sales, licensing revenue can have a disproportionate impact on our gross profit and results of operations. There is no assurance that we will be able to maintain a consistent level of licensing revenue or mix of licensing revenue and revenue from product sales, which could result in wide fluctuations in our results of operations from period to period, making it difficult to accurately measure the performance of our business.

Our net operating loss carryforwards may be limited or they may expire before utilization.

As of December 31, 2019, we had federal, state and foreign net operating loss carryforwards of approximately $174.5 million, $10.9 million, and $38.5 million respectively, which will begin to expire in 2020. These net operating loss carryforwards may be used to offset future taxable income and thereby reduce our income taxes otherwise payable. However, we cannot assure you that we will have taxable income in the future before all or a portion of these net operating loss carryforwards expire. Additionally, our federal net operating losses may be limited by Section 382 of the Internal Revenue Code of 1986, as amended (the "Code"), which imposes an annual limit on the ability of a corporation that undergoes an "ownership change" to use its net operating loss carryforwards to reduce its tax liability. An ownership change is generally defined as a greater than 50% increase in equity ownership by 5% shareholders in any three-year period. In the event of certain changes in our shareholder base, we may at some time in the future experience an "ownership change" and the use of our federal net operating loss carryforwards may be limited. In addition, the Tax Cuts and Jobs Act (the "TCJA"), limits the deduction for net operating loss carryforwards to 80 percent of taxable income for losses arising in taxable years beginning after December 31, 2017.

We face a number of risks as a result of the concentration of our operations and customers in Asia.

Many of our customers are located in Japan, China, Korea, or Taiwan. Sales outside the U.S. accounted for approximately 91%, 95% and 98% of revenue for the six months ended June 30, 2020 and the years ended December 31, 2019 and 2018, respectively. We anticipate that sales outside the U.S. will continue to account for a substantial portion of our revenue in future periods. In addition, customers who incorporate our products into their products sell a substantial portion of their products outside of the U.S. All of our products are also manufactured outside of the U.S. and most of our current manufacturers are located in Taiwan. Furthermore, most of our employees are located in China, Japan and Taiwan. Our Asian operations require significant management attention and resources, and we are subject to many risks associated with operations in Asia, including, but not limited to:

- outbreaks of health epidemics in China or other parts of Asia, including COVID-19;
- difficulties in managing international distributors and manufacturers due to varying time zones, languages and business customs;
- compliance with U.S. laws affecting operations outside of the U.S., such as the Foreign Corrupt Practices Act;
- reduced or limited protection of our IP, particularly in software, which is more prone to design piracy;
- difficulties in collecting outstanding accounts receivable balances;
- changes in tax rates, tax laws and the interpretation of those laws;
- difficulties regarding timing and availability of export and import licenses;
- ensuring that we obtain complete and accurate information from our Asian operations to make proper disclosures in the United States;
- political and economic instability;
- difficulties in maintaining sales representatives outside of the U.S. that are knowledgeable about our industry and products;
- changes in the regulatory environment in China, Japan, Taiwan and Korea that may significantly impact purchases of our products by our customers or our customers' sales of their own products;
- imposition of new tariffs, quotas, trade barriers and similar trade restrictions on our sales;
- varying employment and labor laws; and
- greater vulnerability to infrastructure and labor disruptions than in established markets.

Any of these factors could require a disproportionate share of management's attention, result in increased costs or decreased revenues, and could materially affect our product sales, financial condition and results of operations.

Our operations in Asia expose us to heightened risks due to natural disasters.

The risk of natural disasters in the Pacific Rim region is significant. Natural disasters in countries where our manufacturers or customers are located could result in disruption of our manufacturers' and customers' operations, resulting in significant delays in shipment of, or significant reductions in orders for, our products. There can be no assurance that we can locate additional manufacturing capacity or markets on favorable terms, or find new customers, in a timely manner, if at all. Natural disasters in this region could also result in:

- reduced end user demand due to the economic impact of any natural disaster;
- a disruption to the global supply chain for products manufactured in areas affected by natural disasters that are included in products purchased either by us or by our customers;
- an increase in the cost of products that we purchase due to reduced supply; and
- other unforeseen impacts as a result of the uncertainty resulting from a natural disaster.

We face additional risks associated with our operations in China and our results of operations and financial position may be harmed by changes in China's political, economic or social conditions or changes in U.S.-China relations.

We have, and expect to continue to have, significant operations in China. The economy of China differs from the economies of many countries in important respects such as structure, government involvement, level of development, growth rate, capital reinvestment, allocation of resources, self-sufficiency, rate of inflation, foreign currency flows and balance of payments position, among others. There can be no assurance that China's economic policies will be consistent or effective and our results of operations and financial position may be harmed by changes in China's political, economic or social conditions. Additionally, the political and economic relationship between the U.S. and China is uncertain, and any changes in policy as a result may adversely affect our business.

Additionally, our Chinese subsidiary is considered a foreign-invested enterprise and is subject to laws and regulations applicable to foreign investment in China and, in particular, laws applicable to foreign-invested enterprises. For example, China's government imposes control over the convertibility of RMB into foreign currencies, which can cause difficulties converting cash held in RMB to other currencies. While the overall effect of legislation over the past two decades has significantly enhanced the protections afforded to various foreign investments in China, China has not developed a fully integrated legal system, and recently enacted laws and regulations may not sufficiently cover all aspects of economic activities in China. Because these laws and regulations are relatively new, and published court decisions are limited and nonbinding in nature, the interpretation and enforcement of these laws and regulations involve uncertainties. In addition, China's legal system is based in part on government policies and internal rules, some of which are not published on a timely basis or at all, which may have a retroactive effect. As a result, we may not be aware of our violation of these policies and rules until after the violation occurs. Any administrative and court proceedings in China may be protracted, resulting in substantial costs and diversion of resources and management attention. Further, since Chinese administrative and court authorities have significant discretion in interpreting and implementing statutory and contractual terms, it may be more difficult to evaluate the outcome of administrative and court proceedings. These uncertainties may also impede our ability to enforce the contracts entered into by our Chinese subsidiary and could materially and adversely affect our business and results of operations.

