

**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, 2019**

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: 001-36083

Applied Optoelectronics, Inc.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of incorporation or organization)

76-0533927
(I.R.S. Employer Identification No.)

13139 Jess Pirtle Blvd.
Sugar Land, TX 77478
(Address of principal executive offices)

(281) 295-1800
(Registrant's telephone number)

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 ("Exchange Act") 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 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, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input checked="" type="checkbox"/>
Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>
Smaller reporting company	<input type="checkbox"/>
Emerging growth company	<input type="checkbox"/>

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:

Title of each class	Trading Symbol(s)	Trading Name of each exchange on which registered
Common Stock, Par value \$0.001	AAOI	NASDAQ Global Market

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date: as of August 2, 2019 there were 20,028,929 shares of the registrant's Common Stock outstanding.

Applied Optoelectronics, Inc.
Table of Contents

	<u>Page</u>
<u>Part I. Financial Information</u>	
<u>Item 1. Condensed Consolidated Financial Statements (Unaudited)</u>	3
<u>Condensed Consolidated Balance Sheets as of June 30, 2019 (Unaudited) and December 31, 2018</u>	3
<u>Condensed Consolidated Statements of Operations for the Three and Six Months ended June 30, 2019 and 2018 (Unaudited)</u>	4
<u>Condensed Consolidated Statements of Comprehensive Income (Loss) for the Three and Six Months ended June 30, 2019 and 2018 (Unaudited)</u>	5
<u>Condensed Consolidated Statements of Stockholders' Equity for the Three and Six Months ended June 30, 2019 and 2018 (Unaudited)</u>	6
<u>Condensed Consolidated Statements of Cash Flows for the Six Months ended June 30, 2019 and 2018 (Unaudited)</u>	7
<u>Notes To Condensed Consolidated Financial Statements (Unaudited)</u>	8
<u>Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations</u>	26
<u>Item 3. Quantitative and Qualitative Disclosures About Market Risk</u>	34
<u>Item 4. Controls and Procedures</u>	34
<u>Part II. Other Information</u>	
<u>Item 1. Legal Proceedings</u>	36
<u>Item 1A. Risk Factors</u>	37
<u>Item 2. Unregistered Sales of Equity Securities and Use of Proceeds</u>	59
<u>Item 3. Defaults Upon Senior Securities</u>	59
<u>Item 4. Mine Safety Disclosures</u>	59
<u>Item 5. Other Information</u>	59
<u>Item 6. Exhibits</u>	59
<u>Signatures</u>	62

Part I. Financial Information**Item 1. Condensed Consolidated Financial Statements****Applied Optoelectronics, Inc. and Subsidiaries**
CONDENSED CONSOLIDATED BALANCE SHEETS
(Unaudited, in thousands, except per share data)

	<u>June 30,</u> <u>2019</u>	<u>December 31,</u> <u>2018</u>
ASSETS		
Current Assets		
Cash and cash equivalents	\$ 81,070	\$ 55,646
Restricted cash	2,917	2,358
Accounts receivable - trade, net of allowance of \$30 and \$31, respectively	28,406	30,534
Notes receivable	136	—
Inventories	81,475	93,256
Prepaid income tax	1,312	1,188
Prepaid expenses and other current assets	5,719	11,293
Total current assets	201,035	194,275
Property, plant and equipment, net	247,887	234,211
Land use rights, net	5,743	5,814
Operating right of use asset	7,912	—
Intangible assets, net	4,028	3,977
Deferred income tax assets	27,437	21,714
Other assets, net	1,080	6,849
TOTAL ASSETS	\$ 495,122	\$ 466,840
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Current portion of notes payable and long-term debt	\$ 19,180	\$ 23,589
Accounts payable	31,526	29,910
Bank acceptance payable	2,532	4,628
Current lease liability	903	—
Accrued liabilities	13,986	19,291
Total current liabilities	68,127	77,418
Notes payable and long-term debt, less current portion	30,468	60,328
Convertible senior notes	76,630	—
Non-current lease liability	8,182	—
TOTAL LIABILITIES	183,407	137,746
Stockholders' equity:		
Preferred Stock; 5,000 shares authorized at \$0.001 par value; no shares issued and outstanding at June 30, 2019 and December 31, 2018, respectively	—	—
Common Stock; 45,000 shares authorized at \$0.001 par value; 19,951 and 19,810 shares issued and outstanding at June 30, 2019 and December 31, 2018, respectively	20	20
Additional paid-in capital	297,922	292,480
Accumulated other comprehensive income	(379)	602
Retained earnings	14,152	35,992
TOTAL STOCKHOLDERS' EQUITY	311,715	329,094
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	\$ 495,122	\$ 466,840

The accompanying notes are an integral part of these condensed consolidated financial statements.

Applied Optoelectronics, Inc. and Subsidiaries
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited, in thousands, except share and per share data)

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
Revenue, net	\$ 43,411	\$ 87,822	\$ 96,130	\$ 153,061
Cost of goods sold	32,873	53,959	73,241	93,362
Gross profit	10,538	33,863	22,889	59,699
Operating expenses				
Research and development	11,151	12,645	22,336	24,381
Sales and marketing	2,331	2,377	4,926	4,851
General and administrative	10,884	9,898	21,324	19,354
Total operating expenses	24,366	24,920	48,586	48,586
Income (loss) from operations	(13,828)	8,943	(25,697)	11,113
Other income (expense)				
Interest income	310	85	382	137
Interest expense	(1,490)	(279)	(2,486)	(350)
Other expense, net	451	1,581	296	554
Total other expense, net	(729)	1,387	(1,808)	341
Income (loss) before income taxes	(14,557)	10,330	(27,505)	11,454
Income tax benefit	3,191	(2,296)	5,665	(1,300)
Net income (loss)	\$ (11,366)	\$ 8,034	\$ (21,840)	\$ 10,154
Net income (loss) per share				
Basic	\$ (0.57)	\$ 0.41	\$ (1.10)	\$ 0.52
Diluted	\$ (0.57)	\$ 0.40	\$ (1.10)	\$ 0.51
Weighted average shares used to compute net income (loss)				
per share:				
Basic	19,931,745	19,590,164	19,897,602	19,541,478
Diluted	19,931,745	20,079,702	19,897,602	20,012,344

The accompanying notes are an integral part of these condensed consolidated financial statements.

Applied Optoelectronics, Inc. and Subsidiaries
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(Unaudited, in thousands)

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
Net income (loss)	\$ (11,366)	\$ 8,034	\$ (21,840)	\$ 10,154
Loss on foreign currency translation adjustment	(3,329)	(10,445)	(981)	(4,110)
Comprehensive income (loss)	<u>\$ (14,695)</u>	<u>\$ (2,411)</u>	<u>\$ (22,821)</u>	<u>\$ 6,044</u>

The accompanying notes are an integral part of these condensed consolidated financial statements.

Applied Optoelectronics, Inc. and Subsidiaries
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
Three and Six Months ended June 30, 2019 and 2018
(Unaudited, in thousands)

	Preferred Stock		Common Stock		Additional paid-in capital	Accumulated other comprehensive gain (loss)	Retained earnings	Stockholders' equity
	Number of shares	Amount	Number of shares	Amount				
April 1, 2019	—	\$ —	19,888	\$ 20	\$ 295,130	\$ 2,950	\$ 25,518	\$ 323,618
Public offering of common stock, net	—	—	—	—	—	—	—	—
Stock options exercised, net of shares withheld for employee tax	—	—	—	—	—	—	—	—
Issuance of restricted stock, net of shares withheld for employee tax	—	—	63	—	(227)	—	—	(227)
Share-based compensation	—	—	—	—	3,019	—	—	3,019
Foreign currency translation adjustment	—	—	—	—	—	(3,329)	—	(3,329)
Other	—	—	—	—	—	—	—	—
Net income (loss)	—	—	—	—	—	—	(11,366)	(11,366)
June 30, 2019	—	\$ —	19,951	\$ 20	\$ 297,922	\$ (379)	\$ 14,152	\$ 311,715

	Preferred Stock		Common Stock		Additional paid-in capital	Accumulated other comprehensive gain (loss)	Retained earnings	Stockholders' equity
	Number of shares	Amount	Number of shares	Amount				
April 1, 2018	—	\$ —	19,538	\$ 20	\$ 286,938	\$ 16,078	\$ 40,258	\$ 343,294
Stock options exercised, net of shares withheld for employee tax	—	—	40	—	(619)	—	—	(619)
Issuance of restricted stock, net of shares withheld for employee tax	—	—	56	—	(532)	—	—	(532)
Share-based compensation	—	—	—	—	2,899	—	—	2,899
Foreign currency translation adjustment	—	—	—	—	—	(10,445)	—	(10,445)
Net income	—	—	—	—	—	—	8,034	8,034
June 30, 2018	—	\$ —	19,634	\$ 20	\$ 288,686	\$ 5,633	\$ 48,292	\$ 342,631

	Preferred Stock		Common Stock		Additional paid-in capital	Accumulated other comprehensive gain (loss)	Retained earnings	Stockholders' equity
	Number of shares	Amount	Number of shares	Amount				
January 1, 2019	—	\$ —	19,810	\$ 20	\$ 292,480	\$ 602	\$ 35,992	\$ 329,094
Stock options exercised, net of shares withheld for employee tax	—	—	—	—	7	—	—	7
Issuance of restricted stock, net of shares withheld for employee tax	—	—	141	—	(526)	—	—	(526)
Share-based compensation	—	—	—	—	5,961	—	—	5,961
Foreign currency translation adjustment	—	—	—	—	—	(981)	—	(981)
Other	—	—	—	—	—	—	—	—
Net loss	—	—	—	—	—	—	(21,840)	(21,840)
June 30, 2019	—	\$ —	19,951	\$ 20	\$ 297,922	\$ (379)	\$ 14,152	\$ 311,715

	Preferred Stock		Common Stock		Additional paid-in capital	Accumulated other comprehensive gain (loss)	Retained earnings	Stockholders' equity
	Number of shares	Amount	Number of shares	Amount				
January 1, 2018	—	\$ —	19,451	\$ 19	\$ 285,376	\$ 9,743	\$ 38,138	\$ 333,276
Stock options exercised, net of shares withheld for employee tax	—	—	78	—	(1,228)	—	—	(1,228)
Issuance of restricted stock, net of shares withheld for employee tax	—	—	105	1	(930)	—	—	(929)
Share-based compensation	—	—	—	—	5,468	—	—	5,468
Foreign currency translation adjustment	—	—	—	—	—	(4,110)	—	(4,110)
Net income	—	—	—	—	—	—	10,154	10,154
June 30, 2018	—	\$ —	19,634	\$ 20	\$ 288,686	\$ 5,633	\$ 48,292	\$ 342,631

The accompanying notes are an integral part of these condensed consolidated financial statements.

Applied Optoelectronics, Inc. and Subsidiaries
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited, in thousands)

	<u>Six months ended June 30,</u>	
	<u>2019</u>	<u>2018</u>
Operating activities:		
Net income (loss)	\$ (21,840)	\$ 10,154
Adjustments to reconcile net income to net cash provided by operating activities:		
Lower of cost or market reserve adjustment to inventory	5,207	2,356
Depreciation and amortization	11,964	14,291
Amortization of debt issuance costs	457	—
Deferred income taxes, net	(5,770)	(381)
Loss (gain) on disposal of assets	10	(5)
Share-based compensation	5,961	5,468
Unrealized foreign exchange gain	(171)	(1,254)
Changes in operating assets and liabilities:		
Accounts receivable, trade	2,128	11,182
Notes receivable	(137)	—
Prepaid income tax	(127)	781
Inventories	6,346	(21,614)
Other current assets	5,579	(1,489)
Operating right of use asset	561	—
Accounts payable	1,615	7,805
Accrued liabilities	(4,043)	(6,926)
Lease liability	(573)	(2,289)
Net cash provided by operating activities	<u>7,167</u>	<u>18,079</u>
Investing activities:		
Maturities of short-term investments	—	36
Purchase of property, plant and equipment	(26,286)	(30,895)
Purchase of land use rights	—	(5,591)
Proceeds from disposal of equipment	1	11
Deposits and prepaid for equipment	5,763	1,444
Purchase of intangible assets	(316)	(225)
Net cash used in investing activities	<u>(20,838)</u>	<u>(35,220)</u>
Financing activities:		
Proceeds from issuance of notes payable and long-term debt, net of debt issuance costs	10,537	26,556
Principal payments of long-term debt and notes payable	(41,203)	(1,093)
Proceeds from line of credit borrowings	38,473	79,953
Repayments of line of credit borrowings	(42,211)	(93,953)
Proceeds from bank acceptance payable	4,471	—
Repayments of bank acceptance payable	(6,575)	—
Proceeds from issuance of convertible senior notes, net of debt issuance costs	76,364	—
Exercise of stock options	7	53
Payments of tax withholding on behalf of employees related to share-based compensation	(526)	(2,212)
Net cash provided by financing activities	<u>39,337</u>	<u>9,304</u>
Effect of exchange rate changes on cash	317	1,832
Net increase (decrease) in cash, cash equivalents and restricted cash	25,983	(6,005)
Cash, cash equivalents and restricted cash at beginning of period	58,004	83,948
Cash, cash equivalents and restricted cash at end of period	<u>\$ 83,987</u>	<u>\$ 77,943</u>
Supplemental disclosure of cash flow information:		
Cash paid for:		
Interest	\$ 498	\$ 255
Income taxes	224	7,783
Non-cash investing and financing activities:		
Net change in accounts payable related to property and equipment additions	777	214

The accompanying notes are an integral part of these condensed consolidated financial statements.

Applied Optoelectronics, Inc. and Subsidiaries
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Note 1. Description of Business

Business Overview

Applied Optoelectronics, Inc. (“AOI” or the “Company”) is a Delaware corporation. The Company is a leading, vertically integrated provider of fiber-optic networking products, primarily for four networking end-markets: internet data center, cable television, telecommunications and fiber-to-the-home. The Company designs and manufactures a wide range of optical communications products at varying levels of integration, from components, subassemblies and modules to complete turn-key equipment.

The Company has manufacturing and research and development facilities located in the U.S., Taiwan and China. In the U.S., at its corporate headquarters and manufacturing facilities in Sugar Land, Texas, the Company primarily manufactures lasers and laser components and performs research and development activities for laser component and optical module products. In addition, the Company also has a research and development facility in Duluth, Georgia. The Company operates in Taipei, Taiwan and Ningbo, China through its wholly-owned subsidiary Prime World International Holdings, Ltd. (“Prime World”, incorporated in the British Virgin Islands). Prime World operates a branch in Taipei, Taiwan, which primarily manufactures transceivers and performs research and development activities for the transceiver products. Prime World is also the parent of Global Technology, Inc. (“Global”, incorporated in the People’s Republic of China). Through Global, the Company primarily manufactures certain of its data center transceiver products, including subassemblies, as well as Cable TV Broadband (“CATV”) systems and equipment, and performs research and development activities for the CATV products.

Interim Financial Statements

The unaudited condensed consolidated financial statements of the Company as of June 30, 2019 and December 31, 2018 and for the three and six months ended June 30, 2019 and June 30, 2018, have been prepared in accordance with accounting principles generally accepted in the United States of America (“GAAP”) for interim information and with the instructions on Form 10-Q and Rule 10-01 of Regulation S-X pursuant to the rules and regulations of the Securities and Exchange Commission (“SEC”). In accordance with those rules and regulations, the Company has omitted certain information and notes required by GAAP for annual consolidated financial statements. In the opinion of management, the condensed consolidated financial statements contain all adjustments, except as otherwise noted, necessary for the fair presentation of the Company’s financial position and results of operations for the periods presented. The year-end condensed balance sheet data was derived from audited financial statements. These condensed consolidated financial statements should be read in conjunction with the Consolidated Financial Statements and Notes thereto included in the Company’s Annual Report on Form 10-K (“Annual Report”) for the fiscal year ended December 31, 2018. The results of operations for the three and six months ended June 30, 2019 are not necessarily indicative of the results expected for the entire fiscal year. All significant intercompany accounts and transactions have been eliminated.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported. Actual results could differ from those estimates in the consolidated financial statements and accompanying notes. Significant estimates and assumptions that impact these financial statements and the accompanying notes relate to, among other things, allowance for doubtful accounts, inventory reserve, product warranty costs, share-based compensation expense, estimated useful lives of property and equipment, and taxes.

Note 2. Significant Accounting Policies

There have been no changes in the Company’s significant accounting policies for the three and six months ended June 30, 2019, as compared to the significant accounting policies described in its 2018 Annual Report, except as described below.

Recent Accounting Pronouncements

Recent Accounting Pronouncements Adopted in 2019

On February 25, 2016, the FASB released Accounting Standards Update (ASU) No. 2016-02, Leases, to complete its project to overhaul lease accounting. The ASU codifies ASC 842, Leases, which will replace the guidance in ASC 840. The new 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. The Company adopted this ASU on January 1, 2019 without any impact to beginning retained earnings. Upon adoption of the new lease standard, the Company elected the package of practical expedients which allowed it to carry forward the historical lease classification on existing leases at adoption. In addition, the Company elected the short-term lease recognition exemption for all leases that qualify. The Company also elected the practical expedient to not separate lease and non-lease components for all of its leases. The Company has implemented internal controls to enable the presentation of financial information on adoption. The standard has a material impact on the Company's consolidated balance sheet, but did not have an impact in its consolidated income statements. The most significant effects of adopting the new standard relate to the recognition of new ROU assets and lease liabilities on its balance sheet for its Taiwan branch. See Note 4, "Operating Leases" for additional information on the required disclosures related to the impact of adopting this standard.

In June 2018, the FASB issued ASU 2018-07, Compensation-Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting, which simplifies the accounting for nonemployee share-based payment transactions. The amendments specify that Topic 718 applies to all share-based payment transactions in which a grantor acquires goods or services to be used or consumed in a grantor's own operations by issuing share-based payment awards. The Company adopted this ASU on January 1, 2019 with no impact on its consolidated financial statements.

Recent Accounting Pronouncements Yet to be Adopted

In June 2016, the FASB issued ASU 2016-13 Financial Instruments - Credit Losses, Measurement of Credit Losses on Financial Instruments, which changes the way entities measure credit losses for most financial assets and certain other instruments that are not measured at fair value through net earnings. The new standard is effective for annual periods beginning after December 15, 2019, including interim periods within those annual periods. Based on the composition of the Company's investment portfolio, current market conditions, and historical credit loss activity, the adoption of ASU 2016-13 is not expected to have a material impact on its consolidated financial statements.

Note 3. Revenue Recognition

The adoption of Topic 606 represents a change in accounting principle that will provide financial statement readers with enhanced revenue recognition disclosures. In accordance with Topic 606, revenue is recognized when obligations under the terms of a contract with our customer are satisfied; generally, this occurs with the transfer of control of products or services. Revenue is measured as the amount of consideration the Company expects to receive in exchange for transferring products or providing services. Certain customers may receive cash and/or non-cash incentives, which are accounted for as variable consideration. To achieve this core principle, the Company applies the following five steps: (i) identify the contract with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to performance obligations in the contract; and (v) recognize revenue when or as the Company satisfies a performance obligation. The Company generally satisfies performance obligations at a point in time. Revenue is recognized based on the transaction price at the time the related performance obligation is satisfied by transferring a promised product or service to a customer.

Disaggregation of Revenue

Revenue is classified based on the location of where the product is manufactured. For additional information on the disaggregated revenues by geographical region, see Note 17, "Geographic Information."

Revenue is also classified by major product category and is presented below (in thousands):

	Three months ended June 30,			
	2019	% of Revenue	2018	% of Revenue
Data Center	\$ 31,806	73.3%	\$ 69,040	78.6%
CATV	9,818	22.6%	14,184	16.2%
Telecom	1,630	3.8%	4,157	4.7%
FTTH	16	0.0%	166	0.2%
Other	141	0.3%	275	0.3%
Total Revenue	<u>\$ 43,411</u>	<u>100.0%</u>	<u>\$ 87,822</u>	<u>100.0%</u>

	Six months ended June 30,			
	2019	% of Revenue	2018	% of Revenue
Data Center	\$ 70,305	73.1%	\$ 119,623	78.2%
CATV	21,780	22.7%	24,752	16.2%
Telecom	3,368	3.5%	7,743	5.1%
FTTH	110	0.1%	277	0.2%
Other	567	0.6%	666	0.4%
Total Revenue	<u>\$ 96,130</u>	<u>100.0%</u>	<u>\$ 153,061</u>	<u>100.0%</u>

Note 4. Operating Leases

The Company leases space under non-cancelable operating leases for manufacturing facilities, research and development offices and certain storage facilities and apartments. These leases do not contain contingent rent provisions. The Company also leases certain machinery, office equipment and a vehicle under operating leases. Many of its leases include both lease (e.g. fixed payments including rent, taxes, and insurance costs) and non-lease components (e.g. common-area or other maintenance costs) which are accounted for as a single lease component as the Company has elected the practical expedient to group lease and non-lease components for all leases. Several of the leases include one or more options to renew which have been assessed and either includes or excludes from the calculation of the lease liability of the ROU asset based on management's intentions and individual fact patterns. Several warehouses and apartments have non-cancelable lease terms of less than one-year and therefore, the Company has elected the practical expedient to exclude these short-term leases from its ROU asset and lease liabilities.

As most of the Company's leases do not provide an implicit rate, the Company uses its incremental borrowing rate, which is the rate incurred to borrow on a collateralized basis over a similar term an amount equal to the lease payments in a similar economic environment. Based on the applicable lease terms and current economic environment, the Company applies a location approach for determining the incremental borrowing rate.

The Components of lease expense were as follows for the periods indicated (in thousands):

	Three months ended June 30, 2019	Six months ended June 30, 2019
	Operating lease expense	\$ 318
Short Term lease expense	51	80
Total lease expense	<u>\$ 369</u>	<u>\$ 721</u>

Maturities of lease liabilities are as follows for the future one-year periods ending June 30, (in thousands):

2020	\$	1,212
2021		1,146
2022		1,092
2023		1,042
2024		1,055
2025 and thereafter		5,397
Total lease payments	\$	10,944
Less imputed interest		(1,859)
Present value	\$	9,085

The weighted average remaining lease term and discount rate for operating leases were as follows for the periods indicated:

	June 30,
	2019
Weighted Average Remaining Lease Term (Years)	9.69
Weighted Average Discount Rate	3.13%

Supplemental cash flow information related to operating leases was as follows for the periods indicated (in thousands):

	Six months ended
	June 30,
	2019
Cash paid for amounts included in the measurement of lease liabilities	
Operating cash flows from operating leases	676
Operating cash flows from financing lease	—
Financing cash flows from financing lease	—
Right-of-use assets obtained in exchange for new operating lease liabilities	15
Right-of-use assets obtained in exchange for new finance lease liabilities	—

Note 5. Cash, Cash Equivalents and Restricted Cash

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the statement of financial position that sum to the total of the same such amounts in the statement of cash flows (in thousands):

	June 30,	December 31,
	2019	2018
Cash and cash equivalents	\$ 81,070	\$ 55,646
Restricted cash	2,917	2,358
Total cash, cash equivalents and restricted cash shown in the statement of cash flows	\$ 83,987	\$ 58,004

Restricted cash includes guarantee deposits for customs duties and compensating balances required for certain credit facilities.

Note 6. Earnings Per Share

Basic net income (loss) per share has been computed using the weighted-average number of shares of common stock outstanding during the period. Diluted net income (loss) per share has been computed using the weighted-average number of shares of common stock and dilutive potential common shares from stock options, restricted stock units and senior convertible notes outstanding during the period. In periods with net losses, normally dilutive shares become anti-dilutive. Therefore, basic and diluted earnings per share are the same.

[Table of Contents](#)

The following table sets forth the computation of the basic and diluted net income (loss) per share for the periods indicated (in thousands, except per share amounts):

	<u>Three months ended June 30,</u>		<u>Six months ended June 30,</u>	
	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>
Numerator:				
Net income (loss)	\$ (11,366)	\$ 8,034	\$ (21,840)	\$ 10,154
Denominator:				
Weighted average shares used to compute net income (loss) per share				
Basic	19,932	19,590	19,898	19,541
Effect of dilutive options and restricted stock units	—	490	—	472
Diluted	19,932	20,080	19,898	20,012
Net income (loss) per share				
Basic	\$ (0.57)	\$ 0.41	\$ (1.10)	\$ 0.52
Diluted	\$ (0.57)	\$ 0.40	\$ (1.10)	\$ 0.51

The following potentially dilutive securities were excluded from the diluted net income (loss) per share as their effect would have been antidilutive (in thousands):

	<u>Three months ended June 30,</u>		<u>Six months ended June 30,</u>	
	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>
Employee stock options	29	—	63	—
Restricted stock units	—	—	2	—
Shares for convertible senior notes	4,587	—	4,587	—
Total antidilutive shares	<u>4,616</u>	<u>—</u>	<u>4,652</u>	<u>—</u>

Note 7. Inventories

Inventories, net of inventory write-downs, consist of the following for the periods indicated (in thousands):

	<u>June 30, 2019</u>	<u>December 31, 2018</u>
Raw materials	\$ 26,581	\$ 30,214
Work in process and sub-assemblies	48,008	49,192
Finished goods	6,886	13,850
Total inventories	<u>\$ 81,475</u>	<u>\$ 93,256</u>

The lower of cost or market adjustment expensed for inventory for the three months ended June 30, 2019 and 2018 was \$2.9 million and \$1.5 million, respectively. The lower of cost or market adjustment expensed for inventory for the six months ended June 30, 2019 and 2018 was \$5.2 million and \$2.4 million, respectively.

Note 8. Property, Plant & Equipment

Property, plant and equipment consisted of the following for the periods indicated (in thousands):

	<u>June 30, 2019</u>	<u>December 31, 2018</u>
Land improvements	\$ 806	\$ 806
Building and improvements	83,121	80,960
Machinery and equipment	232,852	214,718
Furniture and fixtures	5,087	5,043
Computer equipment and software	10,041	9,709
Transportation equipment	654	658
	<u>332,561</u>	<u>311,894</u>
Less accumulated depreciation and amortization	(105,777)	(95,233)
	<u>226,784</u>	<u>216,661</u>
Construction in progress	20,002	16,449
Land	1,101	1,101
Total property, plant and equipment, net	<u>\$ 247,887</u>	<u>\$ 234,211</u>

For the three months ended June 30, 2019 and 2018, depreciation expense of property, plant and equipment was \$5.9 million and \$7.2 million, respectively. For the six months ended June 30, 2019 and 2018, depreciation expense of property, plant and equipment was \$11.7 million and \$14.0 million, respectively.

Depreciation expense of \$2.3 million and \$3.8 million was recorded as cost of sales for the three months ended June 30, 2019 and 2018, respectively. Depreciation expense of \$4.8 million and \$7.6 million was recorded as cost of sales for the six months ended June 30, 2019 and 2018, respectively.

Note 9. Intangible Assets, net

Intangible assets consisted of the following for the periods indicated (in thousands):

	<u>June 30, 2019</u>		
	<u>Gross Amount</u>	<u>Accumulated amortization</u>	<u>Intangible assets, net</u>
Patents	\$ 7,292	\$ (3,267)	\$ 4,025
Trademarks	16	(13)	3
Total intangible assets	<u>\$ 7,308</u>	<u>\$ (3,280)</u>	<u>\$ 4,028</u>

	<u>December 31, 2018</u>		
	<u>Gross Amount</u>	<u>Accumulated amortization</u>	<u>Intangible assets, net</u>
Patents	\$ 6,983	\$ (3,008)	\$ 3,975
Trademarks	15	(13)	2
Total intangible assets	<u>\$ 6,998</u>	<u>\$ (3,021)</u>	<u>\$ 3,977</u>

For the three months ended June 30, 2019 and 2018, amortization expense for intangible assets, included in general and administrative expenses on the income statement, was each \$0.1 million. For the six months ended June 30, 2019 and 2018, amortization expense for intangible assets, included in general and administrative expenses on the income statement, was each \$0.3 million.

The remaining weighted average amortization period for intangible assets is approximately 8 years.