Our international operations expose us to risks resulting from the fluctuations of foreign currencies.

We are exposed to risks resulting from the fluctuations of foreign currencies, primarily those of Japan, Taiwan, Korea and China. Additionally, with the acquisition of ViXS, we are exposed to risks resulting from fluctuations in the Canadian dollar. We sell our products to OEMs that incorporate our products into other products that they sell outside of the U.S. While sales of our products to OEMs are denominated in U.S. dollars, the products sold by OEMs are denominated in foreign currencies. Accordingly, any strengthening of the U.S. dollar against these foreign currencies will increase the foreign currency price equivalent of our products, which could lead to a change in the competitive nature of these products in the marketplace. This, in turn, could lead to a reduction in revenue.

In addition, a portion of our operating expenses, such as employee salaries and foreign income taxes, are denominated in foreign currencies. Accordingly, our operating results are affected by changes in the exchange rate between the U.S. dollar and those currencies. Any future strengthening of those currencies against the U.S. dollar will negatively impact our operating results by increasing our operating expenses as measured in U.S. dollars.

We may engage in financial hedging techniques in the future as part of a strategy to address potential foreign currency exchange rate fluctuations. These hedging techniques, however, may not be successful at reducing our exposure to foreign currency exchange rate fluctuations and may increase costs and administrative complexity.

Failure to comply with anti-bribery, anti-corruption, and anti-money laundering laws could subject us to penalties and other adverse consequences.

We are subject to the Foreign Corrupt Practices Act ("FCPA") and other anti-corruption, anti-bribery and anti-money laundering laws in various jurisdictions. From time to time, we may leverage third parties to help conduct our businesses abroad. We and our third-party intermediaries may have direct or indirect interactions with officials and employees of government agencies or state-owned or affiliated entities and may be held liable for the corrupt or other illegal activities of these third-party business partners and intermediaries, our employees, representatives, contractors, channel partners, and agents, even if we do not explicitly authorize such activities. While we have policies and procedures to address compliance with such laws, we cannot assure you that all of our employees and agents will not take actions in violation of our policies and applicable law, for which we may be ultimately held responsible. Any violation of the FCPA or other applicable anti-bribery, anti-corruption laws, and anti-money laundering laws could result in whistleblower complaints, adverse media coverage, investigations, loss of export privileges, severe criminal or civil sanctions, or suspension or debarment from U.S. government contracts, all of which may have an adverse effect on our reputation, our business, results of operations and financial condition.

Our reported financial results may be materially and adversely affected by changes in accounting principles generally accepted in the United States.

Generally accepted accounting principles in the United Sates are subject to interpretation by the Financial Accounting Standards Board ("FASB"), the SEC, and various bodies formed to promulgate and interpret appropriate accounting principles. A change in these principles or interpretations could have a significant effect on our reported financial results and could materially and adversely affect the transactions completed before the announcement of a change. Additionally, the adoption of new or revised accounting principles may require that we make significant changes to our systems, processes and controls. In February 2016, the FASB issued Accounting Standards Update No. 2016-02, *Leases (Topic 842)* ("ASU 2016-02"). ASU 2016-02 requires a dual approach for lessee accounting under which a lessee would account for leases as finance leases or operating leases. ASU 2016-02 became effective for us on January 1, 2019. Upon adoption, we recognized additional operating lease liabilities of $6,847 based on the present value of the remaining minimum rental payments under current leasing standards for existing operating leases. We also recognized ROU assets of $6,224, which represents the operating lease liability adjusted for accrued rent and impairment of ROU assets.

If we are unable to maintain effective disclosure controls and internal controls over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports, and the market price of our common stock may be materially and adversely affected.

In the second quarter of 2019, we identified a material weakness in our internal controls over financial reporting related to the review of aged liabilities for possible extinguishment due to the expiration of the statute of limitation, which was remediated as of December 31, 2019. As a result, investors may have lost confidence in the accuracy and completeness of our financial reports and effectiveness which may cause the price of our common stock to decline. Additionally, if any new internal control procedures which may be adopted or our existing internal control procedures are deemed inadequate, or if we identify additional material weaknesses in our disclosure controls or internal controls over financial reporting in the future, we will be unable to assert that our internal controls are effective. If we are unable to do so, or if our auditors are unable to attest to the effectiveness of our internal controls, we could lose investor confidence in the accuracy and completeness of our financial reports, which would cause the price of our common stock to decline.

As we have limited insurance coverage, any incurred liability resulting from uncovered claims could adversely affect our financial condition and results of operations.

Our insurance policies may not be adequate to fully offset losses from covered incidents, and we do not have coverage for certain losses. For example, we do not have earthquake insurance related to our Asian operations because adequate coverage is not offered at economically justifiable rates. If our insurance coverage is inadequate to protect us against catastrophic losses, any uncovered losses could adversely affect our financial condition and results of operations.

Our dependence on selling to distributors and integrators increases the complexity of managing our supply chain and may result in excess inventory or inventory shortages.

Selling to distributors and OEMs that build display devices based on specifications provided by branded suppliers, also referred to as integrators, reduces our ability to forecast sales accurately and increases the complexity of our business. Our sales are generally made on the basis of customer purchase orders rather than long-term purchase commitments. Our distributors, integrators and customers may cancel or defer purchase orders at any time but we must order wafer inventory from our contract manufacturers three to four months in advance.

The estimates we use for our advance orders from contract manufacturers are based, in part, on reports of inventory levels and production forecasts from our distributors and integrators, which act as intermediaries between us and the companies using our products. This process requires us to make numerous assumptions concerning demand and to rely on the accuracy of the reports and forecasts of our distributors and integrators, each of which may introduce error into our estimates of inventory requirements. Our failure to manage this challenge could result in excess inventory or inventory shortages that could materially impact our operating results or limit the ability of companies using our semiconductors to deliver their products. If we overestimate demand for our products, it could lead to significant charges for obsolete inventory. On the other hand, if we underestimate demand, we could forego revenue opportunities, lose market share and damage our customer relationships.

We may be unable to successfully manage any future growth, including the integration of any acquisition or equity investment, which could disrupt our business and severely harm our financial condition.