Note 10. Fair Value of Financial Instruments

The following table represents a summary of the Company's financial instruments measured at fair value on a recurring basis for the periods indicated (in thousands):

	As of June 30, 2019				As of December 31, 2018			
	(Level 1)	(Level 2)	(Level 3)	Total	(Level 1)	(Level 2)	(Level 3)	Total
Assets:								
Cash and cash equivalents	\$ 81,070	\$ —	\$ —	\$ 81,070	\$ 55,646	\$ —	\$ —	\$ 55,646
Restricted cash	2,917	—	—	2,917	2,358	—	—	2,358
Total assets	<u>\$ 83,987</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 83,987</u>	<u>\$ 58,004</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 58,004</u>
Liabilities:								
Bank acceptance payable	—	\$ 2,532	—	\$ 2,532	—	\$ 4,628	—	\$ 4,628
Convertible senior notes	—	71,500	—	71,500	—	—	—	—
Total liabilities	<u>\$ —</u>	<u>\$ 74,032</u>	<u>\$ —</u>	<u>\$ 74,032</u>	<u>\$ —</u>	<u>\$ 4,628</u>	<u>\$ —</u>	<u>\$ 4,628</u>

The carrying value amounts of accounts receivable, prepaid expenses and other current assets, accounts payable, accrued expenses and other current liabilities approximate fair value because of the short-term maturity of these instruments. The carrying value amounts of debt approximate fair value due to the short-term nature of the debt since it renews frequently at current interest rates. The Company believes that the interest rates in effect at each period end represent the current market rates for similar borrowings.

Note 11. Notes Payable and Long-Term Debt

Notes payable and long-term debt consisted of the following for the periods indicated (in thousands):

	June 30, 2019	December 31, 2018
Revolving line of credit with a U.S. bank up to \$25,000 with interest at LIBOR plus 1.5%, maturing September 28, 2020	\$ 20,000	\$ 23,104
Term loan with a U.S. bank with monthly payments of principal and interest at LIBOR plus 1.15%, maturing April 1, 2024	—	20,067
Term loan with a U.S. bank with monthly payments of principal and interest at LIBOR plus 1.3%, maturing between April 1, 2023 and December 18, 2023	—	19,164
Revolving line of credit with a Taiwan bank up to \$9,659 with interest at 2%, maturing July 29, 2019	3,220	3,256
Revolving line of credit with a Taiwan bank up to \$7,000 with interest ranging from 1.5% to 3.5%, maturing July 26, 2019	3,219	3,550
Notes payable to a finance company due in monthly installments with 3.4% interest, maturing November 30, 2021	5,187	6,331
Notes payable to a finance company due in monthly installments with 3.1% interest, maturing January 21, 2022	5,545	—
Revolving line of credit with a Taiwan bank up to \$2,576 with interest of 1.7%, maturing September 11, 2019	644	—
Revolving line of credit with a China bank up to \$19,158 with interest ranging from 4.1% to 4.6%	—	8,652
Revolving line of credit with a China bank up to \$26,183 with interest of 4.57%, maturing May 24, 2024	7,804	—
Credit facility with a China bank up to \$14,546 with interest of 5.7%, maturing January 4, 2021	4,073	—
Sub-total	49,692	84,124
Less debt issuance costs, net	(44)	(207)
Grand total	49,648	83,917
Less current portion	(19,180)	(23,589)
Non-current portion	<u>\$ 30,468</u>	<u>\$ 60,328</u>
Bank Acceptance Notes Payable		
Bank acceptance notes issued to vendors with a zero percent interest rate	\$ 2,532	\$ 4,628

The current portion of long-term debt is the amount payable within one year of the balance sheet date of June 30, 2019.

Maturities of long-term debt are as follows for the future one-year periods ending June 30, (in thousands):

2020	\$ 19,180
2021	24,249
2022	6,219
2023	—
2024	—
2025 and thereafter	—
Total outstanding	<u>\$ 49,648</u>

On September 28, 2017, the Company entered into a Loan Agreement (“Loan Agreement”), a Promissory Note, an Addendum to the Promissory Note, a BB&T Security Agreement, a Trademark Security Agreement, and a Patent Security Agreement (together the “Credit Facility”) with Branch Banking and Trust Company (“BB&T”). The Credit Facility provides the Company with a three-year, \$50 million, revolving line of credit. Borrowings under the Credit Facility will be used for general corporate purposes. The Company makes monthly payments of accrued interest with the final monthly payment being for all principal and all accrued interest not yet paid. The Company’s obligations under the Credit Facility are secured by the Company’s accounts receivable, inventory, intellectual property, and all business assets with the exception of real estate and equipment. Borrowings under the Credit Facility bear interest at a rate equal to the one-month LIBOR plus 1.50%. The Credit Facility requires the Company to maintain certain financial covenants and also contains representations and warranties, and events of default applicable to the Company that are customary for agreements of this type.

On March 30, 2018, the Company executed a First Amendment to Loan Agreement, a Note Modification Agreement and Addendum to Promissory Note for \$60 million, a Promissory Note and Addendum to Promissory Note for \$26 million, a Promissory Note and Addendum to Promissory Note for \$21.5 million, a Texas Deed of Trust and Security Agreement, an Assignment of Lease and Rent, and an Environmental Certification and Indemnity Agreement, (collectively, the “Amended Credit Facility”), with BB&T. The Amended Credit Facility amends the Company’s three-year \$50 million line of credit with BB&T. The Amended Credit Facility (1) increases the principal amount of the three-year line of credit from \$50 million to \$60 million (the “Line of Credit”); (2) allows the Company to borrow an additional \$26 million from BB&T in the form of a five-year capital expenditure loan (the “CapEx Loan”) and (3) allows the Company to borrow an additional \$21.5 million in the form of a seventy-month real estate term loan (the “Term Loan”) to refinance the Company’s plant and facilities in Sugar Land, Texas. Borrowings under the Line of Credit bear interest at a rate equal to the one-month LIBOR plus a Line of Credit margin ranging between 1.40% and 2.0%. Borrowings under the CapEx Loan bear interest at a rate equal to the one-month LIBOR plus a CapEx Loan margin ranging between 1.30% and 2.0%. Borrowings under the Term Loan bear interest at a rate equal to the one-month LIBOR plus a Term Loan margin ranging between 1.15% and 2.0%. The Company is required to make monthly payments of principal and accrued interest with the final monthly payments being for all principal and accrued interest not yet paid. The Company’s obligations under the Amended Credit Facility are secured by the Company’s accounts receivable, inventory, equipment, intellectual property, real property, and virtually all business assets.

On February 1, 2019, the Company executed a Second Amendment to Loan Agreement with BB&T. The original loan agreement with BB&T, executed on September 28, 2017, and a first amendment to the original loan agreement, executed on March 30, 2018, provided the Company with a three-year \$60 million line of credit; a \$26 million five-year CapEx Loan and a \$21.5 million seventy-month real estate term loan for the Company’s plant and facilities in Sugar Land, Texas. The Second Amendment to Loan Agreement extends the CapEx Loan draw-down date from March 30, 2019 to September 30, 2019, requires the Company to provide BB&T monthly financial statements and allows additional unfinanced capital expenditures.

On March 5, 2019, the Company executed a Third Amendment (the “Third Amendment”) to Loan Agreement with BB&T pursuant to which the Company has established a revolving credit line used for working capital purposes. The Third Amendment to the Loan Agreement, among other things: (i) contemplates the issuance of the Notes (as defined in Note 12 below) and the subsequent conversion of the Notes into common stock in accordance with the

terms of the Indenture, including the payment of cash for any fractional shares; (ii) adjusts pricing of the unused line fee to 0.20% per annum; (iii) reduces the maximum commitment under the line of credit from \$60,000,000 to \$25,000,000; and (iv) provides that, so long as the Company's utilization of the revolving credit line is not greater than 60% of the available commitment, the Company will not be required to comply with its financial covenants, including its fixed charge coverage ratio or funded debt to EBITDA covenant, and provided that, such restriction on utilization will not apply during the period of time commencing seven business days prior to the end of any fiscal quarter through seven business days after the subsequent fiscal quarter.

On March 5, 2019, the Company used approximately \$37.8 million of the net proceeds from the offering of the Notes to fully repay the CapEx Loan and Term Loan with BB&T.

As of June 30, 2019, the Company was in compliance with all covenants under the Loan Agreement. As of June 30, 2019, \$20.0 million was outstanding under the Line of Credit.

On June 19, 2018, Prime World entered into a one year revolving credit facility totaling 300 million New Taiwan dollars, or approximately \$9.8 million, (the "Taiwan Credit Facility") with Taishin International Bank in Taiwan. Borrowing under the Taiwan Credit Facility will be used for short-term working capital. Prime World may draw upon the Taiwan Credit Facility from June 19, 2018 until July 31, 2019. The term of each draw shall be either 90 or 120 days. Borrowings under the Taiwan Credit Facility bear interest at a rate of 2.00% for 90 day draws and 1.95% for 120 day draws. At the end of the draw term, Prime World is required to make payments for all principal and accrued interest. The agreements for the Taiwan Credit Facility contain representations and warranties and events of default applicable to Prime World that are customary for agreements of this type. As of June 30, 2019, \$3.2 million was outstanding under the Taiwan Credit Facility.

On October 3, 2018, Prime World entered into a revolving credit facility for up to \$7 million, (the "Revolving Credit Facility") with the Development Bank of Singapore (Taiwan) Ltd. ("DBS"). Borrowing under the Revolving Credit Facility will be used for short-term working capital. Prime World may draw upon the Revolving Credit Facility from October 3, 2018 until July 26, 2019. The term of each draw shall be either 60 or 90 days depending on the purpose of the draw. Borrowings under the Revolving Credit Facility bear interest at a rate equal to DBS's cost of funds rate plus 1.25% for draws in U.S. Dollars and 1.35% plus the Bank's cost of funds rate for draws in New Taiwan Dollars. DBS's cost of fund's rate is adjusted daily. Prime World is required to make monthly payments of accrued interest with the final monthly payment being for all principal and all accrued interest not yet paid. Prime World's obligations under the Revolving Credit Facility is secured by promissory notes executed between Prime World and DBS at the time of each draw. The agreements for the Revolving Credit Facility contain representations and warranties and events of default applicable to the Prime World that are customary for agreements of this type. As of June 30, 2019, \$3.2 million was outstanding under the Revolving Credit Facility.

On November 29, 2018, Prime World entered into a Purchase and Sale Contract (the "Sale Contract") and an Equipment Finance Agreement with Chailease Finance Co., Ltd. ("Chailease") in connection with certain equipment. Pursuant to the Sale Contract, Prime World sold certain equipment to Chailease for a purchase price of NT\$267,340,468, or approximately \$8.7 million. Simultaneously, Prime World leased the equipment back from Chailease for a term of three-years, pursuant to the Equipment Finance Agreement. Prime World is obligated to pay an initial payment of NT\$67,340,468, or approximately \$2.2 million, thereafter the monthly lease payments range from NT\$5,571,229, or \$0.2 million, to NT\$6,139,188, or approximately \$0.2 million. Based on the lease payments made under the Equipment Finance Agreement, the annual interest rate is calculated to be 3.5%. Upon an event of default under the Equipment Finance Agreement, Prime World's payment obligation will be secured by a promissory note to Chailease in the amount of NT\$210,601,605, or approximately \$6.8 million, subject to certain terms and conditions. The title of the equipment will be transferred to Prime World upon expiration of the Equipment Finance Agreement. As of June 30, 2019, \$5.2 million was outstanding under the Equipment Finance Agreement.

On January 21, 2019, Prime World entered into a second Purchase and Sale Contract (the "Second Sales Contract"), Promissory Note, and a second Equipment Finance Agreement, (collectively, the "Second Financing Agreements") with Chailease in connection with certain equipment. Pursuant to the Second Sales Contract, Prime World sold certain equipment to Chailease for a purchase price of NT\$267,333,186, or approximately \$8.7 million. Simultaneously, Prime World leased the equipment back from Chailease for a term of three-years, pursuant to the Second Equipment Finance Agreement. Prime World is obligated to pay an initial monthly payment of NT\$67,333,186, or approximately \$2.2 million, thereafter the monthly lease payments range from NT\$5,570,167, or approximately \$0.2

million to NT\$6,082,131, or approximately \$0.2 million. Based on the lease payments made under the Second Equipment Finance Agreement, the annual interest rate is calculated to be 3.1%. Upon an event of default under the Second Equipment Finance Agreement, Prime World's payment obligation will be secured by a promissory note to Chailease at the amount of NT\$209,555,736 or approximately \$6.8 million, subject to certain terms and conditions. The title of the equipment will be transferred to Prime World upon expiration of the Second Equipment Finance Agreement. As of June 30, 2019, \$5.5 million was outstanding under the Second Equipment Finance Agreement.

On December 11, 2018, Prime World entered into a one-year credit facility totaling New Taiwan Dollars 150 million, or approximately \$4.9 million, (the "Credit Facility") with CTBC Bank Co., Ltd. ("CTBC"). Borrowing under the Credit Facility will be used for short-term working capital. Prime World may draw upon the Credit Facility from December 11, 2018 until October 31, 2019. The term of each draw shall be up to 120 days. Under the Credit Facility borrowing in New Taiwan Dollars will bear interest at a rate equal to CTBC's Enterprise Swap Index Rate plus 1.2%; for all foreign currency borrowing interest bear at a rate equal to CTBC's Cost of Fund lending rate plus 1.2%. As of the execution of the Credit Facility, CTBC's Enterprise Swap Index Rate and Cost of Funds lending rate is 0.69% and 3.40% respectively. At the end of the draw term, Prime World is required to make payments for all principal and accrued interest. The Credit Facility contains representations and warranties, and events of default applicable to Prime World that are customary for agreements of this type. As of June 30, 2019, there was no outstanding balance under the Credit Facility.

On April 11, 2019, Prime World entered into a one-year credit facility totaling NT\$80 million, or approximately \$2.6 million, (the "Far Eastern Credit Facility") with Far Eastern International Bank Co., Ltd. ("Far Eastern"). Prime World may draw upon the Far Eastern Credit Facility from April 11, 2019 until April 11, 2020. The term of each draw shall be up to 180 days. Under the Far Eastern Credit Facility borrowing in New Taiwan Dollars will bear interest at a rate equal to Far Eastern's published one-year fixed term time deposits rate, plus 0.655%; for all foreign currency borrowing, interest shall be the TAIFX3 rate for the length of time equal to the term of the loan or the next longer tenor for which rates are quoted, plus 0.7%. As of the execution of the Far Eastern Credit Facility, Far Eastern's published one-year fixed term time deposits rate and TAIFX3 rate are 1.045 % and 2.75%, respectively. Prime World's obligations under the Far Eastern Credit Facility will be secured by promissory note executed between Prime World and Far Eastern. As of June 30, 2019, \$0.6 million was outstanding under the Far Eastern Credit Facility.

On September 21, 2018, the Company's China subsidiary, Global, entered into a five-year revolving credit line agreement, totaling 129,000,000 Chinese Renminbi, or RMB, or approximately \$18.6 million, (the "Credit Line") and a Security Agreement with China Construction Bank Co., Ltd., in Ningbo, China ("CCB"). Borrowing under the Credit Line will be used for general corporate and capital investment purposes, including the issuance of bank acceptance notes to Global's vendors. Global may draw upon the Credit Line between September 21, 2018 and September 17, 2023; however, the amount of available credit under the Credit Line may be reduced by CCB without notice to Global and may be decreased subject to changes of Chinese government regulations. Each draw bears interest equal to CCB's commercial banking interest rate effective on the day of the applicable draw. Global's obligations under the Credit Line is secured by real property owned by Global in China and mortgaged to CCB under the terms of the Security Agreement. On May 10, 2019, Global repaid the Credit Line without penalty and terminated the agreement. As of June 30, 2019, the outstanding balance of bank acceptance notes issued to vendors was \$0.5 million and will be fully repaid by September 26, 2019.

On April 19, 2019, the Company's China subsidiary, Global, entered into a twelve (12) month revolving line of credit agreement, totaling 60,000,000 RMB, or approximately \$8.9 million, (the "China Merchants Credit Line"), with China Merchants Bank Co., Ltd., in Ningbo, China ("China Merchants"). The China Merchants Credit Line will be used by Global for general corporate purposes, including the issuance of bank acceptance notes to Global's vendors. Global may draw upon the China Merchants Credit Line from April 19, 2019 until April 18, 2020 (the "Credit Period"). During the Credit Period, Global may request to draw upon the China Merchants Credit Line on an as-needed basis; however, the amount of available credit under the China Merchants Credit Line and the approval of each draw may be reduced or declined by China Merchants due to changes in Chinese government regulations and/or changes in Global's financial and operational condition at the time of each requested draw. Each draw will bear interest equal to China Merchants' commercial banking interest rate effective on the day of the applicable draw. Global's obligations under the China Merchants Credit Line are unsecured. As of June 30, 2019, there was no outstanding balance under the China Merchants Credit Line and the outstanding balance of bank acceptance notes issued to vendors was \$1.4 million.

On April 30, 2019, the Company's China subsidiary, Global, entered into a one-year credit facility totaling 9,900,000 RMB, or approximately \$1.5 million, (the "SPD ¥9.9M Credit Facility"), with Shanghai Pudong Development Bank Co., Ltd., in Beilun District, Ningbo City, China ("SPD"). Borrowing under the SPD ¥9.9M Credit Facility will be used for short-term working capital. Global may draw upon the SPD ¥9.9M Credit Facility from April 30, 2019 until May 9, 2019. Borrowing under the SPD ¥9.9M Credit Facility will mature on April 30, 2020 and will bear interest equal to SPD's published twelve (12) month prime loan rate in effect on the date of the draw, plus 0.2475%. Under the SPD ¥9.9M Credit Facility, Global will make monthly payments of accrued interest and the principal shall be repaid upon maturity. Global's obligations under the SPD ¥9.9M Credit Facility are unsecured. The SPD ¥9.9M Credit Facility has been replaced by the SPD Credit Line on May 24, 2019.

On May 7, 2019, the Company's China subsidiary, Global, entered into a one-year credit facility totaling 30,000,000 RMB, or approximately \$4.5 million, (the "SPD ¥30M Credit Facility"), with Shanghai Pudong Development Bank Co., Ltd., in Ningbo City, China ("SPD"). Borrowing under the SPD ¥30M Credit Facility will be used to repay Global's outstanding loans with China Construction Bank. Borrowing under the SPD ¥30M Credit Facility will mature on May 7, 2020 and will bear interest equal to the Bank's published twelve (12) month prime loan rate in effect on the date of the draw, plus 0.2475%. As of the execution of the Credit Facility agreement, the Bank's published 12 months prime loan rate is 4.32%. Under the SPD ¥30M Credit Facility, Global will make monthly payments of accrued interest; principal shall be repaid upon maturity. Global's obligations under the SPD ¥30M Credit Facility are unsecured. The SPD ¥30M Credit Facility has been replaced by the SPD Credit Line on May 24, 2019.

On May 8, 2019, the Company's China subsidiary, Global, entered into a six-month credit facility totaling 2,000,000 USD (the "\$2M Credit Facility") with Shanghai Pudong Development Bank Co., Ltd., in Ningbo City, China ("SPD"). Borrowing under the \$2M Credit Facility will be used to repay Global's outstanding loans with CCB and for general corporate purposes. Borrowing under the \$2M Credit Facility will mature on November 7, 2019 and will bear interest equal to SPD's published six (6) month LIBOR in effect on the date of the draw, plus 1.48%. As of the execution of the \$2M Credit Facility agreement, the SPD published 6 months LIBOR rate was 2.59438%. Under the \$2M Credit Facility, Global will make quarterly payments of accrued interest; principal shall be repaid upon maturity. Global's obligations under the \$2M Credit Facility are unsecured. The \$2M Credit Facility also contains rights and obligations, representations and warranties, and events of default applicable to the Company that are customary for agreements of this type. The \$2M Credit Facility has been replaced by the SPD Credit Line on May 24, 2019.

On May 24, 2019, the Company's China subsidiary, Global, entered into a five-year revolving credit line agreement, totaling 180,000,000 RMB (the "SPD Credit Line"), or approximately \$26.2 million, and a mortgage security agreement (the "Security Agreement"), with Shanghai Pudong Development Bank Co., Ltd., in Ningbo City, China ("SPD"). Borrowing under the SPD Credit Line will be used for general corporate and capital investment purposes, including the issuance of bank acceptance notes to Global's vendors. The total SPD Credit Line of 180 million RMB is inclusive of all credit facilities previously entered into with SPD including: a 30 million RMB credit facility entered into on May 7, 2019; and a 9.9 million RMB credit facility entered into on April 30, 2019. Global may draw upon the SPD Credit Line on an as-needed basis at any time during the 5-year term; however, draws under the SPD Credit Line may become due and repayable to SPD at the SPD's discretion due to changes in Chinese government regulations and/or changes in Global's financial and operational condition. Each draw will bear interest equal to SPD's commercial banking interest rate effective on the day of the applicable draw. Global's obligations under the SPD Credit Line will be secured by real property owned by Global and mortgaged to the Bank under the terms of the Security Agreement. The agreements for the SPD Credit Line and the Security Agreement also contain rights and obligations, representations and warranties, and events of default applicable to the Company that are customary for agreements of this type. As of June 30, 2019, \$7.8 million was outstanding under the SPD Credit Line and the outstanding balance of bank acceptance notes issued to vendors was \$0.7 million.

On June 21, 2019, the Company's China subsidiary, Global, entered into a 18 month credit facility totaling 100,000,000 RMB (the "¥100M Credit Facility"), or approximately \$14.6 million, with China Zheshang Bank Co., Ltd., in Ningbo City, China ("CZB"). Borrowing under the ¥100M Credit Facility will be used by Global for general corporate purposes. Global may draw upon the ¥100M Credit Facility from June 21, 2019 until January 4, 2021 (the "¥100M Credit Period"). During the ¥100M Credit Period, Global may request to draw upon the ¥100M Credit Facility on an as-needed basis; however, draws under the ¥100M Credit Facility may become due and repayable to CZB at CZB's discretion due to changes in Chinese government regulations and/or changes in Global's financial and operational condition. Each draw will bear interest equal to CZB's commercial banking interest rate effective on the day of the applicable draw. Global's obligations under the ¥100M Credit Facility will be secured by real property owned by Global

and mortgaged to CZB under the terms of the Real Estate Security Agreement. The agreements for the ¥100M Credit Facility and the Real Estate Security Agreement also contain rights and obligations, representations and warranties, and events of default applicable to the Company that are customary for agreements of this type. As of June 30, 2019, \$4.1 million was outstanding under the ¥100M Credit Facility.

On June 21, 2019, the Company's China subsidiary, Global, entered into a three-year credit facility totaling 50,000,000 RMB (the "¥50M Credit Facility"), or approximately \$7.3 million, with China Zheshang Bank Co., Ltd., in Ningbo City, China ("CZB"). Borrowing under the ¥50M Credit Facility will be used by Global for general corporate purposes. Global may draw upon the ¥50M Credit Facility from June 21, 2019 until June 20, 2022 (the "¥50M Credit Period"). During the ¥50M Credit Period, Global may request to draw upon the Credit Facility on an as-needed basis; however, draws under the ¥50M Credit Facility may become due and repayable to CZB at CZB's discretion due to changes in Chinese government regulations and/or changes in Global's financial and operational condition. Each draw will bear interest equal to CZB's commercial banking interest rate effective on the day of the applicable draw. Global's obligations under the ¥50M Credit Facility will be secured by machinery and equipment owned by Global and mortgaged to CZB under the terms of the Machinery and Equipment Security Agreement. The agreements for the ¥50M Credit Facility and the Machinery and Equipment Security Agreement also contain rights and obligations, representations and warranties, and events of default applicable to the Company that are customary for agreements of this type. As of June 30, 2019, there was no outstanding balance under the ¥50M Credit Facility.

As of June 30, 2019 and December 31, 2018, the Company had \$64.7 million and \$63.6 million of unused borrowing capacity, respectively.

One-month LIBOR rates were 2.4% and 2.5% at June 30, 2019 and December 31, 2018, respectively.

As of June 30, 2019 and December 31, 2018, there was \$1.2 million and \$1.4 million of restricted cash, investments or security deposits associated with the loan facilities, respectively.

Note 12. Convertible Senior Notes

On March 5, 2019, the Company issued \$80.5 million of 5% convertible senior notes due 2024 (the "Notes"). The Notes were issued pursuant to an indenture, dated as of March 5, 2019 (the "Indenture"), between the Company and Wells Fargo Bank, National Association, as trustee, paying agent, and conversion agent (the "Trustee"). The Notes bear interest at a rate of 5.00% per year, payable in cash semi-annually in arrears on March 15 and September 15 of each year, beginning on September 15, 2019. The Notes will mature on March 15, 2024, unless earlier repurchased, redeemed or converted in accordance with their terms.

The sale of the Notes generated net proceeds of \$76.4 million, after deducting the Initial Purchasers' discounts and offering expenses payable by the Company. The Company used approximately \$37.8 million of the net proceeds from the offering to fully repay the CapEx Loan and Term Loan with BB&T and the remainder will be used for general corporate purposes.

The following table presents the carrying value of the Notes for the periods indicated (in thousands):

	June 30, 2019	December 31, 2018
Principal	\$ 80,500	\$ —
Unamortized debt issuance costs	(3,870)	—
Net carrying amount	<u>\$ 76,630</u>	<u>\$ —</u>

The Notes are convertible at the option of holders of the Notes at any time until the close of business on the scheduled trading day immediately preceding the maturity date. Upon conversion, holders of the Notes will receive shares of the Company's common stock, together, if applicable, with cash in lieu of any fractional share, at the then-applicable conversion rate. The initial conversion rate is 56.9801 shares of the Company's common stock per \$1,000 principal amount of Notes (representing an initial conversion price of approximately \$17.55 per share of common stock, which represents an initial conversion premium of approximately 30% above the closing price of \$13.50 per share of the

[Table of Contents](#)

Company's common stock on February 28, 2019), subject to customary adjustments. If a make-whole fundamental change (as defined in the Indenture) occurs, and in connection with certain other conversions before March 15, 2022, the Company will in certain circumstances increase the conversion rate for a specified period of time.

Initially there are no guarantors of the Notes, but the Notes will be fully and unconditionally guaranteed, on a senior, unsecured basis by certain of the Company's future domestic subsidiaries. The Notes are the Company's senior, unsecured obligations and are equal in right of payment with existing and future senior, unsecured indebtedness, senior in right of payment to the Company's existing and future indebtedness that is expressly subordinated to the Notes and effectively subordinated to the Company's existing and future secured indebtedness, to the extent of the value of the collateral securing that indebtedness. The Note Guarantee (as defined in the Indenture) of each future guarantor, if any, will be such guarantor's senior, unsecured obligations and are equal in right of payment with existing and future senior, unsecured indebtedness, senior in right of payment to such future guarantor's existing and future indebtedness that is expressly subordinated to the Notes and effectively subordinated to such future guarantor's existing and future secured indebtedness, to the extent of the value of the collateral securing that indebtedness.

Holders may require the Company to repurchase their Notes upon the occurrence of a fundamental change (as defined in the Indenture) at a cash purchase price equal to the principal amount thereof plus accrued and unpaid interest, if any.

The Company may not redeem the Notes prior to March 15, 2022. On or after March 15, 2022, the Company may redeem for cash all or part of the Notes if the last reported sale price per share of the Company's common stock exceeds 130% of the conversion price on (i) each of at least 20 trading days, whether or not consecutive, during the 30 consecutive trading days ending on, and including, the trading day immediately before the date the Company sends the related redemption notice; and (ii) the trading day immediately before the date the Company sends such redemption notice. The redemption price is equal to 100% of the principal amount of the notes to be redeemed, plus accrued and unpaid interest to, but excluding, the redemption date. In addition, calling any Note for redemption will constitute a "make-whole fundamental change" with respect to that Note, in which case the conversion rate applicable to the conversion of that Note will be increased in certain circumstances if it is converted after it is called for redemption.

The Indenture contains covenants that limit the Company's ability and the ability of our subsidiaries to, among other things: (i) incur or guarantee additional indebtedness or issue disqualified stock; and (ii) create or incur liens.

The Company incurred approximately \$4.1 million in transaction costs in connection with the issuance of the Notes. These costs were recognized as a reduction of the carrying amount of the Notes utilizing the effective interest method and are being amortized over the term of the notes.

The following table sets forth interest expense information related to the Notes (in thousands):

	<u>Three months ended June 30,</u>		<u>Six months ended June 30,</u>	
	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>
Contractual interest expense	1,006	—	1,308	—
Amortization of debt issuance costs	205	—	266	—
Total interest cost	<u>\$ 1,211</u>	<u>\$ —</u>	<u>\$ 1,574</u>	<u>\$ —</u>
Effective interest rate	5.116%	0%	5.116%	0%

Note 13. Accrued Liabilities

Accrued liabilities consisted of the following for the periods indicated (in thousands):

	June 30, 2019	December 31, 2018
Accrued payroll	\$ 7,868	\$ 10,772
Accrued rent	—	1,200
Accrued employee benefits	1,585	2,862
Accrued state and local taxes	631	1,088
Accrued interest	1,336	163
Advance payments	273	426
Accrued product warranty	894	995
Accrued commission expenses	211	398
Accrued professional fees	202	315
Accrued capital expenditures	12	371
Accrued other	974	701
Total accrued liabilities	<u>\$ 13,986</u>	<u>\$ 19,291</u>

Note 14. Other Income and Expense

Other income and (expense) consisted of the following for the periods indicated (in thousands):

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
Foreign exchange transaction loss (gain)	216	1,289	(17)	249
Government subsidy income	74	269	162	269
Other non-operating (loss) gain	161	19	161	31
Gain (loss) on disposal of assets	—	4	(10)	5
Total other expense, net	<u>\$ 451</u>	<u>\$ 1,581</u>	<u>\$ 296</u>	<u>\$ 554</u>

Note 15. Share-Based Compensation*Equity Plans*

The Company's board of directors and stockholders approved the following equity plans:

- the 1998 Share Incentive Plan
- the 2000 Share Incentive Plan
- the 2004 Share Incentive Plan
- the 2006 Share Incentive Plan
- the 2013 Equity Incentive Plan ("2013 Plan")

The Company issued stock options, restricted stock awards ("RSAs") and restricted stock units ("RSUs") to employees, consultants and non-employee directors. Stock option awards generally vest over a four year period and have a maximum term of ten years. Stock options under these plans have been granted with an exercise price equal to the fair market value on the date of the grant. Nonqualified and Incentive Stock Options, RSAs and RSUs may be granted from these plans. Prior to the Company's initial public offering in September 2013, the fair market value of the Company's stock had been historically determined by the board of directors and from time to time with the assistance of third party valuation specialists.

Stock Options

Options have been granted to the Company's employees under the five incentive plans and generally become exercisable as to 25% of the shares on the first anniversary date following the date of grant and 12.5% on a semi-annual basis thereafter. All options expire ten years after the date of grant.

The following is a summary of option activity (in thousands, except per share data):

	Number of shares	Weighted Average Exercise Price	Weighted Average Share Price on Date of Exercise	Weighted Average Fair Value	Weighted Average Remaining Contractual Life	Aggregate Intrinsic Value
(in thousands, except price data)						
Outstanding, January 1, 2019	287	\$ 10.19		\$ 5.31		\$ 1,503
Exercised	(1)	6.77	\$ 13.67	4.96		7
Forfeited	—	—		—		—
Outstanding, June 30, 2019	286	\$ 10.20		\$ 5.31	4.11	217
Exercisable, June 30, 2019	286	\$ 10.20			4.11	217
Vested and expected to vest	286	\$ 10.20			4.11	\$ 217

As of June 30, 2019, there was no unrecognized stock option expense.

Restricted Stock Units/Awards

The following is a summary of RSU/RSA activity (in thousands, except per share data):

	Number of shares	Weighted Average Share Price on Date of Release	Weighted Average Fair Value	Aggregate Intrinsic Value
(in thousands, except price data)				
Outstanding at January 1, 2019	826		\$ 32.07	\$ 12,744
Granted	417		13.54	5,644
Released	(205)	\$ 14.79	28.36	3,034
Cancelled/Forfeited	(27)		27.91	274
Outstanding, June 30, 2019	1,011		25.29	10,393
Vested and expected to vest	1,011		\$ 25.29	\$ 10,393

As of June 30, 2019, there was \$23.0 million of unrecognized compensation expense related to these RSUs and RSAs. This expense is expected to be recognized over 2.3 years.

Share-Based Compensation

Employee share-based compensation expenses recognized for the periods indicated (in thousands):

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
Share-based compensation - by expense type				
Cost of goods sold	\$ 198	\$ 211	\$ 387	\$ 388
Research and development	657	676	1,296	1,252
Sales and marketing	279	260	550	488
General and administrative	1,885	1,752	3,728	3,340
Total share-based compensation expense	<u>\$ 3,019</u>	<u>\$ 2,899</u>	<u>\$ 5,961</u>	<u>\$ 5,468</u>
Share-based compensation - by award type				
Employee stock options	\$ —	\$ 12	\$ —	\$ 12
Restricted stock units	3,019	2,887	5,961	5,456
Total share-based compensation expense	<u>\$ 3,019</u>	<u>\$ 2,899</u>	<u>\$ 5,961</u>	<u>\$ 5,468</u>

Note 16. Income Taxes

The Company's tax provision or benefit from income taxes for interim periods is determined using an estimate of its annual effective tax rate, adjusted for discrete items, if any, that are taken into account in the relevant period. The Company's quarterly tax provision, and its quarterly estimate of its annual effective tax rate, are subject to significant variation due to several factors, including variability in accurately predicting its pre-tax income and loss and the mix of jurisdictions to which they relate, tax law developments and relative changes in permanent tax benefits or expenses.

The Company's effective tax rate for the three months ended June 30, 2019 and 2018 was (22.0%) and 22.2%, respectively. For the three months ended June 30, 2019, the effective tax rate varied from the federal statutory rate of 21% primarily due to the level and mix of earnings among tax jurisdictions, share-based compensation, and tax benefits related to research and development. For the three months ended June 30, 2018, the effective tax rate varied from the federal statutory rate of 21% primarily due to the level and mix of earnings among tax jurisdictions, share-based compensation, tax benefits related to research and development and recognition of the U.S. global intangible low-taxed income ("GILTI").

The Company's effective tax rate for the six months ended June 30, 2019 and 2018 was (20.6%) and 11.4% respectively. For the six months ended June 30, 2019, the effective tax rate varied from the federal statutory rate of 21% primarily due to the level and mix of earnings among tax jurisdictions, share-based compensation, and tax benefits related to research and development. For the six months ended June 30, 2018, the effective tax rate varied from the federal statutory rate of 21% primarily due to the level and mix of earnings among tax jurisdictions, share-based compensation, tax benefits related to research and development and recognition of the U.S. GILTI.

As of June 30, 2019, the Company has accumulated undistributed earnings generated by its foreign subsidiaries of approximately \$23 million. Because \$23 million of such earnings have previously been subject to the one-time transition tax on foreign earnings required by the Tax Cut of Jobs Act of 2017 (the "Tax Act"), any additional taxes due with respect to such earnings or the excess of the amount for financial reporting over the tax basis of its foreign investments would generally be limited to foreign and state taxes. The Company intends, however, to indefinitely reinvest these earnings and expects future U.S. cash generation to be sufficient to meet future U.S. cash needs.

Note 17. Geographic Information

The Company operates in one reportable segment. The Company's Chief Executive Officer, who is considered to be the chief operating decision maker, manages the Company's operations as a whole and reviews financial information presented on a consolidated basis, accompanied by information about product revenue, for purposes of evaluating financial performance and allocating resources.

The following tables set forth the Company's revenue and asset information by geographic region. Revenue is classified based on the location of where the product is manufactured. Long-lived assets in the tables below comprise only property, plant, equipment and intangible assets (in thousands):

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
Revenues:				
United States	\$ 1,652	\$ 3,768	\$ 3,650	\$ 7,331
Taiwan	22,108	28,970	46,128	62,173
China	19,651	55,084	46,352	83,557
	<u>\$ 43,411</u>	<u>\$ 87,822</u>	<u>\$ 96,130</u>	<u>\$ 153,061</u>

	As of the period ended	
	June 30, 2019	December 31, 2018
Long-lived assets:		
United States	\$ 94,983	\$ 88,815
Taiwan	65,509	65,451
China	97,166	89,736
	<u>\$ 257,658</u>	<u>\$ 244,002</u>

Note 18. Contingencies

Litigation

Overview

From time to time, the Company may be subject to legal proceedings and litigation arising in the ordinary course of business, including, but not limited to, inquiries, investigations, audits and other regulatory proceedings, such as described below. The Company records a loss provision when it believes it is both probable that a liability has been incurred and the amount can be reasonably estimated. Unless otherwise disclosed, the Company is unable to estimate the possible loss or range of loss for the legal proceeding described below.

Except for the lawsuits described below, the Company believes that there are no claims or actions pending or threatened against it, the ultimate disposition of which would have a material adverse effect on it.

Class Action and Shareholder Derivative Litigation

On August 5, 2017, a lawsuit was filed in the U.S. District Court for the Southern District of Texas against the Company and two of its officers in *Mona Abouzied v. Applied Optoelectronics, Inc., Chih-Hsiang (Thompson) Lin, and Stefan J. Murry, et al.*, Case No. 4:17-cv-02399. The complaint in this matter seeks class action status on behalf of the Company's shareholders, alleging violations of Sections 10(b) and 20(a) of the Exchange Act against the Company, its chief executive officer, and its chief financial officer, arising out of its announcement on August 3, 2017 that "we see softer than expected demand for our 40G solutions with one of our large customers that will offset the sequential growth and increased demand we expect in 100G." A second, related action was filed by Plaintiff Chad Ludwig on August 16, 2017 (Case No. 4:17-cv-02512) in the Southern District of Texas. The two cases were consolidated before Judge Vanessa D. Gilmore. On January 22, 2018, the court appointed Lawrence Rougier as Lead Plaintiff and Levi & Korinsky LLP as Lead Counsel. Lead Plaintiff filed an amended consolidated class action complaint on March 6, 2018. The amended complaint requests unspecified damages and other relief. The Company filed a motion to dismiss on April 4, 2018, which was denied on March 28, 2019. The Company disputes the allegations, and intends to continue to vigorously defend against these claims. On May 15, 2019, Lead Plaintiff filed a motion for leave to amend the consolidated class action complaint for the purpose of adding named Plaintiffs Richard Hamilton, Kenneth X. Luthy, Roy H. Cetlin, and John Kugel (together with Lead Plaintiff Lawrence Rougier, "Plaintiffs") to the case. The court granted the motion on May 16, 2019. The substantive allegations in the Plaintiffs' operative second amended consolidated class action complaint remain unchanged. On May 28, 2019, Plaintiffs filed a motion seeking to certify the case as a class action pursuant to Federal Rule of Civil Procedure 23 and seeking appointment of Plaintiffs as class representatives and Levi & Korsinsky as class counsel. On July 12, 2019, the Company filed a response in opposition to the motion for class certification. The deadline for Plaintiffs' reply brief is August 26, 2019. The case is currently in the early stages of discovery, and fact discovery is scheduled to be completed by June 1, 2020. At this early stage, we are not yet able to determine the likelihood of loss, if any, arising from this matter.

On August 7, 2018, Plaintiff Lei Jin filed a purported derivative action on behalf of nominal defendant Applied Optoelectronics, Inc. in the U.S. District Court for the Southern District of Texas against the Company's chief executive officer, chief financial officer and board of directors (Case No. 4:18-cv-02713). This case was consolidated with a later filed derivative lawsuit filed by Plaintiff Yiu Kwong Ng in the U.S. District Court for the Southern District of Texas (Case No. 4:18-cv-4751). The allegations in the consolidated derivative complaints are substantially similar to those underlying the *Abouzied* securities class action and the *Taneja* securities class action discussed below. The consolidated derivative action is stayed pending a ruling on defendants' forthcoming motion to dismiss in the *Taneja* securities class action.

On October 1, 2018, a lawsuit was filed in the U.S. District Court for the Southern District of Texas against the Company and two of its officers in *Gaurav Taneja v. Applied Optoelectronics, Inc., Thompson Lin, and Stefan Murry*, Case No. 4:18-cv-03544. The complaint in this matter seeks class action status on behalf of the Company's shareholders, alleging violations of Sections 10(b) and 20(a) of the Exchange Act against the Company, its chief executive officer, and its chief financial officer, arising out of its announcement on September 28, 2018 that it was revising its third quarter revenue guidance due to "an issue with a small percentage of 25G lasers within a specific customer environment." This case was consolidated with two identical cases styled *Davin Pokoik v. Applied Optoelectronics, Inc., Chih-Hsiang Lin, and Stefan J. Murry*, Case No. 4:18-cv-3722 and *Stephen McGrath v. Applied Optoelectronics, Inc., Chih-Hsiang Lin, and Stefan J. Murry*. Mark Naglich was appointed as Lead Plaintiff on the consolidated matter on January 4, 2019. Lead Plaintiff filed an amended consolidated complaint on March 5, 2019, and the Company filed a motion to dismiss the amended consolidated complaint on May 6, 2019. On July 5, 2019, Plaintiff filed a response in opposition to the motion to dismiss. The deadline for the Company's reply brief in support of the motion to dismiss is August 5, 2019. The Company disputes the allegations and intends to vigorously contest the matter.

Books and Records Request

On April 10, 2019, stockholder David Bono filed a complaint in the Delaware Court of Chancery against the Company seeking to inspect certain corporate books and records pursuant to Section 220 of the Delaware General Corporation Law. The lawsuit is styled *David Bono v. Applied Optoelectronics, Inc.*, Case No. 2019-0275 (Del. Ch. 2019). The complaint does not seek damages but seeks the plaintiff's costs and expenses, including attorneys' fees, as well as the requested books and records. On July 5, 2019, by agreement of the parties, the Vice Chancellor issued an order staying the case to allow the parties to seek resolution of the dispute outside of litigation. A joint status report is due to the Court by September 3, 2019.

Note 19. Subsequent Events

The Company has evaluated subsequent events through the date the financial statements were available to be issued.

On July 23, 2019, Prime World entered into a one-year revolving credit facility totaling 100,000,000 NTD, or approximately \$3.3 million, (the "NT\$100M Credit Line") and 1,000,000 USD (the "US\$1M Credit Line") with Taishin International Bank in Taiwan ("Taishin"). Borrowing under the NT\$100M Credit Line will be used for short-term working capital; the borrowing under the US\$1M Credit Line will be strictly used for spot transactions in the foreign exchange market. The NT\$100M Credit Line and US\$1M Credit Line are collectively referred to as the "Credit Facility". Prime World may draw upon the Credit Facility from July 23, 2019 through July 31, 2020. The term of each draw shall be either 90 or 120 days. Borrowings under the NT\$100M Credit Line will bear interest at a rate of 2.25% for 90 day draws and 2.2% for 120 day draws; borrowings under the US\$1M Credit Line will bear interest equal to the Taishin's foreign exchange rate effective on the day of the applicable draw. At the end of the draw term Prime World will make payment for all principal and accrued interest. Prime World's obligations under the Credit Facility will be secured by a promissory note executed between Prime World and Taishin. The agreements for the Credit Facility contain representations and warranties, and events of default applicable to Prime World that are customary for agreements of this type.

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

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with our consolidated financial statements and the accompanying notes appearing elsewhere in this Quarterly Report on Form 10-Q for the period ended June 30, 2019 and the audited consolidated financial statements and notes thereto and management's discussion and analysis of financial condition and results of operations for the fiscal year ended December 31, 2018 included in our Annual Report on Form 10-K. References to "Applied Optoelectronics," "we," "our" and "us" are to Applied Optoelectronics, Inc. and its subsidiaries unless otherwise specified or the context otherwise requires.

This Quarterly Report on Form 10-Q contains "forward-looking statements" that involve risks and uncertainties, as well as assumptions that, if they never materialize or prove incorrect, could cause our results to differ materially from those expressed or implied by such forward-looking statements. The statements contained in this Quarterly Report that are not purely historical are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Terminology such as "believe," "may," "estimate," "continue," "anticipate," "intend," "should," "could," "would," "target," "seek," "aim," "believe," "predicts," "think," "objectives," "optimistic," "new," "goal," "strategy," "potential," "is likely," "will," "expect," "plan," "project," "permit," or by other similar expressions that convey uncertainty of future events or outcomes are intended to identify forward-looking statements.

We have based these forward-looking statements largely on our current expectations and projections about future events and industry and financial trends that we believe may affect our financial condition, results of operations, business strategy and financial needs. Such forward-looking statements are subject to risks, uncertainties and other important factors that could cause actual results and the timing of events to differ materially from future results expressed or implied by such forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those identified in "Part II —Item 1A. Risk Factors" provided below, and those discussed in other documents we file with the SEC, including our Report on Form 10-K for the year ended December 31, 2018 and subsequent Quarterly Reports on Form 10-Q. Furthermore, such forward-looking statements speak only as of the date of this Quarterly Report. Except as required by law, we undertake no obligation to update any forward-looking statements to reflect events or circumstances after the date of this Quarterly Report.

Overview

We are a leading, vertically integrated provider of fiber-optic networking products. We target four networking end-markets: internet data centers, CATV, telecom and FTTH. We design and manufacture a range of optical communications products at varying levels of integration, from components, subassemblies and modules to complete turn-key equipment. In designing products for our customers, we begin with the fundamental building blocks of lasers and laser components. From these foundational products, we design and manufacture a wide range of products to meet our customers' needs and specifications, and such products differ from each other by their end market, intended use and level of integration. We are primarily focused on the higher-performance segments within the internet data center, CATV, telecom and FTTH markets which increasingly demand faster connectivity and innovation. Our vertically integrated manufacturing model provides us several advantages, including rapid product development, fast response times to customer requests and control over product quality and manufacturing costs.

The four end markets we target are all driven by significant bandwidth demand fueled by the growth of network-connected devices, video traffic, cloud computing and online social networking. Within the internet data center market, we benefit from the increasing use of higher-capacity optical networking technology as a replacement for copper cables, particularly as speeds reach 10 Gbps and above, as well as the movement to open internet data center architectures and the increasing use of in-house equipment design among leading internet companies. Within the CATV market, we benefit from a number of ongoing trends including the global build-out of CATV infrastructure, the move to higher bandwidth networks among CATV service providers and the outsourcing of system design among CATV networking equipment companies. In the FTTH market, we benefit from continuing PON deployments and system upgrades among telecommunication service providers. In the telecom market, we benefit from deployment of new high-speed fiber-optic networks by telecom network operators.

Our vertically integrated manufacturing model provides us several advantages, including rapid product development, fast response times to customer requests and control over product quality and manufacturing costs. We

design, manufacture and integrate our own analog and digital lasers using a proprietary Molecular Beam Epitaxy, or MBE, and Metal Organic Chemical Vapor Deposition (MOCVD) fabrication process, which we believe is unique in our industry. We manufacture the majority of the laser chips and optical components that are used in our products. The lasers we manufacture are proven to be reliable over time and highly tolerant of changes in temperature and humidity, making them well-suited to the CATV and FTTH markets where networking equipment is often installed outdoors.

We have three manufacturing sites: Sugar Land, Texas, Ningbo, China and Taipei, Taiwan. Our research and development functions are generally partnered with our manufacturing locations, and we have an additional research and development facility in Duluth, Georgia. In our Sugar Land facility, we manufacture laser chips (utilizing our MBE and MOCVD processes), subassemblies and components. The subassemblies are used in the manufacture of components by our other manufacturing facilities or sold to third parties as modules. We manufacture our laser chips only within our Sugar Land facility, where our laser design team is located. In our Taiwan location, we manufacture optical components, such as our butterfly lasers, which incorporate laser chips, subassemblies and components manufactured within our Sugar Land facility. In addition, in our Taiwan location, we manufacture transceivers for the internet data center, telecom, FTTH and other markets. In our China facility, we take advantage of lower labor costs and manufacture certain more labor intensive components and optical equipment systems, such as optical subassemblies and transceivers for the internet data center market, CATV transmitters (at the headend) and CATV outdoor equipment (at the node). Each manufacturing facility conducts testing on the components, modules or subsystems it manufactures and each facility is certified to ISO 9001:2015. Our facilities in Ningbo, China, Taipei, Taiwan, and Sugar Land, Texas are all certified to ISO 14001:2015.

Our business depends on winning competitive bid selection processes to develop components, systems and equipment for use in our customers' products. These selection processes are typically lengthy, and as a result our sales cycles will vary based on the level of customization required, market served, whether the design win is with an existing or new customer and whether our solution being designed in our customers' product is our first generation or subsequent generation product. We do not have any long-term purchase commitments (in excess of one year) with any of our customers, most of whom purchase our products on a purchase order basis, however, once one of our solutions is incorporated into a customer's design, we believe that our solution is likely to continue to be purchased for that design throughout that product's life cycle because of the time and expense associated with redesigning the product or substituting an alternative solution.

Our principal executive offices are located at 13139 Jess Pirtle Blvd., Sugar Land, TX 77478, and our telephone number is (281) 295-1800.

Results of Operations

The following table set forth our consolidated results of operations for the periods presented and as a percentage of our revenue for those periods (in thousands, except percentages):

	Three months ended June 30, 2019		Three months ended June 30, 2018		Six months ended June 30, 2019		Six months ended June 30, 2018	
	Revenue, net	\$ 43,411	100.0 %	\$ 87,822	100.0 %	\$ 96,130	100.0 %	\$ 153,061
Cost of goods sold	32,873	75.7 %	53,959	61.4 %	73,241	76.2 %	93,362	61.0 %
Gross profit	10,538	24.3 %	33,863	38.6 %	22,889	23.8 %	59,699	39.0 %
Operating expenses								
Research and development	11,151	25.7 %	12,645	14.4 %	22,336	23.2 %	24,381	15.9 %
Sales and marketing	2,331	5.4 %	2,377	2.7 %	4,926	5.1 %	4,851	3.2 %
General and administrative	10,884	25.1 %	9,898	11.3 %	21,324	22.2 %	19,354	12.6 %
Total operating expenses	24,366	56.1 %	24,920	28.4 %	48,586	50.5 %	48,586	31.7 %
Income (loss) from operations	(13,828)	(31.8)%	8,943	10.2 %	(25,697)	(26.7)%	11,113	7.3 %
Other income (expense)								
Interest income	310	0.7 %	85	0.1 %	382	0.4 %	137	0.1 %
Interest expense	(1,490)	(3.4)%	(279)	(0.3)%	(2,486)	(2.6)%	(350)	(0.2)%
Other expense, net	451	1.0 %	1,581	1.8 %	296	0.3 %	554	0.4 %
Total other expense, net	(729)	(1.7)%	1,387	1.6 %	(1,808)	(1.9)%	341	0.2 %
Income (loss) before income taxes	(14,557)	(33.5)%	10,330	11.8 %	(27,505)	(28.6)%	11,454	7.5 %
Income tax benefit	3,191	7.3 %	(2,296)	(2.6)%	5,665	5.9 %	(1,300)	(0.8)%
Net income (loss)	\$ (11,366)	(26.2)%	\$ 8,034	9.1 %	\$ (21,840)	(22.7)%	\$ 10,154	6.6 %

Comparison of Financial Results

Revenue

We generate revenue through the sale of our products to equipment providers and network operators for the internet data center, CATV, telecom and FTTH markets. We derive a significant portion of our revenue from our top ten customers, and we anticipate that we will continue to do so for the foreseeable future. The following charts provide the revenue contribution from each of the markets we served for the three and six months ended June 30, 2019 and 2018 (in thousands, except percentages):

	Three months ended June 30,				Change	
	2019	% of Revenue	2018	% of Revenue	Amount	%
Data Center	\$ 31,806	73.3%	\$ 69,040	78.6%	\$ (37,234)	(53.9)%
CATV	9,818	22.6%	14,184	16.2%	(4,366)	(30.8)%
Telecom	1,630	3.8%	4,157	4.7%	(2,527)	(60.8)%
FTTH	16	0.0%	166	0.2%	(150)	(90.4)%
Other	141	0.3%	275	0.3%	(134)	(48.7)%
Total Revenue	\$ 43,411	100.0%	\$ 87,822	100.0%	\$ (44,411)	(50.6)%

	Six months ended June 30,				Change	
	2019	% of Revenue	2018	% of Revenue	Amount	%
Data Center	\$ 70,305	73.1%	\$ 119,623	78.2%	\$ (49,318)	(41.2)%
CATV	21,780	22.7%	24,752	16.2%	(2,972)	(12.0)%
Telecom	3,368	3.5%	7,743	5.1%	(4,375)	(56.5)%
FTTH	110	0.1%	277	0.2%	(167)	(60.3)%
Other	567	0.6%	666	0.4%	(99)	(14.9)%
Total Revenue	\$ 96,130	100.0%	\$ 153,061	100.0%	\$ (56,931)	(37.2)%

[Table of Contents](#)

The decrease in revenue during the three and six months ended June 30, 2019 was driven primarily by decreased shipments of certain of our 100 Gbps transceivers products to one of our customers during the quarter. We are not always informed by our customers of the exact reasons for changes in their forecasts and the subsequent orders, however, we believe that the recent reduction in orders by this customer is due to excess inventory previously purchased by this customer. We continue to have active engagement with this customer and are evaluating the extent to which excess inventory may impact our future deliveries to this customer. Revenues from customers during the three and six months ended June 30, 2019 that were not customers during the same period in the prior year partially offset the decline in revenue from our 100 Gbps products.

For the three months ended June 30, 2019 and 2018, our top ten customers represented 90.9% and 94.4% of our revenue, respectively. For the six months ended June 30, 2019 and 2018, our top ten customers represented 90.5% and 94.0% of our revenue, respectively. We believe that diversifying our customer base is critical for our future success, since reliance on a small number of key customers makes our ability to forecast future results dependent upon the accuracy of the forecasts we receive from those key customers.

Cost of goods sold and gross margin

	Three months ended June 30,				Change	
	2019		2018		Amount	%
	Amount	% of Revenue	Amount	% of Revenue		
(in thousands, except percentages)						
Cost of goods sold	\$ 32,873	75.7 %	\$ 53,959	61.4 %	\$ (21,086)	(39.1)%
Gross margin	10,538	24.3 %	33,863	38.6 %		

	Six months ended June 30,				Change	
	2019		2018		Amount	%
	Amount	% of Revenue	Amount	% of Revenue		
(in thousands, except percentages)						
Cost of goods sold	\$ 73,241	76.2 %	\$ 93,362	61.0 %	\$ (20,121)	(21.6)%
Gross margin	22,889	23.8 %	59,699	39.0 %		

Cost of goods sold decreased by \$21.1 million, or 39.1%, for the three months ended June 30, 2019 as compared to the three months ended June 30, 2018, primarily due to a 50.6% decrease in sales over the prior year. Cost of goods sold decreased by \$20.1 million, or 21.6%, for the six months ended June 30, 2019 as compared to the six months ended June 30, 2018, primarily due to a 37.2% decrease in sales over the prior year. Gross margin decreased year over year due to additional production costs for our 100 Gbps datacenter products related to the implementation of enhanced quality control testing procedures. Also contributing to the decline in gross margin was a reduction in the selling price of certain of our products, including our 100 Gbps transceiver products. This price decline was in line with our expectations, however, we were unable to reduce the production costs of these products to the extent earlier projected due to the aforementioned additional testing costs combined with relatively lower production volume of these products, which caused fixed costs to be absorbed by a smaller number of units sold.

Operating expenses

	Three months ended June 30,				Change	
	2019		2018		Amount	%
	Amount	% of revenue	Amount	% of revenue		
(in thousands, except percentages)						
Research and development	\$ 11,151	25.7 %	\$ 12,645	14.4 %	\$ (1,494)	(11.8)%
Sales and marketing	2,331	5.4 %	2,377	2.7 %	(46)	(1.9)%
General and administrative	10,884	25.1 %	9,898	11.3 %	986	10.0 %
Total operating expenses	\$ 24,366	56.1 %	\$ 24,920	28.4 %	\$ (554)	(2.2)%

	Six months ended June 30,				Change	
	2019		2018		Amount	%
	Amount	% of revenue	Amount	% of revenue		
	(in thousands, except percentages)					
Research and development	\$ 22,336	23.2 %	\$ 24,381	15.9 %	\$ (2,045)	(8.4)%
Sales and marketing	4,926	5.1 %	4,851	3.2 %	75	1.5 %
General and administrative	21,324	22.2 %	19,354	12.6 %	1,970	10.2 %
Total operating expenses	\$ 48,586	50.5 %	\$ 48,586	31.7 %	\$ —	—%

Research and development expense

Research and development expense decreased by \$1.5 million, or 11.8%, for the three months ended June 30, 2019 as compared to the three months ended June 30, 2018. Research and development expense decreased by \$2.0 million, or 8.4%, for the six months ended June 30, 2019 as compared to the six months ended June 30, 2018. Research and development costs consist of R&D work orders, R&D material usage and other project related costs related to 100 Gbps, 200/400 Gbps data center products, DOCSIS 3.1 capable CATV products, including remote-PHY products, and other new product development, and depreciation expense resulting from R&D equipment investments. Research and development costs decreased for the three and six months ended June 30, 2019 as compared to the three and six months ended June 30, 2018 due mainly to decreases in costs from R&D work orders, depreciation expense related to R&D equipment, materials and supplies used in R&D activities and personnel related costs.

Sales and marketing expense

Sales and marketing expense decreased slightly for the three months ended June 30, 2019 as compared to the three months ended June 30, 2018. Sales and marketing expense increased slightly for the six months ended June 30, 2019 as compared to the six months ended June 30, 2018. The changes were not material and are similar to expected rates of fluctuation in these expenses.