If we fail to effectively manage any future internal growth, our operating expenses may increase more rapidly than our revenue, adversely affecting our financial condition and results of operations. To manage any future growth effectively in a rapidly evolving market, we must be able to maintain and improve our operational and financial systems, train and manage our employee base and attract and retain qualified personnel with relevant experience. We could spend substantial amounts of time and money in connection with expansion efforts for which we may not realize any profit. Our systems, procedures, controls or financial resources may not be adequate to support our operations and we may not be able to grow quickly enough to exploit potential market opportunities. In addition, we may not be able to successfully integrate the businesses, products, technologies or personnel of any entity that we might acquire in the future, or we may fail to realize the anticipated benefits of any such acquisition. The successful integration of any acquired business as well as the retention of personnel may require significant attention from our management and could divert resources from our existing business, which in turn could have an adverse effect on our business operations. Acquired assets or businesses may not achieve the anticipated benefits we expect due to a number of factors including: unanticipated costs or liabilities associated with such acquisition, including in the case of acquisitions we may make outside of the United States, difficulty in operating in foreign countries or complying with foreign regulatory requirements, incurrence of acquisition-related costs, harm to our relationships with existing customers as a result of such acquisition, harm to our brand and reputation, the loss of key employees in the acquired businesses, use of resources that are needed in other parts of our business, and use of substantial portions of our available cash to consummate any such acquisition. Any failure to successfully integrate any entity we may acquire or any failure to achieve the anticipated benefits of any such acquisition could disrupt our business and seriously harm our financial condition.

Continued compliance with regulatory and accounting requirements will be challenging and will require significant resources.

We spend a significant amount of management time and external resources to comply with changing laws, regulations and standards relating to corporate governance and public disclosure, including evolving SEC rules and regulations, Nasdaq Global Market rules, the Dodd-Frank Wall Street Reform and Consumer Protection Act and the Sarbanes-Oxley Act of 2002 which requires management’s annual review and evaluation of internal control over financial reporting. Failure to comply with these laws and rules could lead to investigation by regulatory authorities, de-listing from the Nasdaq Global Market, or penalties imposed on us.

Regulations related to conflict minerals may adversely impact our business.

The SEC has adopted disclosure and reporting rules intended to improve transparency and accountability concerning the supply of certain minerals, known as conflict minerals, originating from the Democratic Republic of Congo ("DRC") and adjoining countries. These rules require us to conduct a reasonable inquiry to determine the origin of certain materials used in our products and disclose whether our products use any materials containing conflict minerals originating from the DRC and adjoining countries. Since we do not own or operate a semiconductor fabrication facility and do not manufacture our products internally, we are dependent on the information provided by third-party foundries and production facilities regarding the materials used and the supply chains for the materials. Further, there are costs associated with complying with these rules, including costs incurred to conduct inquiries to determine the sources of any materials containing conflict minerals used in our products, to fulfill our reporting requirements and to develop and implement potential changes to products, processes or sources of supply if it is determined that our products contain or use any conflict minerals from the DRC or adjoining countries. The implementation of these rules could also affect the sourcing, supply and pricing of materials used in our products. For example, there may only be a limited number of suppliers offering “conflict free” materials and we cannot be sure that we will be able to obtain necessary "conflict free" materials from such suppliers in sufficient quantities or at reasonable prices. In addition, we may face reputational challenges if we determine that any of our products contain minerals that are not conflict free or if we are unable to sufficiently verify the origins for all materials containing conflict minerals used in our products through the procedures we may implement.

Our effective income tax rate is subject to unanticipated changes in, or different interpretations of, tax rules and regulations and forecasting our effective income tax rate is complex and subject to uncertainty.

As a global company, we are subject to taxation by a number of taxing authorities and as such, our tax rates vary among the jurisdictions in which we operate. Unanticipated changes in our tax rates could affect our future results of operations. Our effective tax rates could be adversely affected by changes in the mix of earnings in countries with differing statutory tax rates, changes in tax laws or the interpretation of tax laws either in the U.S. or abroad, or by changes in the valuation of our deferred tax assets and liabilities. The ultimate outcomes of any future tax audits are uncertain, and we can give no assurance as to whether an adverse result from one or more of them would have a material effect on our operating results and financial position.

The computation of income tax expense is complex as it is based on the laws of numerous tax jurisdictions and requires significant judgment on the application of complicated rules governing accounting for tax provisions under U.S. generally accepted accounting principles. Income tax expense for interim quarters is based on our forecasted tax rate for the year, which includes forward looking financial projections, including the expectations of profit and loss by jurisdiction, and contains numerous assumptions. For these reasons, our tax rate may be materially different than our forecast.

We rely upon certain critical information systems for the operation of our business, and the failure of any critical information system may result in serious harm to our business.

We maintain and rely upon certain critical information systems for the effective operation of our business. These information systems include telecommunications, the Internet, our corporate intranet, various computer hardware and software applications, network communications and e-mail. These information systems are subject to attacks, failures and access denials from a number of potential sources including viruses, destructive or inadequate code, power failures, and physical damage to computers, communication lines and networking equipment. To the extent that these information systems are under our control, we have implemented security procedures, such as virus protection software and firewall monitoring, to address the outlined risks. Security procedures for information systems cannot be guaranteed to be failsafe and our inability to use or access these information systems at critical times could compromise the timely and efficient operation of our business. Additionally, any compromise of our information security could result in the unauthorized publication of our confidential business or proprietary information, cause an interruption in our operations, result in the unauthorized release of customer or employee data, result in a violation of privacy or other laws, or expose us to a risk of litigation or damage our reputation, any or all of which could harm our business and operating results.

Environmental laws and regulations may cause us to incur significant expenditures to comply with applicable laws and regulations, and we may be assessed considerable penalties for noncompliance.

We are subject to numerous environmental laws and regulations. Compliance with current or future environmental laws and regulations could require us to incur substantial expenses which could harm our business, financial condition and results of operations. We have worked, and will continue to work, with our suppliers and customers to ensure that our products are compliant with enacted laws and regulations. Failure by us or our contract manufacturers to comply with such legislation could result in customers refusing to purchase our products and could subject us to significant monetary penalties in connection with a violation, either of which would have a material adverse effect on our business, financial condition and results of operations.

Company Risks Related to the Semiconductor Industry and Our Markets

Our highly integrated products and high-speed mixed signal products are difficult to manufacture without defects and the existence of defects could result in increased costs, delays in the availability of our products, reduced sales of products or claims against us.

The manufacture of semiconductors is a complex process and it is often difficult for semiconductor foundries to produce semiconductors free of defects. Because many of our products are more highly integrated than other semiconductors and incorporate mixed signal analog and digital signal processing, multi-chip modules and embedded memory technology, they are even more difficult to produce without defects. Defective products can be caused by design or manufacturing difficulties. Identifying quality problems can be performed only by analyzing and testing our semiconductors in a system after they have been manufactured. The difficulty in identifying defects is compounded because the process technology is unique to each of the multiple semiconductor foundries we contract with to manufacture our products. Despite testing by both our customers and us, errors or performance problems may be found in existing or new semiconductors. Failure to achieve defect-free products may result in increased costs and delays in the availability of our products. Defects may also divert the attention of our engineering personnel from our product development efforts to find and correct the issue, which would delay our product development efforts.

Additionally, customers could seek damages from us for their losses, and shipments of defective products may harm our reputation with our customers. If a product liability claim is brought against us, the cost of defending the claim could be significant and would divert the efforts of our technical and management personnel and harm our business. Further, our business liability insurance may be inadequate or future coverage may be unavailable on acceptable terms, which could adversely impact our financial results.

We have experienced field failures of our semiconductors in certain customer applications that required us to institute additional testing. As a result of these field failures, we have incurred warranty costs due to customers returning potentially affected products and have experienced reductions in revenues due to delays in production. Our customers have also experienced delays in receiving product shipments from us that resulted in the loss of revenue and profits. Additionally, shipments of defective products could cause us to lose customers or to incur significant replacement costs, either of which would harm our reputation and our business. Any defects, errors or bugs could also interrupt or delay sales of our new products to our customers, which would adversely affect our financial results.

The development of new products is extremely complex and we may be unable to develop our new products in a timely manner, which could result in a failure to obtain new design wins and/or maintain our current revenue levels.

In addition to the inherent difficulty of designing complex integrated circuits, product development delays may result from:

- difficulties in hiring and retaining necessary technical personnel;
- difficulties in reallocating engineering resources and overcoming resource limitations;
- difficulties with contract manufacturers;
- changes to product specifications and customer requirements;
- changes to market or competitive product requirements; and
- unanticipated engineering complexities.

If we are not successful in the timely development of new products, we may fail to obtain new design wins and our financial results will be adversely affected.

Intense competition in our markets may reduce sales of our products, reduce our market share, decrease our gross profit and result in large losses.

We compete with specialized and diversified electronics and semiconductor companies that offer display processors or scaling components including: Actions Microelectronics Co., Ltd., ARM Holdings PLC, Dolby Laboratories, Inc., Egis Technology, Inc., Hisilicon Technologies Co., Ltd., i-Chips Technology Inc., Lattice Semiconductor Corporation, MediaTek Inc., Novatek Microelectronics Corp., NVIDIA Corporation, Qualcomm Incorporated, Realtek Semiconductor Corp., Renesas Electronics America Inc., Socionext, Inc., Solomon Systech (International) Ltd., STMicroelectronics N.V., Sunplus Technology Co., Ltd., Synaptics Incorporated, Texas Instruments Incorporated, Unisoc Communications, Inc., and other companies. Potential and current competitors may include diversified semiconductor manufacturers and the semiconductor divisions or affiliates of some of our customers, including: Apple Inc., Broadcom Inc., LG Electronics, Inc., MegaChips Corporation, Mitsubishi Digital Electronics America, Inc., NEC Corporation, Panasonic Corporation, Samsung Electronics Co., Ltd., Socionext, Inc., ON Semiconductor Corporation, Seiko Epson Corporation, Sharp Electronics Corporation, Sony Corporation, and Toshiba America, Inc. In addition, start-up companies may seek to compete in our markets.

Many of our competitors have longer operating histories and greater resources to support development and marketing efforts than we do. Some of our competitors operate their own fabrication facilities. These competitors may be able to react more quickly and devote more resources to efforts that compete directly with our own. Additionally, any consolidation in the semiconductor industry may impact our competitive position. Our current or potential customers have developed, and may continue to develop, their own proprietary technologies and become our competitors. Increased competition from both competitors and our customers' internal development efforts could harm our business, financial condition and results of operations by, for example, increasing pressure on our profit margin or causing us to lose sales opportunities. For example, frame rate conversion technology similar to that used in our line of MotionEngine® advanced video co-processors continues to be integrated into the SoC and display timing controller products of our competitors. We cannot assure you that we can compete successfully against current or potential competitors.

If we are not able to respond to the rapid technological changes and evolving industry standards in the markets in which we compete, or seek to compete, our products may become less desirable or obsolete.

The markets in which we compete or seek to compete are subject to rapid technological change and miniaturization capabilities, frequent new product introductions, changing customer requirements for new products and features and evolving industry standards. The introduction of new technologies and emergence of new industry standards could render our products less desirable or obsolete, which could harm our business and significantly decrease our revenue. Examples of changing industry standards include the growing use of broadband to deliver video content, increased display resolution and size, faster screen refresh rates, video capability such as High Dynamic Range, the proliferation of new display devices and the drive to network display devices together. Our failure to predict market needs accurately or to timely develop new competitively priced products or product enhancements that incorporate new industry standards and technologies, including integrated circuits with increasing levels of integration and new features, using smaller geometry process technologies, may harm market acceptance and sales of our products.

Our products are incorporated into our customers' products, which have different parts and specifications and utilize multiple protocols that allow them to be compatible with specific computers, video standards and other devices. If our customers' products are not compatible with these protocols and standards, consumers will return, or not purchase these products and the markets for our customers' products could be significantly reduced. Additionally, if the technology used by our customers becomes less competitive due to cost, customer preferences or other factors relative to alternative technologies, sales of our products could decline.