General and administrative expense

General and administrative expense increased by \$1.0 million, or 10.0%, for the three months ended June 30, 2019 compared to the three months ended June 30, 2018. General and administrative expense increased by \$2.0 million, or 10.2%, for the six months ended June 30, 2019 compared to the six months ended June 30, 2018. These increases were primarily due to increases in share-based compensation expenses, professional service fees and depreciation expenses. These increases were partially offset by a decrease in personnel related costs.

Other income (expense), net

	Three months ended June 30,				Change	
	2019		2018		Amount	%
	Amount	% of revenue	Amount	% of revenue		
	(in thousands, except percentages)					
Interest income	\$ 310	0.7 %	\$ 85	0.1 %	\$ 225	264.7 %
Interest expense	(1,490)	(3.4)%	(279)	(0.3)%	(1,211)	434.1 %
Other expense, net	451	1.0 %	1,581	1.8 %	(1,130)	(71.5)%
Total other expense, net	\$ (729)	(1.7)%	\$ 1,387	1.6 %	\$ (2,116)	(152.6)%

	Six months ended June 30,				Change	
	2019		2018		Amount	%
	Amount	% of revenue	Amount	% of revenue		
	(in thousands, except percentages)					
Interest income	\$ 382	0.4 %	\$ 137	0.1 %	\$ 245	178.8 %
Interest expense	(2,486)	(2.6)%	(350)	(0.2)%	(2,136)	610.3 %
Other expense, net	296	0.3 %	554	0.4 %	(258)	(46.6)%
Total other expense, net	\$ (1,808)	(1.9)%	\$ 341	0.2 %	\$ (2,149)	(630.2)%

[Table of Contents](#)

Interest income increased 264.7% and 178.8% for the three and six months ended June 30, 2019 as compared to the three and six months ended June 30, 2018, due to higher interest rates and larger cash balances.

Interest expense increased 434.1% and 610.3% for the three and six months ended June 30, 2019 as compared to the three and six months ended June 30, 2018. This increase was due to higher debt balances, including convertible senior notes and higher interest rates in the current period.

Other income (expense) for the three months ended June 30, 2019 was income of \$0.5 million, a \$1.1 million decrease compared to the three months ended June 30, 2018. This decrease was due to the decrease of foreign exchange gains resulting from the favorable fluctuation of certain Asian currencies against the U.S. dollar. Other income (expense) for the six months ended June 30, 2019 was income of \$0.3 million, a \$0.3 million decrease compared to the six months ended June 30, 2018. This decrease was due to the decrease of foreign exchange gains resulting from the favorable fluctuation of certain Asian currencies against the U.S. dollar.

Benefit (provision) for income taxes

	Three months ended June 30,		
	2019	2018	Change
	(in thousands, except percentages)		
Benefit (provision) for income taxes	\$ 3,191	\$ (2,296)	5,487 (239.0)%

	Six months ended June 30,		
	2019	2018	Change
	(in thousands, except percentages)		
Benefit (provision) for income taxes	\$ 5,665	\$ (1,300)	6,965 535.8 %

Our tax provision or benefit from income taxes for interim periods is determined using an estimate of our annual effective tax rate, adjusted for discrete items, if any, that are taken into account in the relevant period. Our quarterly tax provision, and our quarterly estimate of our annual effective tax rate, are subject to significant variation due to several factors, including variability in accurately predicting our pre-tax income and loss and the mix of jurisdictions to which they relate, tax law developments and relative changes in permanent tax benefits or expenses.

Our effective tax rate for the three months ended June 30, 2019 and 2018 was (22.0%) and 22.2%, respectively. For the three months ended June 30, 2019, the effective tax rate varied from the federal statutory rate of 21% primarily due to the level and mix of earnings among tax jurisdictions, share-based compensation, and tax benefits related to research and development. For the three months ended June 30, 2018, the effective tax rate varied from the federal statutory rate of 21% primarily due to the level and mix of earnings among tax jurisdictions, share-based compensation, tax benefits related to research and development and recognition of the U.S. global intangible low-taxed income ("GILTI").

Our effective tax rate for the six months ended June 30, 2019 and 2018 was (20.6%) and 11.4% respectively. For the six months ended June 30, 2019, the effective tax rate varied from the federal statutory rate of 21% primarily due to the level and mix of earnings among tax jurisdictions, share-based compensation, and tax benefits related to research and development. For the six months ended June 30, 2018, the effective tax rate varied from the federal statutory rate of 21% primarily due to the level and mix of earnings among tax jurisdictions, share-based compensation, tax benefits related to research and development and recognition of the U.S. GILTI.

As of June 30, 2019, we had accumulated undistributed earnings generated by our foreign subsidiaries of approximately \$23 million. Because \$23 million of such earnings have previously been subject to the one-time transition tax on foreign earnings required by the Tax Cut of Jobs Act of 2017 (the "Tax Act"), any additional taxes due with respect to such earnings or the excess of the amount for financial reporting over the tax basis of our foreign investments would generally be limited to foreign and state taxes. We intend, however, to indefinitely reinvest these earnings and expects future U.S. cash generation to be sufficient to meet future U.S. cash needs.

Liquidity and Capital Resources

As of June 30, 2019, we had \$64.7 million of unused borrowing capacity from all of our loan agreements. As of June 30, 2019, our cash, cash equivalents and restricted cash totaled \$84.0 million. Cash and cash equivalents are held for working capital purposes and are invested primarily in money market or time deposit funds. We do not enter into investments for trading or speculative purposes. On October 17, 2016, we filed a Registration Statement on Form S-3 with the Securities and Exchange Commission, which was declared effective on November 1, 2016, providing for the public offer and sale of certain securities of the Company from time to time, at our discretion, up to an aggregate amount of \$250 million. Between November 22, 2016 and March 2, 2017, the Company sold 1.6 million shares of common stock at a weighted average price of \$31.55 per share, providing proceeds of \$48.8 million, net of expenses and underwriting discounts and commissions. No shares of common stock were sold pursuant to this Registration Statement on Form S-3 in the three months ended June 30, 2019. On March 5, 2019, the Company issued \$80.5 million of 5% convertible senior notes due 2024, bearing interest at a rate of 5% per year maturing on March 15, 2024, unless earlier repurchased, redeemed or converted in accordance with their terms. The sale of the Notes generated net proceeds of \$76.4 million, after expenses. Also refer to Note 12 “Convertible Senior Notes” to the consolidated financial statements for further discussion of the Notes.

The table below sets forth selected cash flow data for the periods presented (in thousands):

	Six months ended June 30,	
	2019	2018
Net cash provided by operating activities	\$ 7,167	\$ 18,079
Net cash used in investing activities	(20,838)	(35,220)
Net cash provided by financing activities	39,337	9,304
Effect of exchange rates on cash and cash equivalents	317	1,832
Net increase (decrease) in cash and cash equivalents	\$ 25,983	\$ (6,005)

Operating activities

For the six months ended June 30, 2019, net cash provided by operating activities was \$7.2 million. Net cash provided by operating activities consisted of our net loss of \$21.8 million, after the exclusion of non-cash items of \$17.7 million. Cash increased due to a decrease in inventory of \$6.3 million, a decrease in other current assets of \$5.6 million, a decrease in accounts receivable from our customers of \$2.1 million and an increase in accounts payable to our vendors of \$1.6 million. These cash increases were offset by a decrease in accrued liabilities of \$4.0 million.

For the six months ended June 30, 2018, net cash provided by operating activities was \$18.1 million. Net cash provided by operating activities consisted of our net income of \$10.2 million, after the exclusion of non-cash items of \$20.5 million, as well as an increase in accounts payable to our vendors of \$7.8 million and a decrease in accounts receivable from our customers of \$11.2 million. These cash increases were offset by a decrease in accrued liabilities of \$2.3 million, an increase in accrued income tax liabilities of \$6.9 million, a decrease in other current assets of \$1.5 million and an increase in inventory of \$21.6 million.

Investing activities

For the six months ended June 30, 2019, net cash used in investing activities was \$20.8 million, consisting of the purchase of additional machinery and equipment of \$26.3 million, offset by a decrease in non-current assets of \$5.8 million.

For the six months ended June 30, 2018, net cash used in investing activities was \$35.2 million, mainly for the purchase of additional machinery and equipment and land use rights in China.

Financing activities

For the six months ended June 30, 2019, our financing activities provided \$39.3 million in cash. This increase in cash was due to \$76.4 million of proceeds from the issuance of convertible senior notes offset by net loan repayments of \$36.5 million.

[Table of Contents](#)

For the six months ended June 30, 2018, our financing activities provided \$9.3 million in cash. This increase in cash was due to net borrowings of \$11.5 million offset by \$2.2 million of withholding taxes paid on behalf of employees related to their share-based compensation.

Loans and commitments

We have lending arrangements with several financial institutions. In the US, we have a revolving line of credit with Branch Banking and Trust (BB&T) Bank. This line of credit contains financial covenants that may limit the amount and types of debt that we may incur. As of June 30, 2019, we were in compliance with these covenants.

In Taiwan, we have revolving credit facilities with Taishin International Bank and Development Bank of Singapore (Taiwan) Ltd, credit facilities with CTBC Bank Co, Ltd. and Far Eastern International Bank Co., Ltd. and an equipment finance agreement with Chailease Finance Co., Ltd. for Prime World's Taiwan Branch. In China, we have revolving lines of credit with China Merchants Bank Co., Ltd. and Shanghai Pudong Development Bank Co., Ltd. and a credit facility China Zheshang Bank Co., Ltd. for Global.

As of June 30, 2019, we had \$64.7 million of unused borrowing capacity.

On March 5, 2019, the Company issued \$80.5 million of 5% convertible senior notes due 2024. The Notes will mature on March 15, 2024, unless earlier repurchased, redeemed or converted in accordance with their terms.

See Note 11 "Notes Payable and Long-term Debt" and Note 12 "Convertible Senior Notes" of our Condensed Consolidated Financial Statements for a description of our notes payable and long-term debt and convertible senior notes.

China factory construction

On February 8, 2018, we entered into a construction contract with Zhejiang Xinyu Construction Group Co., Ltd. for the construction of a new factory and other facilities at our Ningbo, China location. Construction costs for these facilities under this contract are estimated to total approximately \$27.5 million. As of June 30, 2019, approximately \$17.7 million of this total cost has been incurred, with the remaining portion due as the construction progresses. Construction under this contract is expected to be completed in early 2020.

Future liquidity needs

We believe that our existing cash and cash equivalents, cash flows from our operating activities, and available credit will be sufficient to meet our anticipated cash needs for the next 12 months. Our future capital requirements will depend on many factors including our growth rate, the timing and extent of spending to support our research and development efforts, the expansion of our sales and marketing activities, the introduction of new and enhanced products, the construction of a new factory and other facilities at our Ningbo, China location, changes in our manufacturing capacity and the continuing market acceptance of our products. In the event we need additional liquidity, we will explore additional sources of liquidity. These additional sources of liquidity could include one, or a combination, of the following: (i) issuing equity or debt securities, (ii) incurring indebtedness secured by our assets and (iii) selling product lines, other assets and/or portions of our business. There can be no guarantee that we will be able to raise additional funds on terms acceptable to us, or at all.

Contractual Obligations and Commitments

The following summarizes our contractual obligations as of June 30, 2019 (in thousands):

	Payments due by period				
	Total	Less than 1 Year	1-3 Years	3-5 Years	More than 5 Years
Notes payable and long-term debt ⁽¹⁾	\$ 52,678	\$ 22,014	\$ 26,591	\$ 4,073	\$ —
Convertible senior notes ⁽²⁾	95,447	4,025	8,050	83,372	—
Operating leases ⁽³⁾	10,944	1,212	2,238	2,097	5,397
Total commitments	<u>\$ 159,069</u>	<u>\$ 27,251</u>	<u>\$ 36,879</u>	<u>\$ 89,542</u>	<u>\$ 5,397</u>

- 1) We have several loan and security agreements in China, Taiwan and the U.S. that provide various credit facilities, including lines of credit, bank acceptance payable and term loans. The amount presented in the table represents the principal portion and estimated interest expense for the obligations.
- 2) We issued convertible senior notes due 2024. The amount present in the table represents the principal portion and estimated interest expense for the obligations.
- 3) We have entered into various non-cancellable operating lease agreements for our offices in Taiwan and the U.S.

Inflation

We believe that the relatively low rate of inflation in the U.S. over the past few years has not had a significant impact on our net sales and revenues or on income from continuing operations or on the prices of raw materials. To the extent we expand our operations in China and Taiwan, such actions may result in inflation having a more significant impact on our operating results in the future.

Off-Balance Sheet Arrangements

For the three months ended June 30, 2019, we did not, and we do not currently, have any off-balance sheet arrangements.

Critical Accounting Policies and Estimates

In our annual report on Form 10-K for the year ended December 31, 2018 and in the Notes to the Financial Statements herein, we identify our most critical accounting policies. In preparing the financial statements, we make assumptions, estimates and judgments that affect the amounts reported. We periodically evaluate our estimates and judgments that are most critical in nature which are related to revenue recognition, allowance for doubtful accounts, inventory reserves, impairment of long-lived assets (excluding goodwill and other indefinite-lived intangible assets), goodwill and other indefinite-lived intangible assets, purchase price allocation of acquisitions, service and product warranties, and income taxes. Our estimates are based on historical experience and on our future expectations that we believe are reasonable. The combination of these factors forms the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results are likely to differ from our current estimates and those differences may be material.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

For quantitative and qualitative disclosures about market risk affecting the Company, see Item 7A – Quantitative and Qualitative Disclosures about Market Risk in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018. We do not believe the Company’s exposure to market risk has changed materially since December 31, 2018.

Item 4. Controls and Procedures

The term “disclosure controls and procedures,” as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC’s rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company’s management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Our disclosure controls and procedures are designed to provide reasonable assurance of achieving their control objectives.

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of June 30, 2019. Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that, as of the end of the period covered by this report, our disclosure controls and procedures were effective.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting during the three month period covered by this Quarterly Report on Form 10-Q, which were identified in connection with management's evaluation required by the Rules 13a-15(d) and 15d-15(d) under the Exchange Act that occurred during our last fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Part II. Other Information

Item 1. Legal Proceedings

From time to time, we may be subject to legal proceedings and litigation arising in the ordinary course of business, including, but not limited to, inquiries, investigations, audits and other regulatory proceedings, such as described below. We record a loss provision when we believe it is both probable that a liability has been incurred and the amount can be reasonably estimated. Unless otherwise disclosed, we are unable to estimate the possible loss or range of loss for the legal proceeding described below.

Except for the lawsuits described below, we believe that there are no claims or actions pending or threatened against us, the ultimate disposition of which would have a material adverse effect on us.

Class Action and Shareholder Derivative Litigation

On August 5, 2017, a lawsuit was filed in the U.S. District Court for the Southern District of Texas against us and two of our officers in *Mona Abouzied v. Applied Optoelectronics, Inc., Chih-Hsiang (Thompson) Lin, and Stefan J. Murry, et al.*, Case No. 4:17-cv-02399. The complaint in this matter seeks class action status on behalf of our shareholders, alleging violations of Sections 10(b) and 20(a) of the Exchange Act against us, our chief executive officer, and our chief financial officer, arising out of our announcement on August 3, 2017 that “we see softer than expected demand for our 40G solutions with one of our large customers that will offset the sequential growth and increased demand we expect in 100G.” A second, related action was filed by Plaintiff Chad Ludwig on August 16, 2017 (Case No. 4:17-cv-02512) in the Southern District of Texas. The two cases were consolidated before Judge Vanessa D. Gilmore. On January 22, 2018, the court appointed Lawrence Rougier as Lead Plaintiff and Levi & Korinsky LLP as Lead Counsel. Lead Plaintiff filed an amended consolidated class action complaint on March 6, 2018. The amended complaint requests unspecified damages and other relief. The Company filed a motion to dismiss on April 4, 2018, which was denied on March 28, 2019. We dispute the allegations, and we intend to continue to vigorously defend against these claims. On May 15, 2019, Lead Plaintiff filed a motion for leave to amend the consolidated class action complaint for the purpose of adding named Plaintiffs Richard Hamilton, Kenneth X. Luthy, Roy H. Cetlin, and John Kugel (together with Lead Plaintiff Lawrence Rougier, “Plaintiffs”) to the case. The court granted the motion on May 16, 2019. The substantive allegations in the Plaintiffs’ operative second amended consolidated class action complaint remain unchanged. On May 28, 2019, Plaintiffs filed a motion seeking to certify the case as a class action pursuant to Federal Rule of Civil Procedure 23 and seeking appointment of Plaintiffs as class representatives and Levi & Korsinsky as class counsel. On July 12, 2019, we filed a response in opposition to the motion for class certification. The deadline for Plaintiffs’ reply brief is August 26, 2019. The case is currently in the early stages of discovery, and fact discovery is scheduled to be completed by June 1, 2020. At this early stage, we are not yet able to determine the likelihood of loss, if any, arising from this matter. On August 7, 2018, Plaintiff Lei Jin filed a purported derivative action on behalf of nominal defendant Applied Optoelectronics, Inc. in the U.S. District Court for the Southern District of Texas against our chief executive officer, chief financial officer and board of directors (Case No. 4:18-cv-02713). This case was consolidated with a later filed derivative lawsuit filed by Plaintiff Yiu Kwong Ng in the U.S. District Court for the Southern District of Texas (Case No. 4:18-cv-4751). The allegations in the consolidated derivative complaints are substantially similar to those underlying the *Abouzied* securities class action and the *Taneja* securities class action discussed below. The consolidated derivative action is stayed pending a ruling on defendants’ forthcoming motion to dismiss in the *Taneja* securities class action.

On October 1, 2018, a lawsuit was filed in the U.S. District Court for the Southern District of Texas against us and two of our officers in *Gaurav Taneja v. Applied Optoelectronics, Inc., Thompson Lin, and Stefan Murry*, Case No. 4:18-cv-03544. The complaint in this matter seeks class action status on behalf of the Company’s shareholders, alleging violations of Sections 10(b) and 20(a) of the Exchange Act against the Company, our chief executive officer, and our chief financial officer, arising out of our announcement on September 28, 2018 that we were revising our third quarter revenue guidance due to “an issue with a small percentage of 25G lasers within a specific customer environment.” This case was consolidated with two identical cases styled *Davin Pokoik v. Applied Optoelectronics, Inc., Chih-Hsiang Lin, and Stefan J. Murry*, Case No. 4:18-cv-3722 and *Stephen McGrath v. Applied Optoelectronics, Inc., Chih-Hsiang Lin, and Stefan J. Murry*. Mark Naglich was appointed as Lead Plaintiff on the consolidated matter on January 4, 2019. Lead Plaintiff filed an amended consolidated complaint on March 5, 2019, and we filed a motion to dismiss the amended consolidated complaint on May 6, 2019. On July 5, 2019, Plaintiff filed a response in opposition to the motion

dismiss. The deadline for our reply brief in support of the motion to dismiss is August 5, 2019. We dispute the allegations and intend to vigorously contest the matter.

Books and Records Request

On April 10, 2019, stockholder David Bono filed a complaint in the Delaware Court of Chancery against us seeking to inspect certain corporate books and records pursuant to Section 220 of the Delaware General Corporation Law. The lawsuit is styled *David Bono v. Applied Optoelectronics, Inc.*, Case No. 2019-0275 (Del. Ch. 2019). The complaint does not seek damages but seeks the plaintiff's costs and expenses, including attorneys' fees, as well as the requested books and records. On July 5, 2019, by agreement of the parties, the Vice Chancellor issued an order staying the case to allow the parties to seek resolution of the dispute outside of litigation. A joint status report is due to the Court by September 3, 2019.

Item 1A. Risk Factors

Investing in our common stock involves a high degree of risk. You should carefully consider the following risk factors and all other information contained in our Quarterly Report on Form 10-Q, including our consolidated financial statements and related notes. If any of the following risks actually occur, we may be unable to conduct our business as currently planned and our financial condition and results of operations could be seriously harmed. In addition, the trading price of our common stock could decline due to the occurrence of any of these risks and you may lose all or part of your investment.

Risks Inherent in Our Business

We are dependent on our key customers for a significant portion of our revenue and the loss of, or a significant reduction in orders from, any of our key customers would adversely impact our revenue and results of operations.

We generate much of our revenue from a limited number of customers. For each year ended 2018, 2017 and 2016 and the three and six months ended June 30, 2019, our top ten customers represented 92.9%, 94.9%, 95.5%, 90.9% and 90.5% of our revenue, respectively. In 2018, Facebook represented 38.3% of our revenue, Microsoft represented 22.1% of our revenue and Amazon represented 12.1% of our revenue. As a result, the loss of, or a significant reduction in orders from any of our key customers would materially and adversely affect our revenue and results of operations. We typically do not have long-term contracts with our customers and instead rely on recurring purchase orders. However, many of our current revenue expectations and forecasts reflect significant anticipated orders from a limited number of key customers. If our key customers do not continue to purchase our existing products or fail to purchase additional products from us, our revenue would decline and our results of operations would be adversely affected.

Changes in our customers' demands may negatively affect our sales and revenue. For example, several of our largest customers have informed us that new architectures being implemented in their datacenters may reduce their demand for 100 Gbps optical transceivers compared to their prior forecasts. This would negatively impact our anticipated revenue from these customers. If we cannot sufficiently increase revenue from these new customers and our other existing customers, then our overall revenue may be adversely affected.

Adverse events affecting our key customers could also negatively affect our ability to retain their business and obtain new purchase orders, which could adversely affect our revenue and results of operations. For example, in recent years, there has been consolidation among various network equipment manufacturers and this trend is expected to continue. We are unable to predict the impact that industry consolidation would have on our existing or potential customers. We may not be able to offset any potential decline in revenue arising from the consolidation of our existing customers with revenue from new customers or additional revenue from the merged company.

Customer demand is difficult to forecast accurately and, as a result, we may be unable to match production with customer demand.

We make planning and spending decisions, including determining the levels of business that we will seek and accept, production schedules, component procurement commitments, personnel needs and other resource requirements, based on our estimates of product demand and customer requirements. Our products are typically purchased pursuant to

individual purchase orders. While our customers may provide us with their demand forecasts, they are typically not contractually committed to buy any quantity of products beyond firm purchase orders. Furthermore, many of our customers may increase, decrease, cancel or delay purchase orders already in place without significant penalty. The short-term nature of commitments by our customers and the possibility of unexpected changes in demand for their products reduce our ability to accurately estimate future customer requirements. On occasion, customers may require rapid increases in production, which can strain our resources, cause our manufacturing to be negatively impacted by materials shortages, necessitate more onerous procurement commitments and reduce our gross margin. We may not have sufficient capacity at any given time to meet the volume demands of our customers, or one or more of our suppliers may not have sufficient capacity at any given time to meet our volume demands. If any of our major customers decrease, stop or delay purchasing our products for any reason, we will likely have excess manufacturing capacity or inventory and our business and results of operations would be harmed.

If our customers do not qualify our products for use on a timely basis, our results of operations may suffer.

Prior to the sale of new products, our customers typically require us to “qualify” our products for use in their applications. At the successful completion of this qualification process, we refer to the resulting sales opportunity as a “design win.” Additionally, new customers often audit our manufacturing facilities and perform other evaluations during this qualification process. The qualification process involves product sampling and reliability testing and collaboration with our product management and engineering teams in the design and manufacturing stages. If we are unable to accurately predict the amount of time required to qualify our products with customers, or are unable to qualify our products with certain customers at all, then our ability to generate revenue could be delayed or our revenue would be lower than expected and we may not be able to recover the costs associated with the qualification process or with our product development efforts, which would have an adverse effect on our results of operations.

In addition, due to rapid technological changes in our markets, a customer may cancel or modify a design project before we have qualified our product or begun volume manufacturing of a qualified product. It is unlikely that we would be able to recover the expenses for cancelled or unutilized custom design projects. Some of these unrecoverable expenses for cancelled or unutilized custom design projects may be significant. It is difficult to predict with any certainty whether our customers will delay or terminate product qualification or the frequency with which customers will cancel or modify their projects, but any such delay, cancellation or modification would have a negative effect on our results of operations.

Our ability to successfully qualify and scale capacity for new technologies and products is important to our ability to grow our business and market presence, and we may invest a significant amount to scale our capacity to meet potential demand from customers for our new technologies and products. If we are unable to qualify and sell any of our new products in volume, on time, or at all, our results of operations may be adversely affected.

We face intense competition which could negatively impact our results of operations and market share.

The markets into which we sell our products are highly competitive. Our competitors range from large, international companies offering a wide range of products to smaller companies specializing in niche markets. Current and potential competitors may have substantially greater name recognition, financial, marketing, research and manufacturing resources than we do, and there can be no assurance that our current and future competitors will not be more successful than us in specific product lines or markets. Some of our competitors may also have better-established relationships with our current or potential customers. Some of our competitors have more resources to develop or acquire new products and technologies and create market awareness for their products and technologies. In addition, some of our competitors have the financial resources to offer competitive products at below-market pricing levels that could prevent us from competing effectively and result in a loss of sales or market share or cause us to lower prices for our products. In recent years, there has been consolidation in our industry and we expect such consolidation to continue. Consolidation involving our competitors could result in even more intense competition. Network equipment manufacturers, who are our customers, and network service providers may decide to manufacture the optical subsystems incorporated into their network systems in-house instead of outsourcing such products to companies such as us. We also encounter potential customers that, because of existing relationships with our competitors, are committed to the products offered by our competitors.

We must continually develop successful new products and enhance existing products, and if we fail to do so or if our release of new or enhanced products is delayed, our business may be harmed.

The markets for our products are characterized by frequent new product introductions, changes in customer requirements and evolving industry standards, all with an underlying pressure to reduce cost and meet stringent reliability and qualification requirements. Our future performance will depend on our successful development, introduction and market acceptance of new and enhanced products that address these challenges. If we are unable to make our new or enhanced products commercially available on a timely basis, we may lose existing and potential customers and our financial results would suffer.

In addition, due to the costs and length of research, development and manufacturing process cycles, we may not recognize revenue from new products until long after such expenditures, if at all, and our margins may decrease if our costs are higher than expected, adversely affecting our financial condition and results of operations.

Although the length of our product development cycle varies widely by product and customer, it may take 18 months or longer before we receive our first order. As a result, we may incur significant expenses long before customers accept and purchase our products.

Product development delays may result from numerous factors, including:

- modification of product specifications and customer requirements;
- unanticipated engineering complexities;
- difficulties in reallocating engineering resources and overcoming resource limitations; and
- rapidly changing technology or competitive product requirements.

The introduction of new products by us or our competitors and other changes in our customer's demands could result in a slowdown in demand for our existing products and could result in a write-down in the value of our inventory. We have in the past experienced periodic fluctuations in demand for existing products and delays in new product development, and such fluctuations will likely occur in the future. To the extent we fail to qualify our products and obtain their approval for use, which we refer to as a design win, or experience product development delays for any reason, our competitive position would be adversely affected and our ability to grow our revenue would be impaired.

Furthermore, our ability to enter a market with new products in a timely manner can be critical to our success because it is difficult to displace an existing supplier for a particular type of product once a customer has chosen a supplier, even if a later-to-market product provides better performance or cost efficiency.

The development of new, technologically advanced products is a complex and uncertain process requiring frequent innovation, highly-skilled engineering and development personnel and significant capital, as well as the accurate anticipation of technological and market trends. We cannot assure you that we will be able to identify, develop, manufacture, market or support new or enhanced products successfully or on a timely basis. Further, we cannot assure you that our new products will gain market acceptance or that we will be able to respond effectively to product introductions by competitors, technological changes or emerging industry standards. We also may not be able to develop the underlying core technologies necessary to create new products and enhancements, license these technologies from third parties, or remain competitive in our markets.

Our revenues, growth rates and operating results are likely to fluctuate significantly as a result of factors that are outside our control, which could adversely impact our operating results.

Our revenues, growth rates and operating results are likely to fluctuate significantly in the future as a result of factors that are outside our control. We may not achieve similar revenues, growth rates or operating results in future periods. Our revenues, growth rates and operating results for any prior quarterly or annual period should not be relied upon as any indication of our future revenues, growth rates or operating results. The timing of order placement, size of orders and satisfaction of contractual customer acceptance criteria, changes in the pricing of our products due to competitive pressures as well as order or shipment delays or deferrals, with respect to our products, may cause material

fluctuations in revenues. Our lengthy sales cycle, which may extend to more than one year, may cause our revenues and operating results to vary from period to period and it may be difficult to predict the timing and amount of any variation. Delays or deferrals in purchasing decisions by our customers may increase as we develop new or enhanced products for existing and new markets, including automotive and biotechnology markets. Our current and anticipated future dependence on a small number of customers increases the revenue impact of each such customer's decision to delay or defer purchases from us, or decision not to purchase products from us. Our expense levels in the future will be based, in large part, on our expectations regarding future revenue sources and, as a result, operating results for any quarterly period in which anticipated material orders fail to occur, or are delayed or deferred, could be significantly harmed.