Dependence on a limited number of sole-source, third-party manufacturers for our products exposes us to possible shortages based on low manufacturing yield, errors in manufacturing, uncontrollable lead-times for manufacturing, capacity allocation, price increases with little notice, volatile inventory levels and delays in product delivery, any of which could result in delays in satisfying customer demand, increased costs and loss of revenue.

We do not own or operate a semiconductor fabrication facility and do not have the resources to manufacture our products internally. We rely on a limited number of foundries and assembly and test vendors to produce all of our wafers and for completion of finished products. Our wafers are not fabricated at more than one foundry at any given time and our wafers typically are designed to be fabricated in a specific process at only one foundry. Sole sourcing each product increases our dependence on our suppliers. We have limited control over delivery schedules, quality assurance, manufacturing yields, potential errors in manufacturing and production costs. We do not have long-term supply contracts with our third-party manufacturers, so they are not obligated to supply us with products for any specific period of time, quantity or price, except as may be provided in a particular purchase order. Our suppliers can increase the prices of the products we purchase from them with little notice, which may cause us to increase the prices to our customers and harm our competitiveness. Because our requirements represent only a small portion of the total production capacity of our contract manufacturers, they could reallocate capacity to other customers during periods of high demand for our products, as they have done in the past. We expect this may occur again in the future.

Establishing a relationship with a new contract manufacturer in the event of delays or increased prices would be costly and burdensome. The lead time to make such a change would be at least nine months, and the estimated time for us to adapt a product’s design to a particular contract manufacturer’s process is at least four months. Additionally, we have chosen, and may continue to choose new foundries to manufacture our wafers which in turn, may require us to modify our design methodology flow for the process technology and intellectual property cores of the new foundry. If we have to qualify a new foundry or packaging, assembly and testing supplier for any of our products or if we are unable to obtain our products from our contract manufacturers on schedule, at costs that are acceptable to us, or at all, we could incur significant delays in shipping products, our ability to satisfy customer demand could be harmed, our revenue from the sale of products may be lost or delayed and our customer relationships and ability to obtain future design wins could be damaged.

We use a customer-owned tooling process for manufacturing most of our products, which exposes us to the possibility of poor yields and unacceptably high product costs.

We build most of our products on a customer-owned tooling basis, whereby we directly contract the manufacture of our products, including wafer production, assembly and testing. As a result, we are subject to increased risks arising from wafer manufacturing yields and risks associated with coordination of the manufacturing, assembly and testing process. Poor product yields result in higher product costs, which could make our products less competitive if we increase our prices to compensate for our higher costs or could result in lower gross profit margins if we do not increase our prices.

We depend on manufacturers of our semiconductor products not only to respond to changes in technology and industry standards but also to continue the manufacturing processes on which we rely.

To respond effectively to changes in technology and industry standards, we depend on our contracted foundries to implement advanced semiconductor technologies and our operations could be adversely affected if those technologies are unavailable, delayed or inefficiently implemented. In order to increase performance and functionality and reduce the size of our products, we are continuously developing new products using advanced technologies that further miniaturize semiconductors and we are dependent on our foundries to develop and provide access to the advanced processes that enable such miniaturization. We cannot be certain that future advanced manufacturing processes will be implemented without difficulties, delays or increased expenses. Our business, financial condition and results of operations could be materially adversely affected if advanced manufacturing processes are unavailable to us, substantially delayed or inefficiently implemented.

Creating the capacity for new technological changes may cause manufacturers to discontinue older manufacturing processes in favor of newer ones. We must then either retire the affected part or port (develop) a new version of the part that can be manufactured with a newer process technology. In the event that a manufacturing process is discontinued, our current suppliers may be unwilling or unable to manufacture our current products. We may not be able to place last time buy orders for the old technology or find alternate manufacturers of our products to allow us to continue to produce products with the older technology while we expend the significant costs for research and development and time to migrate to new, more advanced processes.

Shortages of materials used in the manufacturing of our products and other key components of our customers' products may increase our costs, impair our ability to ship our products on time and delay our ability to sell our products.

From time to time, shortages of components and materials that are critical to the manufacture of our products and our customers' products may occur. Such critical components and materials include semiconductor wafers and packages, double data rate memory die, display components, analog-to-digital converters, digital receivers, video decoders and voltage regulators. If material shortages occur, we may incur additional costs or be unable to ship our products to our customers in a timely fashion, both of which could harm our business and adversely affect our results of operations.

Because of our long product development process and sales cycles, we may incur substantial costs before we earn associated revenue and ultimately may not sell as many units of our products as we originally anticipated.

We develop products based on anticipated market and customer requirements and incur substantial product development expenditures, which can include the payment of large up-front, third-party license fees and royalties, prior to generating the associated revenue. Our work under these projects is technically challenging and places considerable demands on our limited resources, particularly on our most senior engineering talent. Additionally, the transition to smaller geometry process technologies continues to significantly increase the cost and complexity of new product development, particularly with regards to tooling, software tools, third party IP and engineering resources. Because the development of our products incorporates not only our complex and evolving technology, but also our customers' specific requirements, a lengthy sales process is often required before potential customers begin the technical evaluation of our products. Our customers typically perform numerous tests and extensively evaluate our products before incorporating them into their systems. The time required for testing, evaluation and design of our products into a customer's system can take nine months or more. It can take an additional nine months or longer before a customer commences volume shipments of systems that incorporate our products, if at all. Because of the lengthy development and sales cycles, we will experience delays between the time we incur expenditures for research and development, sales and marketing and inventory and the time we generate revenue, if any, from these expenditures.

Furthermore, we have entered into and may in the future enter into, co-development agreements that do not guarantee future sales volumes and limit our ability to sell the developed products to other customers. The exclusive nature of these development agreements increases our dependence on individual customers, particularly since we are limited in the number of products we are able to develop at any one time.

If actual sales volumes for a particular product are substantially less than originally anticipated, we may experience large write-offs of capitalized license fees, software development tools, product masks, inventories or other capitalized or deferred product-related costs, any of which would negatively affect our operating results.

Our developed software may be incompatible with industry standards and challenging and costly to implement, which could slow product development or cause us to lose customers and design wins.

We provide our customers with software development tools and with software that provides basic functionality for our integrated circuits and enables enhanced connectivity of our customers' products. Software development is a complex process and we are dependent on software development languages and operating systems from vendors that may limit our ability to design software in a timely manner. Also, as software tools and interfaces change rapidly, new software languages introduced to the market may be incompatible with our existing systems and tools, requiring significant engineering efforts to migrate our existing systems in order to be compatible with those new languages. Software development disruptions could slow our product development or cause us to lose customers and design wins. The integration of software with our products adds complexity, may extend our internal development programs and could impact our customers' development schedules. This complexity requires increased coordination between hardware and software development schedules and increases our operating expenses without a corresponding increase in product revenue. This additional level of complexity lengthens the sales cycle and may result in customers selecting competitive products requiring less software integration.

The competitiveness and viability of our products could be harmed if necessary licenses of third-party technology are not available to us on terms that are acceptable to us or at all.

We license technology from independent third parties that is incorporated into our products or product enhancements. Future products or product enhancements may require additional third-party licenses that may not be available to us on terms that are acceptable to us or at all. In addition, in the event of a change in control of one of our licensors, it may become difficult to maintain access to its licensed technology. If we are unable to obtain or maintain any third-party license required to develop new products and product enhancements, we may have to obtain substitute technology with lower quality or performance standards, or at greater cost, either of which could seriously harm the competitiveness of our products.

Our limited ability to protect our IP and proprietary rights could harm our competitive position by allowing our competitors to access our proprietary technology and to introduce similar products.

Our ability to compete effectively with other companies depends, in part, on our ability to maintain the proprietary nature of our technology, including our semiconductor designs and software code. We provide the computer programming code for our software to customers in connection with their product development efforts, thereby increasing the risk that customers will misappropriate our proprietary software. We rely on a combination of patent, copyright, trademark and trade secret laws, as well as nondisclosure agreements and other methods, to help protect our proprietary technologies. As of June 30, 2020, we held 345 patents and had 12 patent applications pending for protection of our significant technologies. Competitors in both the U.S. and foreign countries, many of whom have substantially greater resources than we do, may apply for and obtain patents that will prevent, limit or interfere with our ability to make and sell our products, or they may develop similar technology independently or design around our patents. Effective patent, copyright, trademark and trade secret protection may be unavailable or limited in foreign countries and, thus, make the possibility of piracy of our technology and products more likely in these countries.

We cannot assure you that the degree of protection offered by patent or trade secret laws will be sufficient. Furthermore, we cannot assure you that any patents will be issued as a result of any pending applications or that any claims allowed under issued patents will be sufficiently broad to protect our technology. We may incur significant costs to stop others from infringing our patents. In addition, it is possible that existing or future patents may be invalidated, diluted, circumvented, challenged or licensed to others.

Others may bring infringement or indemnification actions against us that could be time-consuming and expensive to defend.

We may become subject to claims involving patents or other intellectual property rights. In recent years, there has been significant litigation in the U.S. and in other jurisdictions involving patents and other intellectual property rights. This litigation is particularly prevalent in the semiconductor industry, in which a number of companies aggressively use their patent portfolios to bring infringement claims. In recent years, there has been an increase in the filing of so-called "nuisance suits," alleging infringement of intellectual property rights. These claims may be asserted initially or as counterclaims in response to claims made by a company alleging infringement of intellectual property rights. These suits pressure defendants into entering settlement arrangements to quickly dispose of such suits, regardless of merit. We may also face claims brought by companies that are organized solely to hold and enforce patents. In addition, we may be required to indemnify our customers against IP claims related to their usage of our products as certain of our agreements include indemnification provisions from third parties relating to our intellectual property.

IP claims could subject us to significant liability for damages and invalidate our proprietary rights. Responding to such claims, regardless of their merit, can be time-consuming, result in costly litigation, divert management’s attention and resources and cause us to incur significant expenses. As each claim is evaluated, we may consider the desirability of entering into settlement or licensing agreements. No assurance can be given that settlements will occur or that licenses can be obtained on acceptable terms or that litigation will not occur. In the event there is a temporary or permanent injunction entered prohibiting us from marketing or selling certain of our products, or a successful claim of infringement against us requiring us to pay damages or royalties to a third-party and we fail to develop or license a substitute technology, our business, results of operations or financial condition could be materially adversely affected. Any IP litigation or claims also could force us to do one or more of the following:

- stop selling products using technology that contains the allegedly infringing IP;
- attempt to obtain a license to the relevant IP, which may not be available on terms that are acceptable to us or at all;
- attempt to redesign those products that contain the allegedly infringing IP; or
- pay damages for past infringement claims that are determined to be valid or which are arrived at in settlement of such litigation or threatened litigation.

If we are forced to take any of the foregoing actions, we may incur significant additional costs or be unable to manufacture and sell our products, which could seriously harm our business. In addition, we may not be able to develop, license or acquire non-infringing technology under reasonable terms. These developments could result in an inability to compete for customers or otherwise adversely affect our results of operations.

Our products are characterized by average selling prices that can decline over relatively short periods of time, which will negatively affect our financial results unless we are able to reduce our product costs or introduce new products with higher average selling prices.

Average selling prices for our products can decline over relatively short periods of time, while many of our product costs are relatively fixed. When our average selling prices decline, our gross profit declines unless we are able to sell more units or reduce the cost to manufacture our products. We have experienced declines in our average selling prices and expect that we will continue to experience them in the future, although we cannot predict when they may occur or how severe they will be. Our financial results will suffer if we are unable to offset any reductions in our average selling prices by increasing our sales volumes, reducing our costs, adding new features to our existing products or developing new or enhanced products in a timely manner with higher selling prices or gross profits.

The cyclical nature of the semiconductor industry may lead to significant variances in the demand for our products and could harm our operations.

In the past, the semiconductor industry has been characterized by significant downturns and wide fluctuations in supply and demand. Also, the industry has experienced significant fluctuations in anticipation of changes in general economic conditions, including economic conditions in Asia, Europe and North America. The cyclical nature of the semiconductor industry has also led to significant variances in product demand and production capacity. We have experienced, and may continue to experience, periodic fluctuations in our financial results because of changes in industry-wide conditions.