We are subject to the cyclical nature of the markets in which we compete and any future downturn will likely reduce demand for our products and revenue.

In each of our target markets, including the CATV market, our sales depend on the aggregate capital expenditures of service providers as they build out and upgrade their network infrastructure. These markets are highly cyclical and characterized by constant and rapid technological change, price erosion, evolving standards and wide fluctuations in product supply and demand. In the past, these markets have experienced significant downturns, often connected with, or in anticipation of, the maturation of product cycles. These downturns have been characterized by diminished product demand, production overcapacity, high inventory levels and accelerated erosion of average selling prices. Our historical results of operations have been subject to these cyclical fluctuations, and we may experience substantial period to period fluctuations in our future results of operations. Any future downturn in any of the markets in which we compete could significantly reduce the demand for our products and therefore may result in a significant reduction in our revenue. Our revenue and results of operations may be materially and adversely affected in the future due to changes in demand from individual customers or cyclical changes in any of the markets utilizing our products. We may not be able to accurately predict these cyclical fluctuations and the impact that these fluctuations may have on our revenue and operating results.

If we encounter manufacturing problems, we may lose sales and damage our customer relationships.

We may experience delays, disruptions or quality control problems in our manufacturing operations. These and other factors may cause less than acceptable yields at our facility. Manufacturing yields depend on a number of factors, including the quality of available raw materials, the degradation or change in equipment calibration and the rate and timing of the introduction of new products. Changes in manufacturing processes required as a result of changes in product specifications, changing customer needs and the introduction of new product lines may significantly reduce our manufacturing yields, resulting in low or negative margins on those products. In addition, we use our Molecular Beam Epitaxy, or MBE, fabrication process to make our lasers, in addition to Metal Organic Chemical Vapor Deposition, or MOCVD, the technique most commonly used in optical manufacturing by communications optics vendors, and our MBE fabrication process relies on custom-manufactured equipment. If our MBE or MOCVD fabrication facility in Sugar Land, Texas were to be damaged or destroyed for any reason, our manufacturing process would be severely disrupted. Any such manufacturing problems would likely delay product shipments to our customers. For example, shipments of certain of our 100 Gbps transceiver products to one of our customers decreased during the three months ended September 30, 2018 due to customer concerns about failures of similar products shipped previously. During the quarter, we conducted extensive testing of our products to demonstrate that any potentially affected units could be nearly eliminated from future shipments, and we subsequently resumed shipments with the customer's agreement. However, additional testing costs and costs to enhance the ongoing monitoring of product quality may adversely affect the results of our operations. Manufacturing problems and any such delays would negatively affect our sales and revenue and could negatively affect our competitive position and reputation. We may also experience delays in production, typically in February, during the Lunar New Year holiday when our facilities in China and Taiwan are closed.

Given the high fixed costs associated with our vertically integrated business, a reduction in demand for our products will likely adversely impact our gross profits and our results of operations.

We have a high fixed cost base due to our vertically integrated business model, including the fact that 2,529 of our employees as of December 31, 2018 were employed in manufacturing and research and development operations. We may not be able to adjust these fixed costs quickly to adapt to rapidly changing market conditions. Our gross profit and gross margin are greatly affected by our sales volume and volatility on a quarterly basis and the corresponding absorption of fixed manufacturing overhead expenses. In addition, because we are a vertically integrated manufacturer, insufficient demand for our products may subject us to the risk of high inventory carrying costs and increased inventory

obsolescence. Given our vertical integration, the rate at which we turn inventory has historically been low when compared to our cost of sales. We do not expect this to change significantly in the future and believe that we will have to maintain a relatively high level of inventory compared to our cost of sales. As a result, we continue to expect to have a significant amount of working capital invested in inventory. We may be required to write down inventory costs in the future and our high inventory costs may have an adverse effect on our gross profits and our results of operations.

Increasing costs and shifts in product mix may adversely impact our gross margins.

Our gross margins on individual products and among products fluctuate over each product's life cycle. Our overall gross margins have fluctuated from period to period as a result of shifts in product mix, the introduction of new products, decreases in average selling prices and our ability to reduce product costs, and these fluctuations are expected to continue in the future. We may not be able to accurately predict our product mix from period to period, and as a result we may not be able to forecast accurately our overall gross margins. The rate of increase in our costs and expenses may exceed the rate of increase in our revenue, either of which would materially and adversely affect our business, our results of operations and our financial condition.

If the CATV market does not continue to develop as we expect, or if there is any downturn in this market, our business would be adversely affected.

Historically, we have generated much of our revenue from the CATV market. In 2018, 2017 and 2016, the CATV market represented 19.3%, 15.9% and 16.7% of our revenue, respectively. In the CATV market, we are relying on expected increasing demand for bandwidth-intensive services and applications such as on-demand television programs, high-definition television channels, or HDTV, social media, peer-to-peer file sharing and online video creation and viewing from network service providers. Without network and bandwidth growth, the need for our products will not increase and may decline, adversely affecting our financial condition and results of operations. Although demand for broadband access is increasing, network and bandwidth growth may be limited by several factors, including an uncertain regulatory environment, high infrastructure costs to purchase and install equipment and uncertainty as to which competing content delivery solution, such as telecommunications, wireless or satellite, will gain the most widespread acceptance. If the trend of outsourcing for the design and manufacture of CATV equipment does not continue, or continues at a slower pace than currently expected, our customers' demand for our design and manufacturing services may not grow as quickly as expected. If expectations for the growth of the CATV market are not realized, our financial condition and results of operations will be adversely affected. In addition, if the CATV market is adversely impacted, whether due to competitive pressure from telecommunication service providers, regulatory changes, or otherwise, our business would be adversely affected. We may not be able to offset any potential decline in revenue from the CATV market with revenue from new customers in other markets.

We have limited operating history in the telecom and FTTH markets, and our business could be harmed if these markets do not develop as we expect.

For 2018 and 2017, respectively, we generated 4.9% and 3.4% of our revenue from the telecom market and 0.3%, and 0.1% of our revenue from the FTTH market. In the telecom market, we generally have sold products that were originally designed for other markets (such as internet data center or FTTH) or are variations of such products. As we gain experience in this market, we have begun to develop products specifically designed for telecom customers. Given our limited experience in this market, the products that we develop may prove to be unsuitable for customer use, or we may be unable to derive profit margins from this market that are similar to what we derive from our other markets. The products that we offer in the FTTH market are relatively new and have not yet gained widespread customer acceptance. For example, our WDM-PON products designed for the FTTH market, have not, and may never, gain widespread acceptance by large internet service providers. Our business in this market is dependent on the deployment of our optical components, modules and subassemblies. We are relying on increasing demand for bandwidth-intensive services and telecommunications service providers' acceptance and deployment of WDM-PON as a technology supporting 1 Gbps service to the home. Without network and bandwidth growth and adoption of our solutions by operators in these markets, we will not be able to sell our products in these markets in high volume or at our targeted margins, which would adversely affect our financial condition and results of operations. For example, WDM-PON technology may not be adopted by equipment and service providers in the FTTH market as rapidly as we expect or in the volumes we need to achieve acceptable margins. Network and bandwidth growth may be limited by several factors, including an uncertain regulatory environment, high infrastructure costs to purchase and install equipment and uncertainty as to which competing content delivery solution, such as CATV, will gain the most widespread acceptance. In addition, as we enter

new markets or expand our product offerings in existing markets, our margins may be adversely affected due to competition in those markets and commoditization of competing products. If our expectations for the growth of these markets are not realized, our financial condition and results of operations will be adversely affected.

Our financial results may vary significantly from quarter-to-quarter due to a number of factors, which may lead to volatility in our stock price.

Our quarterly revenue and operating results have varied in the past and will likely continue to vary significantly from quarter-to-quarter. This variability may lead to volatility in our stock price as research analysts and investors respond to these quarterly fluctuations. These fluctuations are due to numerous factors, including:

- the timing, size and mix of sales of our products;
- fluctuations in demand for our products, including the increase, decrease, rescheduling or cancellation of significant customer orders;
- our ability to design, manufacture and deliver products which meet customer requirements in a timely and cost-effective manner;
- new product introductions and enhancements by us or our competitors;
- the gain or loss of key customers;
- the rate at which our present and potential customers and end users adopt our technologies;
- changes in our pricing and sales policies or the pricing and sales policies of our competitors;
- seasonality of certain of our products and manufacturing capabilities;
- quality control or yield problems in our manufacturing operations;
- supply disruption for certain raw materials and components used in our products;
- capacity constraints of our outside contract manufacturers for a portion of the manufacturing process for some of our products;
- length and variability of the sales cycles of our products;
- unanticipated increases in costs or expenses;
- the loss of key employees;
- different capital expenditure and budget cycles for our customers, affecting the timing of their spending for our products;
- political stability in the areas of the world in which we operate;
- fluctuations in foreign currency exchange rates;
- changes in accounting rules;
- changes in or limitations imposed by trade protection laws or other regulatory orders or requirements in the United States or in other countries, including tariffs, sanctions, or other costs, restrictions, or requirements which may affect our ability to import or export our products to or from various countries;

- trade-related government actions that impose barriers or restrictions that would impact our ability to sell or ship products to Huawei or other customers;
- the evolving and unpredictable nature of the markets for products incorporating our solutions; and
- general economic conditions and changes in such conditions specific to our target markets.

The foregoing factors are difficult to forecast, and these, as well as other factors, could materially adversely affect our quarterly and annual operating results. In addition, a significant amount of our operating expenses is relatively fixed in nature due to our internal manufacturing, research and development, sales and general administrative efforts. Any failure to adjust spending quickly enough to compensate for a revenue shortfall could magnify the adverse impact of such revenue shortfall on our results of operations. For these reasons, you should not rely on quarter-to-quarter comparisons of our results of operations as an indicator of future performance. Moreover, our operating results may not meet our announced guidance or the expectations of research analysts or investors, in which case the price of our common stock could decrease significantly. There can be no assurance that we will be able to successfully address these risks.

Our indebtedness and liabilities could limit the cash flow available for our operations, expose us to risks that could adversely affect our business, financial condition and results of operations and impair our ability to satisfy our obligations under our indebtedness.

As of June 30, 2019, we had approximately \$128.8 million of consolidated indebtedness. We may also incur additional indebtedness to meet future financing needs. Our indebtedness could have significant negative consequences for our security holders and our business, results of operations and financial condition by, among other things:

- increasing our vulnerability to adverse economic and industry conditions;
- limiting our ability to obtain additional financing;
- requiring the dedication of a substantial portion of our cash flow from operations to service our indebtedness, which will reduce the amount of cash available for other purposes;
- limiting our flexibility to plan for, or react to, changes in our business;
- diluting the interests of our existing stockholders as a result of issuing shares of our common stock upon conversion of the Notes; and
- placing us at a possible competitive disadvantage with competitors that are less leveraged than us or have better access to capital.

Our business may not generate sufficient funds, and we may otherwise be unable to maintain sufficient cash reserves, to pay amounts due under our indebtedness, including the Notes, and our cash needs may increase in the future. In addition, our existing Credit Facility with BB&T, contains, and any future indebtedness that we may incur may contain, financial and other restrictive covenants that limit our ability to operate our business, raise capital or make payments under our other indebtedness. If we fail to comply with these covenants or to make payments under our indebtedness when due, then we would be in default under that indebtedness, which could, in turn, result in that and our other indebtedness becoming immediately payable in full.

We depend on key personnel to develop and maintain our technology and manage our business in a rapidly changing market.

The continued services of our executive officers and other key engineering, sales, marketing, manufacturing and support personnel is essential to our success. For example, our ability to achieve new design wins depends upon the experience and expertise of our engineers. Any of our key employees, including our Chief Executive Officer, Chief Financial Officer, Senior Vice President and North America General Manager and Senior Vice President and Asia General Manager, may resign at any time. We do not have key person life insurance policies covering any of our employees. To implement our business plan, we also intend to hire additional employees, particularly in the areas of

engineering, manufacturing and sales. Our ability to continue to attract and retain highly skilled employees is a critical factor in our success. Competition for highly skilled personnel is intense. We may not be successful in attracting, assimilating or retaining qualified personnel to satisfy our current or future needs. Our ability to develop, manufacture and sell our products, and thus our financial condition and results of operations, would be adversely affected if we are unable to retain existing personnel or hire additional qualified personnel.

We depend on a limited number of suppliers and any supply interruption could have an adverse effect on our business.

We depend on a limited number of suppliers for certain raw materials and components used in our products. Some of these suppliers could disrupt our business if they stop, decrease or delay shipments or if the materials or components they ship have quality or reliability issues. Some of the raw materials and components we use in our products are available only from a sole source or have been qualified only from a single supplier. Furthermore, other than our current suppliers, there are a limited number of entities from whom we could obtain certain materials and components. We may also face shortages if we experience increased demand for materials or components beyond what our qualified suppliers can deliver. Our inability to obtain sufficient quantities of critical materials or components could adversely affect our ability to meet demand for our products, adversely affecting our financial condition and results of operations.

We typically have not entered into long-term agreements with our suppliers and, therefore, our suppliers could stop supplying materials and components to us at any time or fail to supply adequate quantities of materials or components to us on a timely basis. It is difficult, costly, time consuming and, on short notice, sometimes impossible for us to identify and qualify new suppliers. Our customers generally restrict our ability to change the components in our products. For more critical components, any changes may require repeating the entire qualification process. Our reliance on a limited number of suppliers or a single qualified vendor may result in delivery and quality problems, and reduced control over product pricing, reliability and performance.

We depend upon outside contract manufacturers for a portion of the manufacturing process for some of our products.

Almost all of our products are manufactured internally. However, we also rely upon manufacturers in China, Taiwan and other Asia locations to provide back-end manufacturing and produce the finished portion of a few of our products. Our reliance on a contract manufacturer for these products makes us vulnerable to possible capacity constraints and reduced control over delivery schedules, manufacturing yields, manufacturing quality/controls and costs. If one or more of our contract manufacturers is unable to meet our customer demand in a timely fashion, this could have a material adverse effect on the revenue from our products. If one or more contract manufacturers for one of our products was unable or unwilling to manufacture such product in required volumes and at high quality levels or to continue our existing supply arrangement, we would have to identify, qualify and select an acceptable alternative contract manufacturer or move these manufacturing operations to our internal manufacturing facilities. An alternative contract manufacturer may not be available to us when needed or may not be in a position to satisfy our quality or production requirements on commercially reasonable terms, including price. Any significant interruption in manufacturing our products would require us to reduce our supply of products to our customers, which in turn, would reduce our revenue, harm our relationships with the customer of these products and cause us to forego potential revenue opportunities.

Our products could contain defects that may cause us to incur significant costs or result in a loss of customers.

Our products are complex and undergo quality testing as well as formal qualification by our customers. Our customers' testing procedures are limited to evaluating our products under likely and foreseeable failure scenarios and over varying amounts of time. For various reasons, such as the occurrence of performance problems that are unforeseeable in testing or that are detected only when products age or are operated under peak stress conditions, our products may fail to perform as expected long after customer acceptance. Failures could result from faulty components or design, problems in manufacturing or other unforeseen reasons. Any such failures could delay product shipments to our customers or result in a loss of customers. For example, shipments of certain of our 100 Gbps transceiver products to one of our customers decreased during the three months ended September 30, 2018 due to customer concerns about failures of similar products shipped previously. As a result, we could incur significant costs to repair or replace defective products under warranty, particularly when such failures occur in installed systems. Our products are typically embedded in, or deployed in conjunction with, our customers' products, which incorporate a variety of components, modules and

subsystems and may be expected to interoperate with modules produced by third parties. As a result, not all defects are immediately detectable and when problems occur, it may be difficult to identify the source of the problem. We face this risk because our products are widely deployed in many demanding environments and applications worldwide. In addition, we may in certain circumstances honor warranty claims after the warranty has expired or for problems not covered by warranty to maintain customer relationships. Any significant product failure could result in litigation, damages, repair costs and lost future sales of the affected product and other products, divert the attention of our engineering personnel from our product development efforts and cause significant customer relations problems, all of which would harm our business. Although we carry product liability insurance, this insurance may not adequately cover our costs arising from defects in our products or otherwise.

Our loan agreements contain restrictive covenants that may adversely affect our ability to conduct our business.

We have lending arrangements with several financial institutions, including loan agreements with Branch Banking and Trust (BB&T) Bank in the U.S., credit facilities with Taishin International Bank, Development Bank of Singapore and CTBC Bank, an equipment finance agreement with Chailease Finance Co., Ltd. in Taiwan and credit facilities with China Merchants Bank Co. Ltd., Shanghai Pudong Development Bank Co., Ltd. and China Zheshang Bank Co., Ltd. in China. Our loan agreements governing our long-term debt obligations in the U.S. and Asia contain certain financial and operating covenants that limit our management's discretion with respect to certain business matters. Among other things, these covenants require us to maintain certain financial ratios and restrict our ability to incur additional debt, create liens or other encumbrances, change the nature of our business, sell or otherwise dispose of assets and merge or consolidate with other entities. In addition, the Indenture governing the Notes contains covenants that limit our ability and the ability of our subsidiaries to, among other things: (i) incur or guarantee additional indebtedness or issue disqualified stock; and (ii) create or incur liens. These restrictions may limit our flexibility in responding to business opportunities, competitive developments and adverse economic or industry conditions. Any failure by us or our subsidiaries to comply with these agreements could harm our business, financial condition and operating results. In addition, our obligations under our loan agreements with BB&T are secured by our accounts receivable, inventory, intellectual property, and all business assets including real estate and equipment. Our credit facilities with Shanghai Pudong Development Bank Co., Ltd. and China Zheshang Bank Co., Ltd. are secured by real estate. A breach of any of covenants under our loan agreements, or a failure to pay interest or indebtedness when due under any of our credit facilities could result in a variety of adverse consequences, including the acceleration of our indebtedness.

We may not be able to obtain additional capital when desired, on favorable terms or at all.

We operate in a market that makes our prospects difficult to evaluate and, to remain competitive, we will be required to make continued investments in capital equipment, facilities and technological improvements. We expect that substantial capital will be required to expand our manufacturing capacity and fund working capital for anticipated growth. If we do not generate sufficient cash flow from operations or otherwise have the capital resources to meet our future capital needs, we may need additional financing to implement our business strategy, which includes:

- expansion of research and development;
- expansion of manufacturing capabilities;
- hiring of additional technical, sales and other personnel; and
- acquisitions of complementary businesses.

If we raise additional funds through the issuance of our common stock or convertible securities, the ownership interests of our stockholders could be significantly diluted. These newly issued securities may have rights, preferences or privileges senior to those of existing stockholders. Additional financing may not, however, be available on terms favorable to us, or at all, if and when needed, and our ability to fund our operations, take advantage of unanticipated opportunities, develop or enhance our infrastructure or respond to competitive pressures could be significantly limited. If we cannot raise required capital when needed, including under our Registration Statement filed with the SEC in October 2016, we may be unable to meet the demands of existing and prospective customers, adversely affecting our sales and market opportunities and consequently our business, financial condition and results of operations.

Data breaches and cyberattacks could compromise our operations, our customers' operations, or the operations of our contract manufacturers upon whom we rely, and cause significant damage to our business and reputation.

Cyberattacks have become more prevalent and much harder to detect and defend against. Companies, including companies in our industry, have been increasingly subject to a wide variety of security incidents, cyberattacks and other attempts to gain unauthorized access to their systems or to deny access and disrupt their systems and operations. These threats can come from a variety of sources, ranging in sophistication from an individual hacker to a state-sponsored attack. Cyber threats may be generic, or they may be custom-crafted against our information systems.

In the ordinary course of our business, we and our data center customers maintain sensitive data on our respective networks, including intellectual property, employee personal information and proprietary or confidential business information relating to our business and that of our customers and business partners. The secure maintenance of this information is critical to our business and reputation. Despite our implementation of network security measures, our network and storage applications have been subject to computer viruses, ransomware and other forms of cyber terrorism. Also, despite our implementation of security measures, we are not able to guarantee that we can prevent unauthorized access by hackers or breaches due to operator error, malfeasance or other system disruptions. Our customers' network and storage applications may be subject to similar disruptions. It is often difficult to anticipate or immediately detect such incidents and the damage caused by such incidents. Data breaches and any unauthorized access or disclosure of our information, employee information or intellectual property could compromise our business, trade secrets and other sensitive business information, any of which could result in legal action against us, exposure of our intellectual property to our competitors, damages, fines and other adverse effects. A data security breach could also lead to public exposure of personal information of our employees, customers and others. Any such theft, loss or misuse of personal data collected, used, stored or transferred by us to run our business could result in significantly increased security costs or costs related to defending legal claims. Cyberattacks, such as computer viruses or other forms of cyber terrorism, have disrupted access to some of our network applications. In past incidents we have been able to recover quickly without material financial impact, however such disruptions in the future may result in delays or cancellations of customer orders or delays or additional costs to produce and ship our products. Data security breaches involving our data center customers could affect their financial condition and ability to continue to purchase our products. Further, cyberattacks may cause us to incur significant remediation costs, result in product development delays, disrupt key business operations and divert attention of management and key information technology resources. These incidents could also subject us to liability, expose us to significant expense and cause significant harm to our reputation and business.

Changes in U.S. and international trade policies, particularly with regard to China, may materially and adversely impact our business and operating results.

The U.S. government has recently made statements and taken certain actions that have led and may lead to further changes to U.S. and international trade policies, including recently-imposed tariffs affecting certain products manufactured in China. Since the beginning of 2018, there has been increasing rhetoric, in some cases coupled with legislative or executive action, from several U.S. and foreign leaders regarding the possibility of instituting tariffs on the foreign imports of certain materials. Three rounds of U.S. tariffs on imports from China have become effective in July 2018, August 2018 and September 2018 (respectively the "U.S. Tariffs on China Imports"). A limited number of our products that have a China country of origin are currently subject to the U.S. Tariffs on China Imports.

It is unknown whether and to what extent new tariffs (or other new laws or regulations) will be adopted, or the effect that any such actions would have on us or our industry. A significant portion of our manufacturing operations is based in Ningbo, China; therefore, if any new tariffs, legislation and/or regulations are implemented, or if existing trade agreements are renegotiated or if China or other affected countries take further retaliatory trade actions, such changes could have a material adverse effect on our business, financial condition, results of operations or cash flows.

Furthermore, the implementation of trade tariffs both globally and between the U.S. and China specifically carries the risk of negatively impacting China's overall economic condition, which could have negative repercussions on us. Imposition of tariffs could cause a decrease in the sales of our products to customers located in China or other customers selling to Chinese end users, which would directly impact our business.

Significant changes to existing international trade agreements could also lead to sourcing or logistics disruption resulting from import delays or the imposition of increased tariffs on our sourcing partners. For example, the Chinese

government could, among other things, require the use of local suppliers, compel companies that do business in China to partner with local companies to conduct business and provide incentives to government-backed local customers to buy from local suppliers. Changes in, and responses to, U.S. trade policy could reduce the competitiveness of our products and cause our sales and revenues to drop, which could materially and adversely impact our business and results of operations.

We face a variety of risks associated with our international sales and operations.

We currently derive, and expect to continue to derive, a significant portion of our revenue from sales to international customers. In 2018, 2017 and 2016, 23.1%, 22.7% and 15.8% of our revenue was derived from sales that occurred outside of North America, respectively. In addition, a significant portion of our manufacturing operations is based in Ningbo, China and Taipei, Taiwan.

Trade-related government actions, by China or other countries, that impose barriers or restrictions that would impact our ability to sell or ship products to Huawei or other customers may have a negative impact on our financial condition and results of operations. We cannot predict the actions government entities may take in this context and may be unable to quickly offset or effectively react to government actions that restrict our ability to sell to certain customers or in certain jurisdictions. Government actions that affect our customers' ability to sell products or access critical elements of their supply chains may result in a decreased demand for their products, which may consequently reduce their demand for our products.

Our international revenue and operations are subject to a number of material risks, including:

- difficulties in staffing, managing and supporting operations in more than one country;
- difficulties in enforcing agreements and collecting receivables through foreign legal systems;
- fewer legal protections for intellectual property in foreign jurisdictions;
- foreign and U.S. taxation issues and international trade barriers, including the adoption or expansion of governmental trade tariffs;
- difficulties in obtaining any necessary governmental authorizations for the export of our products to certain foreign jurisdictions;
- fluctuations in foreign economies;
- fluctuations in the value of foreign currencies and interest rates;
- trade and travel restrictions;
- domestic and international economic or political changes, hostilities and other disruptions in regions where we currently operate or may operate in the future;
- difficulties and increased expenses in complying with a variety of U.S. and foreign laws, regulations and trade standards, including the Foreign Corrupt Practices Act; and
- different and changing legal and regulatory requirements in the jurisdictions in which we currently operate or may operate in the future.

Negative developments in any of these factors in China or Taiwan or other countries could result in a reduction in demand for our products, the cancellation or delay of orders already placed, difficulties in producing and delivering our products, threats to our intellectual property, difficulty in collecting receivables, and a higher cost of doing business. Although we maintain certain compliance programs throughout the Company, violations of U.S. and foreign laws and regulations may result in criminal or civil sanctions, including material monetary fines, penalties and other costs against us or our employees, and may have a material adverse effect on our business.

Our business operations conducted in China and Taiwan are important to our success. A substantial portion of our property, plant and equipment is located in China and Taiwan. We expect to make further investments in China and Taiwan in the future. Therefore, our business, financial condition, results of operations and prospects are subject to economic, political, legal, and social events and developments in China and Taiwan. Factors affecting military, political or economic conditions in China and Taiwan could have a material adverse effect on our financial condition and results of operations, as well as the market price and the liquidity of our common shares.

In some instances, we rely on third parties to assist in selling our products, and the failure of those parties to perform as expected could reduce our future revenue.

Although we primarily sell our products through direct sales, we also sell our products to some of our customers through third party sales representatives and distributors. Many of such third parties also market and sell products from our competitors. Our third party sales representatives and distributors may terminate their relationships with us at any time, or with short notice. Our future performance will also depend, in part, on our ability to attract additional third party sales representatives and distributors that will be able to market and support our products effectively, especially in markets in which we have not previously distributed our products. If our current third party sales representatives and distributors fail to perform as expected, our revenue and results of operations could be harmed.

Changes in our effective tax rate may adversely affect our results of operation and our business.

We are subject to income taxes in the U.S. and other foreign jurisdictions, including China and Taiwan. In addition, we are subject to various state taxes in states where we have nexus. We base our tax position on the anticipated nature and conduct of our business and our understanding of the tax laws of the countries and states in which we have assets or conduct activities. Our tax position may be reviewed or challenged by tax authorities. Moreover, the tax laws currently in effect may change, and such changes may have retroactive effect, such as the U.S. tax reform legislation commonly referred to as the U.S. Tax Cuts and Jobs Act of 2017 (the “Tax Act”). We have inter-company arrangements in place providing for administrative and financing services and transfer pricing, which involve a significant degree of judgment and are often subject to close review by tax authorities. The tax authorities may challenge our positions related to these agreements. If the tax authorities successfully challenge our positions, our effective tax rate may increase, adversely affecting our results of operation and our business.

The Tax Act significantly changes how the U.S. taxes corporations. The Tax Act requires complex computations to be performed that were not previously required in U.S. tax law, significant judgments to be made in interpretation of the provisions of the Tax Act and significant estimates in calculations, and the preparation and analysis of information not previously relevant or regularly produced. The U.S. Treasury Department, the IRS, and other standard-setting bodies could interpret or issue guidance on how provisions of the Tax Act will be applied or otherwise administered that is different from our interpretation. As we interpret any additional guidance, we may make adjustments to amounts that we have recorded that may materially impact our provision for income taxes in the period in which the adjustments are made.

Failure to manage our growth effectively may adversely affect our financial condition and results of operations.

Successful implementation of our business plan in our target markets requires effective planning and management. Production volumes for some of our products are increasing and we have announced plans to increase our production capacity in response to demand for certain of our current and future products, including adding personnel in some of our locations as well as expanding our physical manufacturing facilities. We currently operate facilities in Sugar Land, Texas, Ningbo, China, Taipei, Taiwan, and Duluth, Georgia. We currently manufacture our lasers using a proprietary process and customized equipment located only in our Sugar Land, Texas facility, and it will be costly to duplicate that facility, to scale our laser manufacturing capacity or to mitigate the risks associated with operating a single facility. The challenges of managing our geographically dispersed operations have increased and will continue to increase the demand on our management systems and resources. Moreover, we are continuing to improve our financial and managerial controls, reporting systems and procedures. Any failure to manage our expansion and the resulting demands on our management systems and resources effectively may adversely affect our financial condition and results of operations.

Future acquisitions may adversely affect our financial condition and results of operations.