Other Risks

The price of our common stock has and may continue to fluctuate substantially.

Our stock price and the stock prices of technology companies similar to Pixelworks have been highly volatile. The price of our common stock may decline and the value of our shareholders' investment may be reduced regardless of our performance.

The daily trading volume of our common stock has historically been relatively low, although, in the three most recent years, trading volume increased compared to historical levels. As a result of the historically low volume, our shareholders may be unable to sell significant quantities of common stock in the public trading markets without a significant reduction in the price of our common shares. Additionally, market fluctuations, as well as general economic and political conditions, including recessions, interest rate changes or international currency fluctuations, may negatively impact the market price of our common stock. Other factors that could negatively impact our stock price include:

- actual or anticipated fluctuations in our operating results;
- changes in or failure to meet expectations as to our future financial performance;
- changes in or failure to meet financial estimates of securities analysts;
- announcements by us or our competitors of technological innovations, design wins, contracts, standards, acquisitions or divestitures;
- the operating and stock price performance of other comparable companies;
- issuances or proposed issuances of equity, debt or other securities by us, or sales of securities by our security holders; and
- changes in market valuations of other technology companies.

Any inability or perceived inability of investors to realize a gain on an investment in our common stock could have an adverse effect on our business, financial condition and results of operations by potentially limiting our ability to retain our customers, to attract and retain qualified employees and to raise capital. In addition, in the past, following periods of volatility in the overall market and the market price of a particular company's securities, securities class action litigation has often been instituted against these companies. This litigation, if instituted against us, could result in substantial costs and a diversion of our management's attention and resources.

The interest of our current or potential significant shareholders may conflict with other shareholders and they may attempt to effect changes or acquire control, which could adversely affect our results of operations and financial condition.

Our shareholders may from time to time engage in proxy solicitations, advance shareholder proposals, acquire control or otherwise attempt to effect changes, including by directly voting their shares on shareholder proposals. Campaigns by shareholders to effect changes at publicly traded companies are sometimes led by investors seeking to increase short-term shareholder value through actions such as financial restructuring, increased debt, special dividends, stock repurchases or sales of assets or the entire company. Responding to proxy contests and other actions by activist shareholders can be costly and time-consuming, disrupting our operations and diverting the attention of our Board of Directors and senior management from the pursuit of business strategies. Additionally, uncertainty over our direction and leadership may negatively impact our relationship with our customers and make it more difficult to attract and retain qualified personnel and business partners. As a result, shareholder campaigns could adversely affect our results of operations and financial condition.

Future sales of our equity could result in significant dilution to our existing shareholders and depress the market price of our common stock.

It is likely that we will need to seek additional capital in the future and from time to time. If this financing is obtained through the issuance of equity securities, debt convertible into equity securities, options or warrants to acquire equity securities or similar instruments or securities, our existing shareholders will experience dilution in their ownership percentage upon the issuance, conversion or exercise of such securities and such dilution could be significant. New equity securities issued by us could have rights, preferences or privileges senior to those of our common stock. Additionally, pursuant to our “at the market” equity offering program, we may sell shares of our common stock having aggregate sales proceeds of up to $25 million from time to time through Cowen and Company, LLC, as our agent. As of June 30, 2020, we had issued and sold 803,528 shares of our common stock pursuant to our “at the market” equity offering program, resulting in net proceeds to us of approximately $2.5 million. Shares of our common stock having a value of approximately $22.5 million remain available for sale under this program. The issuance and sale of additional shares of our common stock pursuant to our “at the market” equity offering program will have a dilutive impact on our existing stockholders. Further, the issuance and sale of, or the perception that we may issue and sell, additional shares of common stock pursuant to our “at the market” equity offering program could have the effect of depressing the market price of our common stock or increasing the volatility thereof.

In addition, any such issuance by us or sales of our securities by our security holders, including by any of our affiliates, or the perception that such issuances or sales could occur, could negatively impact the market price of our securities. For example, a number of shareholders own significant blocks of our common stock, and we have issued approximately 3.7 million shares of our common stock to the former holders of ViXS, such shares which were freely tradeable upon issuance. If one or more of these large shareholders were to sell large portions of their holdings in a relatively short time, or if the former holders of ViXS were to collectively sell large portions of the stock issued as consideration in the Acquisition in a relatively short time, for liquidity or other reasons, the prevailing market price of our common stock could be negatively affected. This could result in further potential dilution to our existing shareholders and the impairment of our ability to raise capital through the sale of equity, debt or other securities.

We may be unable to maintain compliance with Nasdaq Marketplace Rules which could cause our common stock to be delisted from the Nasdaq Global Market. This could result in the lack of a market for our common stock, cause a decrease in the value of our common stock, and adversely affect our business, financial condition and results of operations.

Under the Nasdaq Marketplace Rules our common stock must maintain a minimum price of $1.00 per share for continued inclusion on the Nasdaq Global Market. Our stock price was previously below $1.00 on May 6, 2009 and was $1.22 on February 12, 2016 and we cannot guarantee that our stock price will remain at or above $1.00 per share. If the price again drops below $1.00 per share, our stock could become subject to delisting, and we may seek shareholder approval for a reverse stock split, which in turn could produce adverse effects and may not result in a long-term or permanent increase in the price of our common stock. Further, for continued listing on the Nasdaq Global Market we must have at least 400 total shareholders.