As part of our business strategy, we may pursue acquisitions of companies that we believe could enhance or complement our current product portfolio, augment our technology roadmap or diversify our revenue base. Acquisitions involve numerous risks, any of which could harm our business, including:

- difficulties integrating the acquired business;
- unanticipated costs, capital expenditures or liabilities or changes related to research in progress and product development;
- diversion of financial and management resources from our existing business;
- difficulties integrating the business relationships with suppliers and customers of the acquired business with our existing business relationships;
- risks associated with entering markets in which we have little or no prior experience; and
- potential loss of key employees, particularly those of the acquired organizations.

Acquisitions may also result in the recording of goodwill and other intangible assets subject to potential impairment in the future, adversely affecting our operating results. We may not achieve the anticipated benefits of an acquisition if we fail to evaluate it properly, and we may incur costs in excess of what we anticipate. A failure to evaluate and execute an acquisition appropriately or otherwise adequately address these risks may adversely affect our financial condition and results of operations.

We may be subject to disruptions or failures in information technology systems and network infrastructures that could have a material adverse effect on our business and financial condition.

We rely on the efficient and uninterrupted operation of complex information technology systems and network infrastructures to operate our business. A disruption, infiltration or failure of our information technology systems as a result of software or hardware malfunctions, system implementations or upgrades, computer viruses, third-party security breaches, employee error, theft or misuse, malfeasance, power disruptions, natural disasters or accidents could cause a breach of data security, loss of intellectual property and critical data and the release and misappropriation of sensitive competitive information and partner, customer, and employee personal data. We have experienced ransomware, computer viruses and other forms of cyber terrorism. In past incidents we have been able to recover quickly without material financial impact; however, any of these events could harm our competitive position, result in a loss of customer confidence, cause us to incur significant costs to remedy any damages and ultimately materially adversely affect our business and financial condition.

Our future results of operations may be subject to volatility as a result of exposure to fluctuations in currency exchange rates.

We have significant foreign currency exposure and are affected by fluctuations among the U.S. dollar, the Chinese Renminbi, or RMB, and the New Taiwan dollar, or NT dollar, because a substantial portion of our business is conducted in China and Taiwan. Our sales, raw materials, components and capital expenditures are denominated in U.S. dollars, RMB and NT dollars in varying amounts.

Foreign currency fluctuations may adversely affect our revenue and our costs and expenses, and hence our results of operations. The value of the NT dollar or the RMB against the U.S. dollar and other currencies may fluctuate and be affected by, among other things, changes in political and economic conditions. The RMB currency is no longer being pegged solely to the value of the U.S. dollar. In the long term, the RMB may appreciate or depreciate significantly in value against the U.S. dollar, depending upon the fluctuation of the basket of currencies against which it is currently valued, or it may be permitted to enter into a full float, which may also result in a significant appreciation or depreciation of the RMB against the U.S. dollar. In addition, our currency exchange variations may be magnified by Chinese exchange control regulations that restrict our ability to convert RMB into foreign currency.

Our sales in Europe are denominated in U.S. dollars and fluctuations in the Euro or our customers' other local currencies relative to the U.S. dollar may impact our customers and affect our financial performance. If our customers' local currencies weaken against the U.S. dollar, we may need to lower our prices to remain competitive in our international markets which could have a material adverse effect on our margins. If our customers' local currencies strengthen against the U.S. dollar and if the local sales prices cannot be raised due to competitive pressures, we will experience a deterioration of our margins.

To date, we have not entered into any hedging transactions in an effort to reduce our exposure to foreign currency exchange risk. While we may decide to enter into hedging transactions in the future, the availability and effectiveness of these hedging transactions may be limited and we may not be able to successfully hedge our exposure.

Natural disasters or other catastrophic events could harm our operations.

Our operations in the U.S., China and Taiwan could be subject to significant risk of natural disasters, including earthquakes, hurricanes, typhoons, flooding and tornadoes, as well as other catastrophic events, such as epidemics, terrorist attacks or wars. For example, our corporate headquarters and wafer fabrication facility in Sugar Land, Texas is located near the Gulf of Mexico, an area that is susceptible to hurricanes. We use a proprietary MBE laser manufacturing process that requires customized equipment, and this process is currently conducted and located solely at our wafer fabrication facility in Sugar Land, Texas, such that a natural disaster, terrorist attack or other catastrophic event that affects that facility would materially harm our operations. In addition, our manufacturing facility in Taipei, Taiwan, is susceptible to typhoons and earthquakes, and our manufacturing facility in Ningbo, China, has from time to time, suffered electrical outages. Any disruption in our manufacturing facilities arising from these and other natural disasters or other catastrophic events could cause significant delays in the production or shipment of our products until we are able to shift production to different facilities or arrange for third parties to manufacture our products. We may not be able to obtain alternate capacity on favorable terms or at all. Our property insurance coverage with respect to natural disaster is limited and is subject to deductible and coverage limits. Such coverage may not be adequate or continue to be available at commercially reasonable rates and terms. The occurrence of any of these circumstances may adversely affect our financial condition and results of operation.

Our business could be negatively impacted as a result of shareholder activism.

In recent years, shareholder activists have become involved in numerous public companies. Shareholder activists frequently propose to involve themselves in the governance, strategic direction, and operations of the Company. We may in the future become subject to such shareholder activity and demands. Such demands may disrupt our business and divert the attention of our management and employees, and any perceived uncertainties as to our future direction resulting from such a situation could result in the loss of potential business opportunities, be exploited by our competitors, cause concern to our current or potential customers, and make it more difficult to attract and retain qualified personnel and business partners, all of which could adversely affect our business. In addition, actions of activist shareholders may cause significant fluctuations in our stock price based on temporary or speculative market perceptions or other factors that do not necessarily reflect the underlying fundamentals and prospects of our business.

The unfavorable outcome of any pending or future litigation or administrative action and expenses incurred in connection with litigation could result in financial losses or harm to our business.

We are, and in the future may be, subject to legal actions in the ordinary course of our operations, both domestically and internationally. There can be no assurances as to the favorable outcome of any litigation. In addition, it can be costly to defend litigation and these costs could negatively impact our financial results. As disclosed in "Part II - Item 1. Legal Proceedings," on August 5, 2017, we and certain of our officers are currently subject to class action litigation related to allegations that we made materially false and misleading statements or failed to disclose material facts. Such litigation includes requests for damages and other relief. As further described in that section, subsequent derivative actions and securities class actions have since been filed. This litigation and any other such litigation could result in substantial costs and divert our management's attention from other business concerns, which could seriously harm our business.

If we fail to protect, or incur significant costs in defending, our intellectual property and other proprietary rights, our business and results of operations could be materially harmed.

Our success depends on our ability to protect our intellectual property and other proprietary rights. We rely on a combination of patent, trademark, copyright, trade secret and unfair competition laws, as well as license agreements and other contractual provisions, to establish and protect our intellectual property and other proprietary rights. We have applied for patents in the U.S. and in other foreign countries, some of which have been issued. In addition, we have registered certain trademarks in the U.S. We cannot guarantee that our pending applications will be approved by the applicable governmental authorities. Moreover, our existing and future patents and trademarks may not be sufficiently broad to protect our proprietary rights or may be held invalid or unenforceable in court. A failure to obtain patents or trademark registrations or a successful challenge to our patents and trademark registrations in the U.S. or other foreign countries may limit our ability to protect the intellectual property rights that these patent and trademark registrations intended to cover.

Policing unauthorized use of our technology is difficult and we cannot be certain that the steps we have taken will prevent the misappropriation, unauthorized use or other infringement of our intellectual property rights. Further, we may not be able to effectively protect our intellectual property rights from misappropriation or other infringement in foreign countries where we have not applied for patent protections and where effective patent, trademark, trade secret and other intellectual property laws may be unavailable, or may not protect our proprietary rights as fully as U.S. law. We may seek to secure comparable intellectual property protections in other countries. However, the level of protection afforded by patent and other laws in other countries may not be comparable to that afforded in the U.S.

We also attempt to protect our intellectual property, including our trade secrets and know-how, through the use of trade secret and other intellectual property laws, and contractual provisions. We enter into confidentiality and invention assignment agreements with our employees and independent consultants. We also use non-disclosure agreements with other third parties who may have access to our proprietary technologies and information. Such measures, however, provide only limited protection, and there can be no assurance that our confidentiality and non-disclosure agreements will not be breached, especially after our employees end their employment, and that our trade secrets will not otherwise become known by competitors or that we will have adequate remedies in the event of unauthorized use or disclosure of proprietary information. Unauthorized third parties may try to copy or reverse engineer our products or portions of our products, otherwise obtain and use our intellectual property, or may independently develop similar or equivalent trade secrets or know-how. If we fail to protect our intellectual property and other proprietary rights, or if such intellectual property and proprietary rights are infringed, misappropriated or duplicated, our business, results of operations or financial condition could be materially harmed.

In the future, we may need to take legal actions to prevent third parties from infringing upon or misappropriating our intellectual property or from otherwise gaining access to our technology. Protecting and enforcing our intellectual property rights and determining their validity and scope could result in significant litigation costs and require significant time and attention from our technical and management personnel, which could significantly harm our business. We may not prevail in such proceedings, and an adverse outcome may adversely impact our competitive advantage or otherwise harm our financial condition and our business.

We may be involved in intellectual property disputes in the future, which could divert management's attention, cause us to incur significant costs and prevent us from selling or using the challenged technology.

Participants in the markets in which we sell our products have experienced frequent litigation regarding patent and other intellectual property rights. While we have a policy in place that is designed to reduce the risk of infringement of intellectual property rights of others and we have conducted a limited review of other companies' relevant patents, there can be no assurance that third parties will not assert infringement claims against us. We cannot be certain that our products would not be found infringing on the intellectual property rights of others. Regardless of their merit, responding to such claims can be time consuming, divert management's attention and resources and may cause us to incur significant expenses. Intellectual property claims against us could force us to do one or more of the following:

- obtain from a third party claiming infringement a license to the relevant technology, which may not be available on reasonable terms, or at all;

- stop manufacturing, selling, incorporating or using our products that use the challenged intellectual property;
- pay substantial monetary damages; or
- expend significant resources to redesign the products that use the technology and to develop non-infringing technology.

Any of these actions could result in a substantial reduction in our revenue and could result in losses over an extended period of time.

In any potential intellectual property dispute, our customers could also become the target of litigation. Because we often indemnify our customers for intellectual property claims made against them with respect to our products, any claims against our customers could trigger indemnification claims against us. These obligations could result in substantial expenses such as legal expenses, damages for past infringement or royalties for future use. Any indemnity claim could also adversely affect our relationships with our customers and result in substantial costs to us.

If we fail to obtain the right to use the intellectual property rights of others that are necessary to operate our business, and to protect their intellectual property, our business and results of operations will be adversely affected.

From time to time we may choose to or be required to license technology or intellectual property from third parties in connection with the development of our products. We cannot assure you that third party licenses will be available to us on commercially reasonable terms, if at all. Generally, a license, if granted, would include payments of up-front fees, ongoing royalties or both. These payments or other terms could have a significant adverse impact on our results of operations. Our inability to obtain a necessary third party license required for our product offerings or to develop new products and product enhancements could require us to substitute technology of lower quality or performance standards, or of greater cost, any of which could adversely affect our business. If we are not able to obtain licenses from third parties, if necessary, then we may also be subject to litigation to defend against infringement claims from these third parties. Our competitors may be able to obtain licenses or cross-license their technology on better terms than we can, which could put us at a competitive disadvantage.

If we fail to maintain an effective system of disclosure controls and internal control over financial reporting, the accuracy and timing of our financial reporting may be adversely affected.

Preparing our consolidated financial statements involves a number of complex manual and automated processes, which are dependent upon individual data input or review and require significant management judgment. One or more of these elements may result in errors that may not be detected and could result in a material misstatement of our consolidated financial statements. The Sarbanes-Oxley Act requires, among other things, that as a publicly-traded company we disclose whether our internal control over financial reporting and disclosure controls and procedures are effective.

We have implemented a system of disclosure and internal controls that we believe provide reasonable assurance that we will be able to timely report our financial results and avoid accounting errors or material weaknesses in future periods. However, our internal controls cannot guarantee that no accounting errors exist or that all accounting errors, no matter how immaterial, will be detected because a control system, no matter how well designed and operated, can provide only reasonable, but not absolute assurance that the control system's objectives will be met. If we are unable to implement and maintain an effective system of disclosure controls and internal control over financial reporting, our ability to accurately and timely report our financial results could be adversely impacted. This could result in late filings of our annual and quarterly reports under the Exchange Act, restatements of our consolidated financial statements, a decline in our stock price, suspension or delisting of our common stock by NASDAQ, or other material adverse effects on our business, reputation, results of operations or financial condition.

Our ability to use our net operating losses and certain other tax attributes may be limited.

As of December 31, 2018, we had U.S. accumulated net operating losses, or NOLs, of approximately \$47.4 million, federal and state research and development credits ("R&D credits") of \$6.6 million, interest expense of \$1.0 million and foreign tax credits of \$4.6 million for U.S. federal income tax purposes. Under Section 382 of the Internal

Revenue Code of 1986, as amended, if a corporation undergoes an “ownership change,” the corporation’s ability to use its pre-change NOLs, tax credits and other pre-change tax attributes to offset its post-change income may be limited. An ownership change is generally defined as a greater than 50% change in equity ownership by value over a 3-year period. Based upon an analysis of our equity ownership, we believe that we have experienced ownership changes; however, we do not believe those limitations result in a material loss of tax benefits. Should we experience additional ownership changes, including upon the issuance of our common stock as a result of any conversion of the Notes into shares of our common stock or otherwise, our NOL carry forwards and tax credits may be further limited.

Our manufacturing operations are subject to environmental regulation that could limit our growth or impose substantial costs, adversely affecting our financial condition and results of operations.

Our properties, operations and products are subject to the environmental laws and regulations of the jurisdictions in which we operate and sell products. These laws and regulations govern, among other things, air emissions, wastewater discharges, the management and disposal of hazardous materials and solid wastes, the contamination of soil and groundwater, employee health and safety and the content, performance, packaging and disposal of products. Our failure to comply with current and future environmental laws and regulations, or the identification of contamination for which we are liable, could subject us to substantial costs, including fines, clean-up costs, natural resource damages, third-party property damages or personal injury claims, administrative, civil or criminal penalties and could result in injunctive relief requiring us to make significant investments to upgrade our facilities, redesign or change our manufacturing processes, redesign our products, or curtail our operations. Liability under environmental, health and safety laws can be joint and several and without regard to fault or negligence. For example, pursuant to environmental laws and regulations, including but not limited to the Comprehensive Environmental Response Compensation and Liability Act, or CERCLA, we may be liable for the full amount of any remediation-related costs at properties we currently own or formerly owned, such as our currently owned Sugar Land, Texas facility, or at properties at which we previously operated, as well as at properties we will own or operate in the future, and properties to which we have sent hazardous substances, whether or not we caused the contamination. Identification of presently unidentified environmental conditions, more vigorous enforcement by a governmental authority, enactment of more stringent legal requirements or other unanticipated events could give rise to adverse publicity, restrict our operations, affect the design or marketability of our products or otherwise cause us to incur material environmental costs, adversely affecting our financial condition and results of operations.

We are exposed to increased expenses and business risk as a result of Restriction on Hazardous Substances, or RoHS directives.

Following the lead of the European Union, or EU, various governmental agencies have either already put into place or are planning to introduce regulations that regulate the permissible levels of hazardous substances in products sold in various regions of the world. For example, the RoHS directive for EU took effect on July 1, 2006. The labeling provisions of similar legislation in China went into effect on March 1, 2007. Consequently, many suppliers of products sold into the EU have required their suppliers to be compliant with the new directive. Many of our customers have adopted this approach and have required our full compliance. Though we have devoted a significant amount of resources and effort in planning and executing our RoHS program, it is possible that some of our products might be incompatible with such regulations. In such events, we could experience the following consequences: loss of revenue, damaged reputation, diversion of resources, monetary penalties, and legal action.

Failure to comply with the U.S. Foreign Corrupt Practices Act could subject us to penalties and other adverse consequences.

We are subject to the U.S. Foreign Corrupt Practices Act which generally prohibits U.S. companies from engaging in bribery or other prohibited payments to foreign officials for the purpose of obtaining or retaining business. In addition, we are required to maintain records that accurately and fairly represent our transactions and have an adequate system of internal accounting controls. Foreign companies, including some that may compete with us, may not be subject to these prohibitions, and therefore may have a competitive advantage over us. If we are not successful in implementing and maintaining adequate preventative measures, we may be responsible for acts of our employees or other agents engaging in such conduct. We could suffer severe penalties and other consequences that may have a material adverse effect on our financial condition and results of operations.

We are subject to governmental export and import controls that could subject us to liability or impair our ability to compete in international markets.

We are subject to export and import control laws, trade regulations and other trade requirements that limit which products we sell and where and to whom we sell our products. Specifically, the Bureau of Industry and Security of the U.S. Department of Commerce is responsible for regulating the export of most commercial items that are so called dual-use goods that may have both commercial and military applications. Our products are classified under Export Control Classification Numbers, or ECCNs, 5A991 and 6A995. Export Control Classification requirements are dependent upon an item's technical characteristics, the destination, the end-use, the end-user, and other activities of the end-user. Should the regulations applicable to our products change, or the restrictions applicable to countries to which we ship our products change, then the export of our products to such countries could be restricted. As a result, our ability to export or sell our products to certain countries could be restricted, which could adversely affect our business, financial condition and results of operations.

Changes in our products or any change in export or import regulations or related legislation, shift in approach to the enforcement or scope of existing regulations, or change in the countries, persons or technologies targeted by such regulations, could result in delayed or decreased sales of our products to existing or potential customers. In such event, our business and results of operations could be adversely affected. For example, in April 2018, Zhongxing Telecommunications Equipment Corporation and ZTE Kangxun Communications Ltd. (collectively "ZTE") were added to the U.S. Department of Commerce's Bureau of Industry and Security's List of Denied Persons, which imposed a seven-year denial of export privileges against ZTE. However, in July 2018, the denial of export privileged was suspended and ZTE was removed from the list of Denied Persons. Although ZTE is not currently one of our significant customers, such actions against customers or potential customers could adversely affect our business and results of operations.

Rapidly changing standards and regulations could make our products obsolete, which would cause our revenue and results of operations to suffer.

We design our products to conform to regulations established by governments and to standards set by industry standards bodies worldwide, such as the American National Standards Institute, the European Telecommunications Standards Institute, the International Telecommunications Union and the Institute of Electrical and Electronics Engineers, Inc. Various industry organizations are currently considering whether and to what extent to create standards applicable to our products. Because certain of our products are designed to conform to current specific industry standards, if competing or new standards emerge that are preferred by our customers, we would have to make significant expenditures to develop new products. If our customers adopt new or competing industry standards with which our products are not compatible, or the industry groups adopt standards or governments issue regulations with which our products are not compatible, our existing products would become less desirable to our customers and our revenue and results of operations would suffer.

Compliance with regulations related to conflict minerals could increase costs and affect the manufacturing and sale of our products.

Public companies are required to disclose the use of tin, tantalum, tungsten and gold (collectively, "conflict minerals") mined from the Democratic Republic of the Congo and adjoining countries (the "covered countries") if a conflict mineral(s) is necessary to the functionality of a product manufactured, or contracted to be manufactured, by the Company. We filed our latest conflict minerals report on Form SD on May 29, 2019. We have previously determined, as part of our compliance efforts, that certain products or components we obtain from our suppliers contain conflict minerals. Based on our Reasonable Country of Origin Inquiry on the source of our conflict minerals for the year ended December 31, 2018, we had reason to believe that certain of such conflict minerals likely originated in covered countries. If we are unable to conclude in the future that all our products are free from conflict minerals originating from covered countries, this could have a negative impact on our business, reputation and/or results of operations. We may also encounter challenges to satisfy customers who require that our products be certified as conflict free, which could place us at a competitive disadvantage if we are unable to substantiate such a claim. Compliance with these rules could also affect the sourcing and availability of some of the minerals used in the manufacture of products or components we obtain from our suppliers, including our ability to obtain products or components in sufficient quantities and/or at competitive prices. Certain of our customers are requiring additional information from us regarding the origin of our raw materials, and complying with these customer requirements may cause us to incur additional costs, such as costs related to determining

the origin of any minerals used in our products. Our supply chain is complex and we may be unable to verify the origins for all metals used in our products. We may also encounter challenges with our customers and stockholders if we are unable to certify that our products are conflict free.

Some provisions of our named executive officers' agreements regarding change of control or separation of service contain obligations for us to make separation payments to them upon their termination.

Certain provisions contained in our employment agreements with our named executive officers regarding change of control or separation of service may obligate us to make lump sum severance payments and related payments upon the termination of their employment with us, other than such executive officer's resignation without good reason or our termination of their employment as a result of their disability or for cause. In the event we are required to make these separation payments, it could have a material adverse effect on our results of operations for the fiscal period in which such payments are made.

Risks Related to Our Operations in China

Our business operations conducted in China are critical to our success. A total of \$143.1 million, \$122.3 million and \$81.1 million or 53.6%, 32.0% and 31.1%, of our revenue in the years ended December 31, 2018, 2017 and 2016 was attributable to our product manufactured at our plant in China, respectively. Additionally, a substantial portion of our property, plant and equipment, 36.8%, 29.9% and 23.0% as of December 31, 2018, 2017 and 2016, was located in China, respectively. We expect to make further investments in China in the foreseeable future. Therefore, our business, financial condition, results of operations and prospects are to a significant degree subject to economic, political, legal, and social events and developments in China.

Adverse changes in economic and political policies in China, or Chinese laws or regulations could have a material adverse effect on business conditions and the overall economic growth of China, which could adversely affect our business.

The Chinese economy differs from the economies of most developed countries in many respects, including the level of government involvement, level of development, growth rate, control of foreign exchange and allocation of resources. The Chinese economy has been transitioning from a planned economy to a more market-oriented economy. Despite reforms, the government continues to exercise significant control over China's economic growth by way of the allocation of resources, control over foreign currency-denominated obligations and monetary policy and provision of preferential treatment to particular industries or companies.

In addition, the laws, regulations and legal requirements in China, including the laws that apply to foreign-invested enterprises, or FIEs, are subject to frequent changes. The interpretation and enforcement of such laws is uncertain. Protections of intellectual property rights and confidentiality in China may not be as effective as in the U.S. or other countries or regions with more developed legal systems. Any litigation in China may be protracted and result in substantial costs and diversion of resources and management attention. Any adverse changes to these laws, regulations and legal requirements or their interpretation or enforcement could have a material adverse effect on our business.

Furthermore, while China's economy has experienced rapid growth in the past 20 years, growth has been uneven across different regions, among various economic sectors and over time. China has also in the past and may in the future experience economic downturns due to, for example, government austerity measures, changes in government policies relating to capital spending, limitations placed on the ability of commercial banks to make loans, reduced levels of exports and international trade, inflation, lack of financial liquidity, stock market volatility and global economic conditions. Any of these developments could contribute to a decline in business and consumer spending in addition to other adverse market conditions, which could adversely affect our business.

The termination and expiration or unavailability of our preferential tax treatments in China may have a material adverse effect on our operating results.

Prior to January 1, 2008, entities established in China were generally subject to a 30% state and 3% local enterprise income tax rate. In accordance with the China Income Tax Law for Enterprises with Foreign Investment and Foreign Enterprises, effective through December 31, 2007, our China subsidiary enjoyed preferential income tax rates.

Effective January 1, 2008, the China Enterprise Income Tax Law, or the EIT law, imposes a single uniform income tax rate of 25% on all Chinese enterprises, including FIEs, and eliminates or modifies most of the tax exemptions, reductions and preferential treatment available under the previous tax laws and regulations. As a result, our China subsidiary may be subject to the uniform income tax rate of 25% unless we are able to qualify for preferential status. Since calendar year 2012, we have qualified for a preferential 15% tax rate that is available for state-encouraged new high technology enterprises. In order to retain this preferential tax rate, we must meet certain operating conditions, satisfy certain product requirements, meet certain headcount requirements and maintain certain levels of research expenditures. In November 2017, we received approval from the Chinese government to extend this preferential tax treatment for an additional three years, ending November 2020. If we fail to continue to qualify for this preferential rate in the future, we may incur higher tax rates on our income in China. Any future increase in the enterprise income tax rate applicable to us or the expiration or other limitation of preferential tax rates available to us could increase our tax liabilities and reduce our net income.

The turnover of direct labor in manufacturing industries in China is high, which could adversely affect our production, shipments and results of operations.

Employee turnover of direct labor in the manufacturing sector in China is extremely high and retention of such personnel is a challenge to companies located in or with operations in China. Although direct labor costs do not represent a high proportion of our overall manufacturing costs, direct labor is required for the manufacture of our products. If our direct labor turnover rates are higher than we expect, or we otherwise fail to adequately manage our direct labor turnover rates, then our results of operations could be adversely affected.

Chinese regulation of loans to and direct investment by offshore holding companies in China entities may delay or prevent us from making loans or additional capital contributions to our China subsidiary.

Any loans that we wish to make to our China subsidiary are subject to Chinese regulations and approvals. For example, any loans to our China subsidiary to finance their activities cannot exceed statutory limits, must be registered with State Administration of Foreign Exchange, or SAFE, or its local counterpart, and must be approved by the relevant government authorities. Any capital contributions to our China subsidiary must be approved by the Ministry of Commerce or its local counterpart. In addition, under Circular 142, our China subsidiary, as a FIE, may not be able to convert our capital contributions to them into RMB for equity investments or acquisitions in China.

We cannot assure you that we will be able to obtain these government registrations or approvals on a timely basis, if at all, with respect to our future loans or capital contributions to our China subsidiary. If we fail to receive such registrations or approvals, our ability to capitalize our China subsidiary may be negatively affected, which could materially and adversely affect our liquidity and ability to fund and expand our business.

Our China subsidiary is subject to Chinese labor laws and regulations, and Chinese labor laws may increase our operating costs in China.

Chinese labor laws and regulations provide certain protections for our employees located in China, and changes to those labor laws and regulations may increase our costs and reduce our flexibility. The China Labor Contract Law, which went into effect in 2008, together with its implementing rules, provides increased rights to Chinese employees compared to prior employment laws in China. Under the rules under the China Labor Contract Law, the probation period varies depending on contract terms and the employment contract can only be terminated during the probation period for cause upon three days' notice. Additionally, an employer may not be able to terminate a contract during the probation period on the grounds of a material change of circumstances or a mass layoff. The law also has specific provisions on conditions when an employer has to sign an employment contract with open-ended terms. If an employer fails to enter into an open-ended contract in certain circumstances, the employer must pay the employee twice their monthly wage beginning from the time the employer should have executed an open-ended contract. Additionally, an employer must pay severance for nearly all terminations, including when an employer decides not to renew a fixed-term contract. Any further changes to these laws may increase our costs and reduce our flexibility.

An increase in our labor costs in China may adversely affect our business and our profitability.

A significant portion of our workforce is located in China. Labor costs in China have been increasing recently due to labor unrest, strikes and changes in employment laws. If labor costs in China continue to increase, our costs will

increase. If we are not able to pass these increases on to our customers, our business, profitability and results of operations may be adversely affected.

We may have difficulty establishing and maintaining adequate management and financial controls over our China operations.

Businesses in China have historically not adopted a western style of management and financial reporting concepts and practices, which includes strong corporate governance, internal controls and computer, financial and other control systems. Moreover, familiarity with U.S. GAAP principles and reporting procedures is less common in China. As a consequence, we may have difficulty finding accounting personnel experienced with U.S. GAAP, and we may have difficulty training and integrating our China-based accounting staff with our U.S.-based finance organization. As a result of these factors, we may experience difficulty in establishing and maintaining management and financial controls over our China operations. These difficulties include collecting financial data and preparing financial statements, books of account and corporate records and instituting business practices that meet U.S. public-company reporting requirements. We may, in turn, experience difficulties in implementing and maintaining adequate internal controls as required under Section 404 of the Sarbanes-Oxley Act.

Risks Related to Our Common Stock

Our stock price has been and is likely to be volatile.

The market price of our common stock has been and is likely to be subject to wide fluctuations in response to, among other things, the risk factors described in this section of this Quarterly Report on Form 10-Q, and other factors beyond our control, such as fluctuations in the valuation of companies perceived by investors to be comparable to us. For example, announcements made by competitors regarding factors influencing their business may cause fluctuations in the valuation of companies throughout our industry, including fluctuations in the valuation of our stock.

Furthermore, the stock markets have experienced price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. These broad market and industry fluctuations, as well as general economic, political and market conditions, such as recessions, interest rate changes or international currency fluctuations, may negatively affect the market price of our common stock.