In addition to the minimum $1.00 per share and 400 total shareholders requirements, the Nasdaq Global Market has other continued listing requirements, and we must meet all of the criteria under at least one of the following three standards: (i) a minimum of $50.0 million in total asset value and $50.0 million in revenues in the latest fiscal year or in two of the last three fiscal years, at least 1.1 million publicly held shares and at least $15 million in market value of publicly held shares; (ii) a minimum of $50.0 million in market value of listed securities, at least 1.1 million publicly held shares and at least $15.0 million in market value of publicly held shares; or (iii) a minimum of $10.0 million in shareholders' equity, at least 750,000 publicly held shares and at least $5 million in market value of publicly held shares. As of December 31, 2019, we were in compliance with these listing requirements. However, as recently as June 30, 2017, our total asset value was less than $50.0 million. In addition, as recently as during the first quarter of 2016, the aggregate market value of our listed securities was below $50.0 million. Our stock price is volatile and we believe that we continue to remain susceptible to the market value of our listed securities and/or the market value of our publicly held securities falling below $50.0 million and $15.0 million, respectively. Accordingly, we cannot assure you that we will be able to continue to comply with Nasdaq Global Market’s listing requirements. Should we be unable to remain in compliance with these requirements, our stock could become subject to delisting.

If our common stock is delisted, trading of the stock will most likely take place on an over-the-counter market established for unlisted securities. An investor is likely to find it less convenient to sell, or to obtain accurate quotations in seeking to buy, our common stock on an over-the-counter market, and many investors may not buy or sell our common stock due to difficulty in accessing over-the-counter markets, or due to policies preventing them from trading in securities not listed on a national exchange or other reasons. For these reasons and others, delisting would adversely affect the liquidity, trading volume and price of our common stock, causing the value of an investment in us to decrease and having an adverse effect on our business, financial condition and results of operations by limiting our ability to attract and retain qualified executives and employees and limiting our ability to raise capital.

The anti-takeover provisions of Oregon law and in our articles of incorporation could adversely affect the rights of the holders of our common stock, including by preventing a sale or takeover of us at a price or prices favorable to the holders of our common stock.

Provisions of our articles of incorporation and bylaws and provisions of Oregon law may have the effect of delaying or preventing a merger or acquisition of us, making a merger or acquisition of us less desirable to a potential acquirer or preventing a change in our management, even if our shareholders consider the merger, acquisition or change in management favorable or if doing so would benefit our shareholders. In addition, these provisions could limit the price that investors would be willing to pay in the future for shares of our common stock. The following are examples of such provisions:

- if the number of directors is fixed by the board at eight or more, our board of directors is divided into three classes serving staggered terms, which would make it more difficult for a group of shareholders to quickly replace a majority of directors;
- our board of directors is authorized, without prior shareholder approval, to create and issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to acquire us or to effect a change of control, commonly referred to as "blank check" preferred stock;
- members of our board of directors can be removed only for cause and at a meeting of shareholders called expressly for that purpose, by the vote of 75 percent of the votes then entitled to be cast for the election of directors;
- our board of directors may alter our bylaws without obtaining shareholder approval; and shareholders are required to provide advance notice for nominations for election to the board of directors or for proposing matters to be acted upon at a shareholder meeting;
- Oregon law permits our board to consider other factors beyond stockholder value in evaluating any acquisition offer (so-called "expanded constituency" provisions); and
- a supermajority (67%) vote of shareholders is required to approve certain fundamental transactions.

Item 6. **Exhibits.**

3.1	Sixth Amended and Restated Articles of Incorporation of Pixelworks, Inc., as amended (incorporated by reference to Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q filed on August 9, 2004).
3.2	Third Amendment to Sixth Amended and Restated Articles of Incorporation of Pixelworks, Inc. (incorporated by reference to Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q filed on August 11, 2008).
3.3	Second Amended and Restated Bylaws of Pixelworks, Inc. (incorporated by reference to Exhibit 3.3 to the Company's Annual Report on Form 10-K filed on March 10, 2010).
10.1	Amendment No. 9 to the Loan and Security Agreement, between Pixelworks, Inc. and Silicon Valley Bank, dated April 17, 2020 (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed on May 8, 2020).
10.2	Promissory Note between the Company and Silicon Valley Bank dated April 25, 2020 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on April 30, 2020).
10.3	Sales Agreement, dated June 5, 2020, between Pixelworks, Inc. and Cowen and Company, LLC. (incorporated by reference to Exhibit 1.1 to the Company's Current Report on Form 8-K filed on June 5, 2020).
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. Section 1350).
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. Section 1350).
32.1*	Certification of Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. Section 1350).
32.2*	Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. Section 1350).
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

* Exhibits 32.1 and 32.2 are being furnished and shall not be deemed to be "filed" for under the Securities Act of 1933, as amended (the “Securities Act”) or the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liability of that section, nor shall such exhibits be deemed to be incorporated by reference in any registration statement or other document filed under the Securities Act or the Exchange Act, whether made before or after the date hereof and irrespective of any general incorporation language contained in such filing, except to the extent specifically stated in such filing.

SIGNATURE

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

PIXELWORKS, INC.

Dated: August 10, 2020

/s/ Elias N. Nader

Elias N. Nader
Vice President and Chief Financial Officer,
(Duly Authorized Officer and Principal Accounting and Principal Financial Officer)

Exhibit 31.1

CERTIFICATION

I, Todd A. DeBonis, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Pixelworks, Inc.;

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(s) 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(s) 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:	August 10, 2020	By:	/s/ Todd A. DeBonis
			Todd A. DeBonis
			President and Chief Executive Officer *(Principal Executive Officer)*

Exhibit 31.2

CERTIFICATION

I, Elias N. Nader, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Pixelworks, Inc.;

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(s) 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(s) 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:	August 10, 2020	By:	/s/ Elias N. Nader
			Elias N. Nader
			Vice President and Chief Financial Officer
			(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION 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 Quarterly Report of Pixelworks, Inc. (the “Company”) on Form 10-Q for the quarterly period ended June 30, 2020 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Todd A. DeBonis, President and Chief Executive Officer 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 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.

By: /s/ Todd A. DeBonis
Todd A. DeBonis
President and Chief Executive Officer
(Principal Executive Officer)

Date: August 10, 2020

Exhibit 32.2

CERTIFICATION 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 Quarterly Report of Pixelworks, Inc. (the “Company”) on Form 10-Q for the quarterly period ended June 30, 2020 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Elias N. Nader, Vice President, Chief Financial Officer, Secretary and Treasurer 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 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.

By: /s/ Elias N. Nader
Elias N. Nader
Vice President and Chief Financial Officer
(Principal Financial Officer)

Date: August 10, 2020