In the past, many companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation. We have been and may become the target of this type of litigation in the future. For example, on August 3, 2017 we provided guidance for the third quarter of 2017, and on August 4, 2017 the market price of our stock decreased significantly. As disclosed in “Part II - Item 1. Legal Proceedings,” on August 5, 2017, a class action lawsuit was filed against us and two of our officers. The complaint in this matter alleges that we made materially false and misleading statements or failed to disclose material facts and requests damages and other relief. On August 7, 2018, a derivative class action lawsuit was filed against our chief executive officer, chief financial officer and board of directors. The allegations are substantially similar to those under the August 5, 2017 lawsuit. On October 1, 2018, another class action lawsuit was filed in the U.S. District Court for the Southern District of Texas against us and two of our officers. The complaint in this matter alleges that we made materially false and misleading statements or failed to disclose material facts and a related action was filed on October 10, 2018. These lawsuits and any other such litigation could result in substantial costs and divert our management’s attention from other business concerns, which could seriously harm our business.

We have incurred and will continue to incur significant increased expenses and administrative burdens as a public company, which could have a material adverse effect on our operations and financial results.

We face increased legal, accounting, administrative and other costs and expenses as a public company that we did not incur as a private company, and greater expenditures may be necessary in the future with the advent of new laws, regulations and stock exchange listing requirements pertaining to public companies. These increased costs will require us to divert a significant amount of money that we could otherwise use to expand our business and achieve our strategic objectives. The Sarbanes-Oxley Act, including the requirements of Section 404, as well as rules and regulations subsequently implemented by the SEC, the Public Company Accounting Oversight Board and the NASDAQ Global Market, impose additional reporting and other obligations on public companies. Compliance with public company

requirements has increased our costs and made some activities more time-consuming. For example, we have created board committees and adopted internal controls and disclosure controls and procedures. In addition, we have incurred and will continue to incur additional expenses associated with our SEC reporting requirements. Furthermore, if we identify any issues in complying with those requirements (for example, if we or our auditors identify a material weakness or significant deficiency in our internal control over financial reporting), we could incur additional costs rectifying those issues, and the existence of those issues could adversely affect us, our reputation or investor perceptions of us. Advocacy efforts by stockholders and third parties may also prompt additional changes in governance and reporting requirements, which could further increase our costs. Legal, accounting, administrative and other costs and expenses may increase in the future as we continue to incur both increased external audit fees as well as additional spending to ensure continued regulatory compliance.

We currently do not intend to pay dividends on our common stock and, consequently, your only opportunity to achieve a return on your investment is if the price of our common stock appreciates.

We currently do not plan to declare or pay dividends on shares of our common stock in the foreseeable future. Consequently, your only opportunity to achieve a return on any shares of our common stock that you may acquire will be if the market price of our common stock appreciates and you sell your shares at a profit. There is no guarantee that the price of our common stock in the market will ever exceed the price that you pay.

Our charter documents, stock incentive plans and Delaware law could prevent a takeover that stockholders consider favorable and could also reduce the market price of our stock.

Our amended and restated certificate of incorporation and our amended and restated bylaws and our stock incentive plans contain provisions that could delay or prevent a change in control of our company. These provisions could also make it more difficult for stockholders to elect directors and take other corporate actions. These provisions include:

- providing for a classified board of directors with staggered, three-year terms;
- not providing for cumulative voting in the election of directors;
- authorizing our board of directors to issue, without stockholder approval, preferred stock rights senior to those of common stock;
- prohibiting stockholder action by written consent;
- limiting the persons who may call special meetings of stockholders;
- requiring advance notification of stockholder nominations and proposals; and
- change of control provisions in our stock incentive plans, and the individual stock option agreements, which provide that a change of control may accelerate the vesting of the stock options and equity awards issued under such plans.

In addition, we are governed by the provisions of Section 203 of the Delaware General Corporate Law. These provisions may prohibit large stockholders, in particular those owning 15% or more of our outstanding common stock, from engaging in certain business combinations without the approval of substantially all of our stockholders for a certain period of time.

These and other provisions in our amended and restated certificate of incorporation, our amended and restated bylaws and under Delaware law could discourage potential takeover attempts, reduce the price that investors might be willing to pay for shares of our common stock in the future and result in the market price being lower than it would be without these provisions.

If research analysts do not publish research about our business or if they issue unfavorable commentary or downgrade our common stock, our stock price and trading volume could decline.

The trading market for our common stock depends on the research and reports that research analysts publish about us and our business. The price of our common stock could decline if one or more research analysts downgrade our common stock or if those analysts issue other unfavorable commentary or cease publishing reports about us or our business. If one or more of the research analysts ceases coverage of our company or fails to publish reports on us regularly, demand for our stock could decrease, which could cause our stock price or trading volume to decline.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

None.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

None.

Item 6. Exhibits

See Exhibit Index.

EXHIBIT INDEX

Number	Description
3.1*	Amended and Restated Certificate of Incorporation, as currently in effect (filed as Exhibit 3.1 to the Registrant's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 14, 2013).
3.2*	Amended and Restated Bylaws, as currently in effect (filed as Exhibit 3.2 to the Registrant's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 14, 2013).
4.1*	Common Stock Specimen (filed as Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on July 15, 2015).
4.2*	Indenture, dated as of March 5, 2019 between Applied Optoelectronics, Inc. and Wells Fargo Bank, National Association, as trustee, paying agent, and conversion agent (filed as Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on March 5, 2019).
4.3*	Form of Note representing the Company's 5.00% Convertible Senior Notes due 2024 (included as Exhibit A to the Indenture filed as Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on March 5, 2019).
10.1*	Translation of Approval Notice between, Prime World International Holdings, Ltd., and Far Eastern International Bank Co., Ltd., dated April 11, 2019 (filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on April 17, 2019).
10.2*	Translation of Comprehensive Credit Facilities Master Agreement between, Prime World International Holdings, Ltd., and Far Eastern International Bank Co., Ltd., dated April 11, 2019 (filed as Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on April 17, 2019).
10.3*	Translation of Credit Terms / Financial Transaction Terms Agreement between, Prime World International Holdings, Ltd., and Far Eastern International Bank Co., Ltd., dated April 11, 2019 (filed as Exhibit 10.3 to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on April 17, 2019).
10.4*	Translation of Promissory Note between, Prime World International Holdings, Ltd., and Far Eastern International Bank Co., Ltd., dated April 11, 2019 (filed as Exhibit 10.4 to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on April 17, 2019).
10.5*	Translation of the Credit Granting Agreement, between Global Technology, Inc. and China Merchants Bank Co., Ltd., dated April 19, 2019 (filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on April 25, 2019).
10.6*	Translation of the Working Capital Loan Contract, between Global Technology, Inc. and Shanghai Pudong Development Bank Co., Ltd., dated April 30, 2019 (filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on May 6, 2019).
10.7*	Translation of the Working Capital Loan Contract (RMB 30,000,000), between Global Technology, Inc. and Shanghai Pudong Development Bank Co., Ltd., dated May 7, 2019 (filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on May 13, 2019).
10.8*	Translation of the Working Capital Loan Contract (USD 2,000,000), between Global Technology, Inc. and Shanghai Pudong Development Bank Co., Ltd., dated May 8, 2019 (filed as Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on May 13, 2019).

[Table of Contents](#)

10.9*	Translation of the Financing Credit Line Agreement, dated May 24, 2019, between Global Technology, Inc. and Shanghai Pudong Development Bank Co., Ltd. (filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on May 31, 2019).
10.10*	Translation of the Maximum Mortgage Contract (Security Agreement), dated May 24, 2019, between Global Technology, Inc. and Shanghai Pudong Development Bank Co., Ltd. (filed as Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on May 31, 2019).
10.11**	Translation of the Approval Notice of Credit Line, dated July 8, 2019, between Prime World International Holdings Ltd. and Taishin International Bank (filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on July 29, 2019).
10.12**	Translation of the General Agreement for Financial Transaction, dated July 23, 2019, between Prime World International Holdings Ltd. and Taishin International Bank (filed as Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on July 29, 2019).
10.13**	Translation of the Credit Facility Agreement, dated July 23, 2019, between Prime World International Holdings Ltd. and Taishin International Bank (filed as Exhibit 10.3 to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on July 29, 2019).
10.14**	Translation of the Promissory Note, dated July 23, 2019, between Prime World International Holdings Ltd. and Taishin International Bank (filed as Exhibit 10.4 to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on July 29, 2019).
31.1**	Certification of Chief Executive Officer pursuant to Exchange Act Rule, 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2**	Certification of Chief Financial Officer pursuant to Exchange Act Rule, 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	Certification pursuant to 18 U.S.C. 1350, adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, by Chief Executive Officer and Chief Financial Officer.
101.INS**	XBRL Instance – the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
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 Extension Label Linkbase Document.
101.PRE**	XBRL Taxonomy Extension Presentation Linkbase Document.

* Incorporated herein by reference to the indicated filing.

** Filed herewith.

SIGNATURES

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

APPLIED OPTOELECTRONICS, INC.

Date: August 8, 2019

By: /s/ STEFAN J. MURRY _____

STEFAN J. MURRY

Chief Financial Officer

(principal financial officer and principal accounting officer)

Approval Notice of Credit Line

- I. Regarding the related transactions between your company and the Bank, the transaction conditions approved by the Bank are as follows:

Amount Unit: One thousand NTD

Transaction Type	Credit Line	Interest Rate	Usage/Note
1. Comprehensive Credit Line	100,000		
(1) Short term loan - Import 0/A	(100,000)	Negotiable on a case-by-case basis	1. Revolving loans 2. 120-day repayment period 3. The current reference rate for 120-day period is 2.2% 4. A copy of the Invoice must be obtained before the loan can be issued; credited in full amount; the remittance restricted only to the suppliers (must not be enterprises/individuals)
(2) Short term loan	(100,000)	Negotiable on a case-by-case basis	1. Revolving loans 2. 90-day repayment period 3. The current reference rate for 90-day period is 2.25%
2. Financial Derivatives Credit Line - Hedging	USD 1,000	Negotiable with Financial Marketing Department	1. Shall restrict only for spot transactions in the foreign exchange market. 2. The part of the hedging amount that exceeds 30% of the MTM loss needs to be replenished with margin or deposit within two business days.
Total	100,000+ USD 1,000		Maturity Date: July 31,2020

Additional (special) conditions:

1. From August 1, 2019, the Bank will quarterly check and review if the amount of your company's average deposit during each quarter (exclude the cash deposited in the account and pledge of a banking deposit) is more than or equal to 30% of the average credit amount during each quarter.
2. From August 1, 2019, the Bank will quarterly check and review if the amount of the fund transfer between you and your non-related parties during each quarter is more than or equal to USD 2 million.
3. Please provide the Quarterly Consolidated Financial Statements of your parent company ("AOI") before August 31, 2019 and November 30, 2019, and March 15, 2020 and May 31, 2020 for the Bank's reference.
4. Before the loan can be issued, a letter of responsibility issued by Prime World International Holdings Ltd. shall be required.
5. At the end of each quarter (March, May, August, and November), the Applied Optoelectronics, Inc.'s shareholding in Prime World International Holdings Ltd. shall be checked, which must not be less than 100%.
6. Other matters not mentioned herein shall be governed by the Bank's related policy.

- II. Under the above-mentioned conditions, if there are difficulties obtaining the funds due to market factors, or these conditions cannot properly reflect the costs of the Bank's acquisition for the related funds, the Bank reserves the rights to make the adjustments in a timely manner to the amounts of the loan, usage, and the re-determination of the loan interest rates.

- III. We kindly request your company/your good self to check with the relevant documents for signing and other matters.

Kind Regards

Prime World International Holdings Ltd.
Taiwan Branch

Customer Confirmation with Signature

The company/I have fully understood the above content and agreed that it is a part of the agreement signed with the Bank.

Date: July 8, 2019

Version 1041127

Page 1 of 1



Taishin International Bank

General Agreement for Financial Transaction

Taishin International Bank

General Agreement for Financial Transaction

The Customer and Taishin International Bank (hereinafter referred to as “the Bank”) agree to use this General Agreement for Financial Transaction (hereinafter referred to as “this Agreement”) as the standard of both parties in terms of Financial Transactions that have been made or to be made. All requirements, instructions, confirmations, transactional contracts and other documents signed or issued by the Customer apply to all promises of this Agreement and constitute one part of this Agreement, unless otherwise expressly stated in this Agreement. **All transactions made in accordance with this Agreement and confirmations that proved transactions, along with this Agreement, constitute the single consensus between the Customer and the Bank.**

Chapter I General Terms and Conditions

1. Definition

Unless otherwise specified, the following definitions will apply to the situations below within this Agreement and Individual Transactional Contracts:

- (1) “Financial Transaction” or “Transaction”: Financial Transactions made from time to time between the Bank and the Customer, including but not limited to Spot transactions or Forward transactions of Currency, Currency exchange, exchange rate Option, Forward Rate Agreement, index swap, Cross Currency Swap, Exchange of Assets, Structured Products, Credit Derivatives, Equity Derivatives, Commodity Derivatives, and all other financial derivative transaction contracts. All Financial Transactions within this Agreement are not protected by deposit insurance.
 - (2) “Business Day”: Refers to the Business Day of the Bank in the region of Taipei City in Taiwan, Republic of China, and the Foreign Currency part are applicable to the international market practice; if there are special provisions in individual transactional contracts, subject to the agreement of this contract.
 - (3) “Currency”: Refers to new Taiwan Currency and any other country’s legal tender that the Bank agrees to deal with.
 - (4) “Foreign Currency”: Refers to any other country’s legal tender other than new Taiwan Currency.
 - (5) “Spot”: Transactions made on the trade date, the first Business Day after the transaction date or the second Business Day after the transaction date for substantive settlement or balance settlement.
 - (6) “Forward”: Transactions that specify a future Business Day as the expiration date on the trade date, and deal with substantive settlement or balance settlement at a specific price and specified amount.
 - (7) “Forward Rate Agreement”: Transactions that specify a future period as the interest period on the trade date, and deal with interest receipt and payment at a specific interest rate and specified amount.
 - (8) “Interest Rate Swap”: Transactions that use different interest rate index of single Currency as exchange goal to exchange interest or interest differential.
 - (9) “Currency Swap”: Transactions that buy (sell) some foreign exchanges in the Spot market, and at the same time sell (buy) equivalent amount of foreign exchanges in the Forward market.
 - (10) “Cross Currency Swap”: Transactions that exchange principal and interest between different currencies.
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- (11) "Exchange of Assets" (ECB/CB Asset Swap): Exchange of Assets that use profits and equity related convertible bonds as the target.
 - (12) "Credit Derivatives": Transactions that use credit and its relevant interest as the goal, including but not limited to credit protection transactions, credit swap, credit default swap, credit spread transactions, and so on.
 - (13) "Equity Derivatives": Transactions that use stock and its relevant interest as the goal, including but not limited to equity or equity index Option, equity or equity index exchange transactions, and so on.
 - (14) "Commodity Derivatives": Transactions that use commodity price as the goal, including but not limited to Commodity Swap, Commodity Option and Commodity Forward.
 - (15) "Option": The agreement that the capital of the Option commit that the Buyer with the Option has the right (but not the obligation) to buy/sell a target interest from/to him at the time of the exercise of the Option (including American, European, Bermuda, and so on).
 - (16) "Call Option": Refers to the right (but not the obligation) that the holder can buy a target from the Option Seller at Strike Price, which is also known as Call Option.
 - (17) "Put Option": Refers to the right (but not the obligation) that the holder can sell a target to the Option Seller at Strike Price, which is also known as Put Option.
 - (18) "Buyer": Refers to one party who buy or hold the Option.
 - (19) "Seller": Refers to the Seller of the Option.
 - (20) "Currency Option Agreement": The transaction that the Buyer of the Option commit that Buyer with the Option has the right (but not the obligation) to buy a designated Currency from him and/or sell another designated Currency to him at the time of the exercise of the Option.
 - (21) "Knock-in": When the Spot price reaches an agreed price, the Option comes into effect.
 - (22) "Knock-out": When the Spot price reaches an agreed price, the Option becomes invalid.
 - (23) "Cap": At the agreed Fixing Date, when the market interest rate is higher than the performance interest rate, the Option Buyer has the right to execute the interest differential profit between the market interest rate and the performance interest rate (not the obligation), and the Option Seller has the obligation to pay the interest differential between the market interest rate and the performance interest rate to Buyer when the Buyer exercise the Option.
 - (24) "Floor": At the agreed Fixing Date, when the market interest rate is lower than the performance interest rate, the Option Buyer has the right to execute the interest differential profit between the market interest rate and the performance interest rate (not the obligation), and the Option Seller has the obligation to pay the interest differential between the market interest rate and the performance interest rate to Buyer when the Buyer exercise the Option.
 - (25) "American": The Option to exercise on any Business Day before expiring date (including expiring date).
 - (26) "European": The Option to exercise only on the expiring date.
 - (27) "Bermuda": The Option to exercise on any agreed Option exercise date.
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- (28) "Fixing Date": The Business Day on which price comparison is made between the market price and the contracting price.
- (29) "Premium": Refers to the Option consideration that Option Buyer paid to Seller, that is, the amount of money Option Seller obtained due to the sale of the Option.
- (30) "Strike Price": Refers to the consideration that should be paid for buying or selling a specified Currency or other target asset according to contract provisions when exercising the Option.
- (31) "Sold Option by Customer": Refers to the Option that Customer sells to the Bank.
- (32) "Option with Intrinsic Value": Refers to the situation where Buyer is willing to exercise the Option when the Option dealing goal's Spot price is beneficial to Buyer compared with its set price.
- (33) "Maturity Date/Termination Date": The Maturity Date of each Financial Transaction contract made according to this Agreement.
- (34) "Settlement Day": Refers to the Business Day on which substantive settlement or balance settlement is made, unless otherwise agreed in individual transactional contract, which is usually the Fixing Date or the second Business Day after the maturity Date.
- (35) "Structured Product": Refers to the Structured Product transaction that combines fixed income products with financial derivatives (such as Option), and it can join a large number of goals, including transactional contracts derived from interest rate, exchange rate, stock price, index, commodity, credit event or other interests and their combinations. Structured Product is not a general traditional savings account, but an investment. Its profit and loss are influenced by many factors, such as the price of the target asset, the volatility of the index or the performance, or the occurrence of the agreed credit event. In the situation where certain conditions are met, the profit of Structured Product may be higher than that of the common simple deposit rate; otherwise, it may reduce and erode the investment principal. **The Bank doesn't promise to return all investment principal when the agreement is terminated before maturity, and modest capital preservation at maturity is depending on the condition set up. Each Structured Product transaction that ordered by Customer according to this Agreement takes the Structured Product Transaction Confirmation as the voucher.**
- (36) "Electronic Transmission Mode": From time to time, the Bank decides or works out Electronic Transmission Mode for communication between the Bank and the Customer, including telephone, fax, interactive visualized information system, computer, terminal or other electronic or telecommunication equipment.
- (37) "Calculation Agent": Refers to the calculation of each amount, interest rate, exchange rate, price, profit, cost, and so on involved in this Agreement and individual transactional contract, and the identification of the occurrence of each event referred by individual transaction's product specification or Transaction Confirmation, as well as other conditions must be identified or calculated or adjusted by Calculation Agent.
- (38) "Customer": If this Agreement is signed jointly by a Customer, which is a securities investment trust limited liability company (hereinafter referred to as the "trust company"), on behalf of its raised funds/private placements, together with the custodial bank, the Customer referred to in this Agreement shall, unless otherwise agreed, refer to the trust company, the custodian bank and the fund in principle. Also, this Agreement is an agreement on financial derivative instrument transactions between the funds and the Bank.
- (39) "Confirmation Letter" or "Transaction Confirmation": means a document containing the transaction conditions (including but not limited to the amount, the term, etc.) and special terms and conditions agreed between the Customer and the Bank, which is issued by the Bank after it receives the instruction of the Customer to make a Financial Transaction.
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- (40) "Close-out Amount": For each terminated transaction, it refers to losses suffered or commonly incurred (expressed with positive figures) due to the economic interests which shall be restored in or provided to the Bank, including the economic interests (1) which shall be equivalent to that specified in the principal provisions concerning the relevant terminated transactions (including the equivalent economic interests that both parties shall pay or provide concerning terminated transaction according to this Agreement in case of no Termination Date has occurred), and economic interests (2) which shall be equivalent to the Options enjoyed by both parties in relation to the terminated transaction, or refers to the interests realized or commonly realized (expressed with negative figures) by the Bank. Any Close-out Amount shall be determined in good faith by the Bank.
- (41) "Termination Currency": shall be calculated in NTD, and if the NTD does not circulate freely, this shall be calculated in US dollars.
- (42) "Termination Currency Equivalent": For amounts settled in the Termination Currency, it refers to the amount of the Termination Currency; for amounts settled in currencies other than the Termination Currency ("other currencies"), it refers to the amount of the Termination Currency required for the purchase of such amount of other currencies with a Spot rate chosen by the Bank on the relevant Termination Date, or if the Bank settles the amount on a later date, it refers to the amount of the Termination Currency required for the purchase of such amount of other currencies with the Spot rate at approximately 11:00 am Taipei time on this later date.

Except as otherwise provided in this Agreement or in the Confirmation Letters of the individual transaction contracts, the terms used in this Agreement and the Confirmation Letters of the individual transaction contracts shall give priority to the application of the latest version of the definitions made by International Swaps and Derivatives Association, Inc. (or ISDA) whenever applicable, or shall be interpreted in accordance with relevant laws of the Republic of China or current market practices.

Matters that are not covered in this Agreement are subject to the Confirmation Letters of individual transactions, condition descriptions/product descriptions or current market practices. If there are any inconsistencies between provisions, the following order of priority shall apply: verbal or written transaction contracts (including Confirmation Letters), special provisions under this Agreement, General Provisions under this Agreement.

2. Individual Transaction Contracts

- (1) Price offering: The Customer may at any time request the Bank to provide reference prices for individual transactions. However, unless the Bank and the Customer establish separate transaction contracts in accordance with this Agreement, the prices provided by the Bank shall not be binding on neither party.
- (2) Condition description/Product description: The Bank has the right to provide a description on an individual transaction to the Customer for reference, and the Bank has the right to change any transaction conditions in the description at any time. However, unless the Bank and the Customer establish relevant transaction contracts according to this Agreement, the description provided by the Bank shall not be binding on neither party. And if there are any additions, deletions or changes made to the description, the Bank shall keep the Customer informed.
- (3) Advices: Though the Customer may ask for advices on the transactions from the Bank, the advices shall only be used for the Customer's reference. All transactions shall be conducted in the sole judgment of the Customer. The Bank shall not be responsible for any gains or losses from the transactions. The Customer also undertakes that it will not recover any losses from the Bank in respect of any of the Bank's advices on the transactions under any circumstances. The Bank has the absolute right to refuse to provide any advices depending on the circumstances.
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- (4) Offer or Instruction: The Customer must issue a transaction offer or instruction to the Bank for individual transactions. For the purpose of this Agreement, the Customer hereby requests and authorizes the Bank to accept the offer or instruction given by the Customer verbally or in writing or by any other means approved by the Bank (collectively "Instructions"). These Instructions may be withdrawn before the Bank completes the transaction. The Bank shall act in accordance with the instructions of the Customer whether they are given verbally, in writing or otherwise. Each person listed in the "Power of Attorney for Authorized Transaction Personnel" made under this Agreement shall be the person authorized by the Customer to act on his/her behalf to give instructions to the Bank. Unless and until the Bank actually receives any written notice of withdrawal or amendment of the "Power of Attorney for Authorized Transaction Personnel", the Bank should follow the instructions of the original "authorized transaction personnel". The Customer expressly agrees that, the fact whether the instructions made by the authorized personnel who are listed in the "Power of Attorney for Authorized Transaction Personnel" are indeed the very ones executed shall rely on the records preserved by the Bank for verification. The Bank shall not be responsible for any losses suffered by the Customer (including any errors or omissions during the delivery of any instructions), except for those caused by the intentional or gross negligence of the Bank. And the Customer agrees to make up for any loss, damages, or expenses incurred or committed by the Bank due to such errors or required actions taken by the Bank. Notwithstanding the above provisions, the Bank may refuse any instructions at its discretion.
- (5) When the Bank accepts a transaction offer or instruction from the Customer, the corresponding individual transaction contract is established immediately and shall be binding on both parties. The Bank shall confirm it with the Customer in accordance with the provisions of Article 3.
- (6) Transaction documents: According to the regulations of the Bank, individual transaction contracts can be established verbally or in writing.
- (7) Verbally and in writing: "Verbally" means the instructions are delivered personally or through a phone call by the person authorized by the Customer; and the Customer agrees that the Bank may record and archive the conversation between the two parties to serve as evidence. "In writing" means that the instructions are delivered through an original (including electronic files) file or a facsimile copy or a file transmitted in a way approved by the Bank, and the Customer agrees that such a facsimile copy or a file transmitted in other ways shall have the same force as the original one, and that the Bank may act on such files for instructions, and the Customer shall raise no objection to this, and shall send the original files to the Bank for filing within ten days after the fax or transmission. If the Bank believes that the text or data in the facsimile copy is ambiguous or doubtful, it shall confirm with the Customer and the copy shall be seen as valid only after it has been confirmed. "Other means approved by the Bank" means electronic transaction or other agreed transaction methods that have been approved by the Bank.

3. Confirmation

- (1) Confirmation by telephone: The Bank may confirm the essential conditions of the transaction with the authorized confirmation personnel designated by the Customer via a telephone on the completion date of the transaction. If the Bank has not confirmed via telephone, the validity of the transaction shall not be affected.
 - (2) Written confirmation: Except for Spot transactions, the Bank shall send a Confirmation Letter to the Customer within five Business Days from the day after the day of completion of the transaction. Once the Customer confirmed the transaction, it shall stamp on the Confirmation Letter the confirmation seal as shown in the letter of authorization, and shall send it back to the Bank. If the Customer has any doubts about the matters contained in the Confirmation Letter, it shall raise an objection immediately to the Bank by phone. The Bank shall verify the debatable transaction conditions raised by the Customer. When a verbal or written transaction differs from the information contained in the Confirmation Letter, the verbal or written transaction shall prevail. If the Customer has not filed an objection within three Business Days after the Confirmation Letter was delivered (or seen as delivered) in the manner indicated in this Agreement, it is
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regarded that the Customer has accepted and agreed to the content of the Confirmation Letter, and the Customer shall raise no objection. After receiving an objection notice from the Customer, the Bank will verify the objection filed by the Customer and make a decision. The decision made by the Bank shall prevail unless it is obviously erroneous. If the Bank has verified that the Confirmation Letter was incorrect, the Confirmation Letter shall be resent. If the Customer has completed delivery or settlement before sending back the Confirmation Letter, it shall be deemed that the transaction has been confirmed, but the Customer is still obliged to send the Confirmation Letter back. If the Bank finds that the Confirmation Letter sent to the Customer is incorrect or different from the content of the verbal transaction, the Bank has the right to resend the Confirmation Letter to the Customer.

- (3) Electronic transmission system confirmation (including but not limited to the corporate financial network system of the Bank): The Bank may send an electronic Transaction Confirmation in place of a written Transaction Confirmation. The Customer agrees and is aware of that:
- A. Although not expressly indicated in the electronic Transaction Confirmation, the electronic Transaction Confirmation shall form the Confirmation Letter referred to in this Agreement.
 - B. The electronic Transaction Confirmation shall form or be appended as part of this Agreement. Except as otherwise agreed in the contents of the electronic Transaction Confirmation, the provisions under this Agreement and all types of contracts executed through electronic transmission system shall apply to the electronic Transaction Confirmation.
 - C. In case the Customer intends to confirm transactions with the corporate financial network service system, he shall apply to the Bank for the use of the corporate financial network service, and confirm every derivative transaction with the Bank through the corporate financial network service system (hereinafter referred to as the System) as agreed in the *Application for Corporate Financial Service System of Taishin International Commercial Bank*. Additionally the Customer shall set authorized confirmation personnel and user code, password on the system by himself; the same action shall be performed if any change occurs; the authorized confirmation personnel is set and managed by the Customer, and the Customer understands and promises that the authorized transaction personnel and the authorized confirmation personnel of the same transaction shall not be the same person, but the Bank is not responsible for confirming the identity of the confirmation personnel and whether he is the same person as the transaction person. All confirmations based on valid user code and password are deemed as done by the authorized confirmation personnel, and are binding on the Customer.
 - D. After the Customer and the Bank perform the Financial Transactions referred to in this Agreement, the Bank shall transmit Transaction Confirmation of the transactions made by the Customer to the System, and shall notify the Customer of the transaction messages to be confirmed by email. The confirmation personnel authorized by the Customer shall confirm the messages on the System immediately. If the Customer has doubts on the items contained in the electronic Transaction Confirmation, he should immediately click "incorrect transaction content, reject" and select the objected items to inform the Bank. The Bank shall verify the debatable transaction conditions raised by the Customer. If more than two authorized confirmation person deal with the same Transaction Confirmation at the same time, the first confirmation or rejection message sent to the system shall prevail. For the time being, others cannot confirm or reject this transaction. Verbal transactions shall prevail when there are differences between verbal transactions and items contained in the electronic Transaction Confirmation. If the Customer does not raise an objection within three Business Days after the electronic Transaction Confirmation is sent by the Bank, it shall be considered that the Customer accepts and agrees with no objections that the items contained in the electronic Transaction Confirmation are correct. After receiving objection notices from the Customer, the Bank will verify the corresponding content of the objection raised by the Customer and make decisions. The decisions made by the Bank shall prevail unless it is obviously erroneous. If the Bank verified that there are mistakes in the electronic Transaction Confirmation, the
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electronic Transaction Confirmation shall be re-transmitted and the Customer shall be notified by e-mail. The Customer shall reconfirm it immediately. If the Customer has completed delivery or settlement before confirming the electronic Transaction Confirmation, the Customer shall be deemed to confirm the transaction message, but he is still obliged to confirm the electronic Transaction Confirmation. If the Bank finds that the electronic Transaction Confirmation transmitted to the Customer is incorrect or different from the content of the verbal transaction, the Bank has the right to re-transmit the electronic Transaction Confirmation to the Customer.

E. In case the Customer intends to confirm the transaction with other electronic transmission systems that have been approved by the Bank and opened to the public, the Customer shall sign relevant covenant separately with the Bank.

(4) Application of Confirmation Definition and Interpretation

A. Unless otherwise stipulated in the content of the Transaction Confirmation, the relevant definitions and terms (including the subsequent supplements and amendments) of the ISDA 1998 FX and Currency Option Definitions (including the subsequent amendments) published by the International Swaps and Derivatives Association, Inc., the Emerging Markets Traders Association, and the Foreign Exchange Committee are applicable to Transaction Confirmation of foreign exchange transactions and Currency Option transactions; the relevant definitions and terms (including the subsequent supplements and amendments) of the 2006 ISDA Definitions published by the International Swaps and Derivatives Association, Inc. are applicable to Transaction Confirmation of other Financial Transactions.

B. In case of any inconsistency between the applicable definition file agreed in the preceding paragraph and the Transaction Confirmation, the Transaction Confirmation shall prevail for relevant transactions.

4. Settlement and Delivery

When an individual transaction is completed, the following transaction methods apply unless otherwise specified in the confirmation of individual transaction:

- (1) "Close Position": The Customer has the right to close out part or all of the original transaction with a reversing transaction.
- (2) "Close Position Settlement": Profit and loss arising from closing a position are paid by the losing party to the counter party. The Customer agrees that the profit and loss of the close position shall be calculated by the Bank. If only a part of the transaction is closed out, the part of the transaction which is not closed out shall continue to be valid and shall be binding on both the Customer and the Bank.
- (3) "Delivery": For payables of individual transaction contract, the Customer shall deliver the funds that are immediately available and conform to the agreed Currency to the Bank on the appointed date. After delivery, the Customer has the right to receive money earned in the transaction from the Bank.
- (4) "Net Delivery": The payables of multiple transactions with the same payment Currency and expires at the same Business Day shall be paid as an offset amount of money paid by the Customer to the Bank (expressed as positive numbers) or paid by the Bank to the Customer (expressed as negative numbers).

5. Payment and Delay of Premium

- (1) Payment: Unless otherwise agreed in writing agreement, the Buyer shall pay the Premium within two
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Business Days after the parties agree to the transaction of the Option. The Premium shall not be refunded once it is paid.

- (2) Delay: If the Seller of the Option does not receive the Premium before the Premium payment date (inclusive), he may choose to:
 - A. Accept delayed payment of the Premium.
 - B. Write a summon exhortation to the Buyer. If the Seller does not receive the Premium within two Business Days after the summon exhortation letter arrives (or is deemed to be arrived) to the Buyer, the Option transaction will be invalidated or deemed to be a breach of contract, and the Seller will have the right to deal with the Option directly.
- (3) For all costs, interest, losses or damages of the Seller caused by the Buyer due to the delayed payment of the Premium, the Buyer shall be liable for compensation.

6. Deposit

- (1) **Deposit: According to the transaction contract agreed between the Bank and the Customer, the Customer must provide a deposit or other guaranty approved by the Bank in accordance with the Bank's request, pledge it to the Bank as a guarantee, and the Customer shall also agree to provide what the Bank requested, whether it is inapplicable in original agreement or it is not agreed but later considered as applicable. The type, amount, value of pledged object and the payment (delivery) due date, etc. shall be specified and determined by the Bank. The Customer shall, in accordance with the Bank's reasonable requirements, sign the relevant documents and take necessary measures to ensure the Bank's rights and interests of the deposit and other guaranty relevant to this term. The Customer understands and agrees that the Bank has the right to notify the Customer at any time to change the application of the deposit and its scope.**
- (2) Deposit type: The Customer shall divide the deposit respectively claimed by the Financial Transaction individual limits approved by the Bank (including but not limited to hedging and non-hedging limits) and the transaction contract agreed between the Bank and the Customer (including but not limited to hedging and non-hedging Financial Transactions) into "initial deposit" and "loss deposit". The Customer shall claim before the commencement of transaction or before the establishment of transaction contract; the Customer's transaction contract shall be valued on the valuation date set by other special covenants in the following chapter two article three. If the valuated loss reaches the "loss limits" set by the covenants according to the market price calculated by the Bank, the Customer shall claim the "loss deposit" for the portion that exceeds the loss limits.
- (3) Deposit delay: If the Bank does not receive a "initial deposit" that shall be provided by the Customer according to individual limits before the commencement of transaction, the Bank has the right not to accept any transaction instruction from the Customer; if the Bank does not receive the "initial deposit" claimed by individual transaction contract as scheduled, the Bank has the right not to establish a transaction contract related to the "initial deposit" with the Customer; **if the Bank does not receive the "loss deposit" as scheduled, the Bank has the right to settle all positions of the Customer immediately (without issuing any additional notice), and the Customer shall also agree to be liable for compensation of any costs and losses incurred by the processing of positions.** The above fees and losses shall be calculated by the Bank. The Customer shall not raise objections.

7. Authorize Deductions

For all kinds of payments (including but not limited to delivery payments, fees, or losses, etc.) incurred by various transactions according to this Agreement and related terms, the Customer agrees and authorizes the Bank to

deduct payment from one of the Customer's deposit accounts in the Bank on the payment date, and this Agreement is used as a proof of authorization. When different currencies conversion is involved, the exchange rate is determined by the Bank based on the fair market price principle.

8. Events of Default

- (1) **Events of default: Any of the following events that occurs shall all be called "Event of Default":**
- A. The Customer fails to pay any agreed payment as scheduled or provide the deposit (or other agreed collaterals) as scheduled under this Agreement and/or individual transaction contracts, or fails to pay the payment agreed with the Bank or its related enterprises as scheduled, while failing to correct and compensate after receiving the notice of default issued by the Bank;**
 - B. The Customer violates other obligations of this Agreement and/or individual transaction contracts, and fails to correct or propose remedies approved by the Bank after receiving the notice of default issued by the Bank;**
 - C. The statement of facts, declaration or commitment made, or the accounts or other materials submitted by the Customer in relation to this Agreement and/or individual transaction contracts are in violation of good faith such as being false, concealed or misleading, or any circumstance occurs where the Customer has violated this Agreement or the commitment;**
 - D. The Customer has applied for settlement or adjudication of bankruptcy on its own or by another person under the Bankruptcy law, or has applied for corporation reorganization, *dissolution*, liquidation, or deregistration on its own or by another person under the corporation law, the Customer has been informed by the clearing house of transaction refusal (regardless of whether the transaction relation has been resumed or not), or its stock is delisted/off the counter or a relevant exchange has shut down its transactions and business or has required its debt settled;**
 - E. The collaterals provided by the Customer for the Bank are impounded, or the business or assets of the Customer are subject to enforcement, sequestration, provisional injunction, detention or takeover;**
 - F. The Customer fails to pay the total amount as scheduled in the contracts established with others, or, the monetary liability of the Customer (whether as the principal debtor or guarantor) is in a condition where accelerated maturity of the terms has occurred or has been granted, and the accumulative amount has reached 3% of the equity of the Customer's shareholders (the shareholders' equity shall be based on the latest financial statement, and if the Customer is a listed company/OTC company, the financial statement must be certified by a qualified accountant);**
 - G. Under objective circumstances where major adverse changes occur in management, operation, or financial conditions of the Customer, the Bank believes that the Customer will not be able to perform the obligations of this Agreement based on reasonable judgment;**
 - H. If the Customer is a trust company who, on behalf of its raised funds/private fund, jointly signs this Agreement with the custodian bank, the trust company or the custodian bank violates the provisions of the fund trust indenture, or an event of default or a termination event indicated in the Agreement occurs;**
 - I. The Customer is notified as a warning account by the judicial authority or other competent authorities or identified as a suspected illegal or unusual dealer by other governing authorities or the Bank, or the Customer (including persons in charge, major shareholders, directors,**
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persons with control and actual beneficiaries) is involved with targets of sanctions identified or investigated by domestic and foreign governments or international anti-money laundering organizations, terrorists or terrorist groups, or high-risk targets identified the Bank.

- (2) **Consequences of Default:** In case of any event of default, the Customer shall not be entitled to carry on any further transaction with the Bank. The Bank shall have the rights (but with no obligation) to do any of the following at any time:
- A. Issue a notice of premature termination of this Agreement and/or individual transaction contracts to the Customer;
 - B. Cancel the transaction instructions of the Customer;
 - C. Specify the Termination Date of each relevant transaction (hereinafter referred to as "Termination Date"), and calculate the premature termination amount payable on the Termination Date (hereinafter referred to as "premature termination amount"). The premature termination amount equals to the sum of (1) (A) the Termination Currency Equivalent of the settlement amount (whether positive or negative) determined by the Bank for each terminated transaction and (B) the Termination Currency Equivalent of any other payments by the Customer to the Bank under this Agreement, minus (2) the Termination Currency Equivalent of any other payments to the Customer by the Bank under this Agreement. If the premature termination amount is a positive number, the Customer shall pay the Bank; if it is a negative number, the Bank shall pay the Customer;
 - D. Dispose the deposit or collaterals at will, and offset all payments that the Customer is willing to pay the Bank with the proceeds;
 - E. Request the Customer for compensation stipulated in Item (4) of this article;
 - F. Include and treat the money as temporary bank collection according to Item (5) of this article.
 - G. Transfer the rights and interests of the Customer to a third party at will;
 - H. The Customer is aware of that the Customer shall not claim rights only for the parts that are in favor of the Customer and that it's not an obligation of the Bank to enforce the above rights in a time or manner favorable to the Customer.
- (3) **Deferred interests and liquidated damages:** If the Customer fails to pay any payment agreed in this Agreement or individual transaction contracts, the Customer must pay deferred interests for such payments at any time at the request of the Bank, with the interest rate being an annual rate of 2% on the costs of the Bank's collection of such payments (determined at the Bank's sole discretion), in a calculation period from the Maturity Date until the day the Customer pays off. And if the Customer has any delay in payment, liquidated damages within less than six months of the overdue time shall be paid at 10% of the above interest rate, liquidated damages that's delayed more than six months after the due time shall be paid at 20% of the above interest rate.
- (4) **Compensation:** If the Customer fails to perform the obligations of this Agreement and/or any transaction contracts or other related transactions due to events of default, the Customer shall be liable for the compensation of any expenditures, damages, expenses and losses incurred by the Bank. In addition to the above provisions on liability for compensation, the Customer shall also compensate for any of the following (including but not limited to): costs, expenses or other charges paid or payable by the Bank as a result of the Customer's failure to receive or pay in accordance with the provisions of a transaction, or the losses (including losses in benefits), fines or other expenses that may have
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occurred as a result of the Bank's use of its own funds or funds obtained from a third party to pay or offset the payments due or to be due for this Agreement and/or individual transaction contracts or any transactions.

- (5) **Temporary bank collection:** The Bank shall have the rights to include and treat the payables to the Customer, deposits, and proceeds from the sale of the collaterals as temporary collection, and until the Customer's debt to the Bank reaches its Maturity Date pursuant to individual transaction contracts, the Bank may reserve all rights to the Customer. Such temporary receipts shall be offset at will when the above debt reaches its Maturity Date. If the Customer does not have any debt to the Bank till the Maturity Date of such transaction contracts, the temporary receipts mentioned above shall be immediately returned to the Customer without interests.

9. Termination Events

- (1) **Termination events:** Any of the following events that occurs shall be seen as a "termination event":
- A. **Unlawfulness:** means the violation of any laws, regulations, or provisions or directives of the governing authorities due to the changes in laws and decrees after the signing of this Agreement or the establishment of individual transaction contracts.
 - B. **Force majeure:** means that either party of this Agreement cannot fulfill the obligations under this Agreement or individual transaction contracts because of force majeure factors such as natural disasters, strikes, riots, and wars.
 - C. **Merger:** means the fact that the Customer's ability to perform this Agreement or any transaction is adversely affected by an acquisition or a merger, etc.
- (2) **Consequences of termination events**
- A. **Unlawfulness:** both parties may terminate related transactions immediately and the losses incurred shall be borne by both themselves. Except as stipulated in the second paragraph below, the Customer must not whereby claim any rights or make any claims to the Bank.
 - B. **Force majeure:** (i) The party that has encountered force majeure (i.e. the affected party) must notify the other party of any event of force majeure. (ii) The obligations that the affected party must fulfill may be extended until the end of the force majeure event. (iii) If a force majeure event lasts for more than seven Business Days, either party has the right to terminate this Agreement or individual transactions being affected
 - C. **Merger:** The Bank may immediately close all transactions and the losses incurred shall be borne by both parties themselves. Except as stipulated in the second paragraph below, the Customer must not whereby claim any rights or make any claims to the Bank.

When a relevant transaction is terminated by either party in accordance with the above provisions, a Termination Date shall be specified and the amount of premature termination amount payable on the Termination Date shall be calculated by a calculating agency. If the premature termination amount is a

positive number, the Customer shall pay the Bank; if it is a negative number, the Bank shall pay the Customer.

10. Right of set-off, Liens, Account Mortgage

- (1) Right of set-off:** If the Customer fails to pay the payment as scheduled under this Agreement or other contracts between the two parties, the Customer agrees that the Bank shall be entitled (but not obligated) to the maximum extent permitted by law (and not limited to its existing rights under this Agreement and other contracts) to offset the payables of the Customer mentioned above with a. various deposits or other funds deposited by the Customer in the head office and branches of the Bank and b. Any payables or liabilities that the Bank shall pay to the Customer (regardless of whether both of which are incurred as a result of this Agreement or other contracts, and regardless of the Currency and the size or Maturity Date of the money).The Customer unconditionally and irrevocably agrees that the Bank may exercise the right of set-off in this article without a prior notice to the Customer, and that the right of set-off shall take effect as from the account deduction. However, provided that there is a prohibition against the set-off by law, or that the Customer has stated that those may not be offset, or that it is on the basis of voluntary service or a payment made by a third party to the Customer through the Bank for transaction relations, the right of set-off shall not be exercised.
- (2) Liens:** The Customer acknowledges that the Bank has a lien on the assets (including but not limited to stocks, bonds, funds, etc.) of the Customer that are held by the Bank, so that they may be used for the purpose of offsetting the debts owed by the Customer to the Bank.
- (3) Account mortgage:** The Customer shall mortgages all rights of all the accounts that are opened by the Bank to the Bank as a collateral of the Customer's debts to the Bank.

11. Costs and Expenses

- (1) Costs and Expenses:** The Customer agrees to pay off the costs and expenses incurred by the Bank in executing or maintaining this Agreement and the individual transactions, including the costs for exercising the collaterals and recovering the debts from the Customer.
 - (2) Currency and Amount:** The Customer must pay in the Currency and amount agreed upon in this Agreement or on individual transactions. No amount may be deducted in the name of costs, taxes or any reason. If the Customer pays in a Currency other than the agreed Currency, the Bank may convert the Currency paid by the Customer into the agreed Currency with an exchange rate that shall be determined by the Bank on the principle of fair market price. If there is any difference after the conversion, the Customer must make up the difference. Otherwise the Bank may refuse to accept
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a payment made by the Customer in other currencies depending on the circumstances, and the Customer may not object to this.

12. Premature Termination of the Individual Transaction Contracts

Except as agreed by the Bank or otherwise agreed in the individual transaction contracts, the individual transaction contracts made by the Customer pursuant to this Agreement shall not be terminated in advance before the agreed Maturity Date. If the Bank agrees to terminate a contract in advance, the costs, losses or service charges incurred by the Bank shall be borne by the Customer, and the costs or losses shall include the costs incurred by the Bank in writing off the hedge part of the commodity. The Customer may get a return rate lower than the preset rate of the commodity, or even a negative return rate.

13. Statement of Facts, Declaration and Commitment of the Customer

- (1) The Customer must legally signed this Agreement and the individual transaction contracts and other related documents;
 - (2) The Customer has taken necessary actions and has the proper permission to sign and perform this Agreement and the individual transaction contracts;
 - (3) The Customer has the ability to assess and analyze by himself/herself (or through independent professional advices), and to understand and accept the terms, conditions and risks of this Agreement and the individual transaction contracts; and the Customer also has the ability to bear the financial risks and other risks arising from the signing of this Agreement and the individual transaction contracts;
 - (4) This Agreement and the individual transaction contracts shall form a lawful and effective debt of the Customer, and the terms of these contracts shall all be effective in execution;
 - (5) The performance and completion of this Agreement and the individual transaction contracts by the Customer does not violate any law or regulations or form a default event for other contracts;
 - (6) Each transaction made by the Customer must meet the requirements of the competent authorities. If it is a publicly-established company in the Republic of China, the Customer must provide with the "Asset Acquisition or Disposal Procedures" or "Financial Derivative Transaction Procedures" or other similar regulations passed by the Board of Directors and Shareholder Meeting (hereinafter referred to as "Procedures"), and declare that the procedures are true and correct and continues to be valid, and that if the procedures are revised later, the Customer shall immediately notify the Bank and provide the revised procedures to the Bank within 3 days after the notification. Before receiving another notice of the revised procedures, the Bank may believe that the original procedures of the Customer are of the latest version, and the contents shall be indeed true and correct and shall continue to be valid.
 - (7) The transaction and confirmation personnel indicated in the "Power of Attorney for Authorized Transaction Personnel and Authorized Confirmation Personnel (confirmation seals and signatures)" (Or similar documents) (hereinafter referred to as "Power of Attorney") by the Customer to the Bank, shall be authorized legally to act on behalf of the Customer in the scope of the authorization to conduct transactions or confirmations associated with the derivatives, and such transaction personnel must also be accordance with the authorized transaction personnel or hierarchy appointed by the Customer's procedures and internal regulations. Provided that the procedures or other internal regulations otherwise require that such transaction personnel must obtain an internal approval or authorization from the Customer, in addition to the power of attorney that may serve as a general approval or authorization, the transaction personnel, prior to the transaction, have also proven orally, in writing or other ways, that they have obtained the internal approval or authorization required by the procedures prior to the transaction, the Bank may also rely on those such
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transaction personnel who have obtained an internal approval or authorization from the Customer. In addition, the Customer does not have any other authorization restrictions on the transaction personnel that are indicated in the power of attorney provided to the Bank, except for that the Customer has specified a restriction on the authorized transaction personnel in the procedures or in the power of attorney.

- (8) The Customer shall faithfully follow all rules of the procedures, articles of incorporation, or other internal regulations (including but not limited to transaction types, limits, etc.), and shall conduct various financial derivatives with the Bank in accordance with these rules. Even if the Customer violates these rules, the validity of the transaction between the Customer and the Bank shall not be affected. The Customer shall also control the amount of the individual or all transactions and the maximum loss limit, and the Bank has no obligation of notifying the Customer about this.
 - (9) All information submitted by the Customer to the Bank must be true, correct, valid and complete;
 - (10) For individual transactions, the Bank is not a trustee or financial advisor (or other similar legal relationship) of the Customer;
 - (11) **Before signing this Agreement, the Customer confirms that he/she has fully understood and accepted the financial derivatives description and risk disclosure statement and notice provided by the Bank. And the Customer promises to read the contents of the risk disclosure terms indicated in the product descriptions before conducting any transaction or instruction;**
 - (12) Other declarations: the Customer makes the following declarations to the Bank when entering into this Agreement and each time when making a transaction;
 - A. **No trust relationship.** Concerning the negotiation, signing and confirmation of this Agreement and each transaction; (1) the Bank does not (directly or indirectly) provide any guarantees, promises or declarations in terms of the expected successes, profitability, profits, performances, achievements, benefits, results, or interests (economic interests, legal interests, regulatory interests, tax interests, financial interests, accounting interests, or other interests) of this Agreement and any transactions; (2) the Customer can understand and have assessed (solely or by consulting an independent professional adviser) the terms and conditions as well as economic risks or other kinds of risks of this Agreement, and will assess the terms and conditions as well as economic risks or other kinds of risks of each individual transaction, and is able and willing to bear these risks; (3) the Customer has made or will make an investment, hedge, and transaction decision based on its sole judgment, independent adviser's suggestions, and information that he deems necessary or appropriate (including decisions about suitability and appropriateness of a transaction based on the Customer's conditions), rather than any suggestions, opinions, recommendations, ideas or instructions provided by the Bank.
 - B. **Suitability.** The Customer is solely responsible for (i) assessing and understanding the terms and conditions as well as economic risks or other kinds of risks of each transaction and this Agreement; (ii) determining (X)the suitability and appropriateness of the transaction and this Agreement based on the Customer's conditions; (y) to a necessary or appropriate extent, consulting its legal adviser, tax adviser, business consultant, investment advisor, financial or accounting advisor, or get other information and analysis, and (z) deciding whether to accept the interest exchange rate, price, quantity and other conditions and indexes quotations (if these quotations exist) provided by the Bank for each transaction based on considerations about relevant factors (including interest exchange rate, price, quantity and other conditions available from related markets).
 - C. **Purposes of transactions.** This Agreement is signed and each individual transaction is and will be executed (as the case may be) only for the purposes of managing borrowings or investments, hedging for underlying assets or liabilities for the Customer, or other purposes related to the Customer's businesses.
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- D. **Corporate principles.** The Customer declares and guarantees that there are no existing or to-be-adopted corporate principles, decisions or internal rules that will affect the validity and enforceability of this Agreement and/or any existing or future transactions, and obligations caused by signing this Agreement and execution of the master contract or any transactions will not contradict or breach any existing corporate principles, decisions or internal rules. This Agreement and all related transactions shall comply with any applicable laws, rules and regulations and any relevant policies of governing authorities that may affect the Customer's internal policies and procedures. The Customer also agrees to conduct Financial Transactions in connection with this Agreement with the Bank according to applicable laws, rules and regulations, and declare or disclose the transactions according to applicable laws, rules and regulations and generally accepted accounting principles after completion of the transactions.

14. Calculation Entity

This Agreement and all individual transaction contracts consider the Bank as the Calculation Entity. The Calculation Entity shall perform duties in good faith and according to reasonable business practices, and it is not deemed as an agent or counselor for anyone during the performance of the duties under this Agreement and individual transaction contracts. If the Calculation Entity's decisions or determinations have no deliberate or gross faults, they shall have absolute binding force on the Customer.

15. Telephone recording

The Customer agrees and acknowledges that all telephone conversations between the Customer and the Bank's personnel that are related to the Customer's individual transactions as well as any verbal notices will be electronically recorded by the central recording system (whether there is an automated verbal warning device or not). The Customer agrees that such records are used as either party's evidences for disputes or litigations between the Customer and the Bank.

16. Notices

- (1) According to Chapter I Article 8, Clause (1) under this Agreement, notices should be delivered verbally or in writing. If a notice is delivered verbally, a written version of it may also be delivered later, however, the validity of the verbal notice will not be affected without such a written version.
 - (2) Unless otherwise agreed, any notices delivered in accordance with this Agreement and individual transaction contracts should be in written form. And the notice should be sent to the other party in the following manners: notices delivered by registered mail are deemed to be received two days after mailing with postage paid; notices delivered personally by a delegate are deemed to be received at the time the delegate arrives and delivers the notice; notices delivered by fax are deemed to be received after the notice is sent out and a confirmation is received from the recipient or a telephone confirmation is made; notices delivered by electronic messages or emails are deemed to be received on the same day the message or email is received. The address or contact information of the Customer and the Bank are subject to the address, fax number and email box listed in this Agreement or finally informed according to this Agreement and its schedules.
 - (3) If the address or contact information of the Customer is changed, the Customer shall inform the Bank of such changes in writing or by means specified later in this clause. If the Customer failed to inform the Bank in a timely manner, the Bank may notify the Customer of relevant documents (including but not limited to the Confirmation Letter) using the address or contact information as described in this Agreement
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or the latest known address or contact information. And the notice is deemed to be received as agreed in this article. Unless otherwise agreed according to market practices, one of Authorized Confirmation Personnel specified by the Customer shall notify the Bank of changes to the Confirmation Letter as well as the entity to receive, delivery address of or related information about the market price assessment in writing.

- (4) The current address of the Bank for receiving notices is 13th Floor, No. 118, 4 sect of Ren Ai Road, Taipei (Taishin International Bank Financial Transaction department). If the address is changed, the Customer will be notified of this in writing.

17. Assignment

The rights and obligations arising from this Agreement and individual transaction contracts shall not be assigned to others by the Customer without written consent of the Bank. If the Bank has to make such assignments of interest because of business combination or other similar activities or events, the Bank should notify the Customer of such assignments in writing, and the notice shall be binding on the Customer.

18. Non-Waiver of Rights

No delay or omission (including delay, not exercising any rights, fault tolerance or other reasons) by the Bank or any of its personnel, assignees or representatives in exercising any rights under this Agreement shall operate as a waiver of these rights by the Bank or exempt the Customer from related obligations.

19. Termination

- (1) **If there is an “Event of Default” as described in Chapter 1 Article 8 or “Termination Event” as described in Article 9 under this Agreement, this Agreement may be terminated according to these provisions.**
- (2) **Unless otherwise agreed in this Agreement, either party may terminate this Agreement immediately after notifying the other party in writing at any time.**
- (3) **The termination of this Agreement (for any reason or in any way) shall not affect the validity of individual transactions executed by either party before the termination of this Agreement, and shall not exempt any party from its obligations that are not fulfilled under this Agreement and in connection with individual transactions, and shall not affect the validity of the guarantees and commitments provided by the Customer.**

20. Information of the Customer

- (1) **The Customer hereby agrees that, for the purpose specified within the operations scope of the business approved by the competent authorities, the Bank (including the head office and its branches) has the right to collect, process, use and/or internationally transmit the Customer's personal information, including but not limited to the basic information (including name, date of birth, ID card number, telephone, residential address, and others), billing information, credit information, investment information, insurance information, and etc., and/or use such information for credit checking, or provide it to the outsourcing company (organization) appointed by the Bank to undertake the related work on its behalf, or the third party (including but not limited to the organization that is entrusted to do the marketing research) that has commission of authority, cooperation or other relationships with the Bank, or the related financial institutions that have the business connections with the Bank, Joint Credit Information Center, and Financial Information Service Co., Ltd., or the financial administrative authorities and judiciary authorities that have**
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jurisdiction over the Bank, or other agencies, institutions or individuals that such information shall be disclosed to in accordance with the relevant provisions of law, or the foreign government agencies that have signed a treaty or an agreement with the government of the Republic of China, and other institutions designated by the competent authorities, to the extent permitted by applicable law. The name of the outsourcing company (organization) or the third party that has commission of authority, cooperation or other relationships with the Bank will be disclosed regularly on the official website of the Bank for consulting. The personal information, in principle, may only be collected by the Bank during the preceding stage of the contract negotiation for the various financial product services between the Customer and the Bank, during the course of the contract, and within the agreed period by the Customer; and such information will be processed and used in form of soft copy or paper copy behind the border of the Republic of China; only if the Bank need to provide the overseas financial services for the Customer in the future, such information may be processed and used overseas.

The consulting request from the Customer for looking up, making a copy of, making a supplement to or correcting their personal information, or the request for having the information collection, process or usage stopped or deleted can be handled by the Bank's customer service desk, individual branches and original sales unit to which the Customer belongs or the Customer's personal financial specialist. The Customer also acknowledges that when the Bank need to collect, process or use their personal information for the above reasons, the Customer can be free to choose whether to provide their personal information. However, the Bank may not be able to provide the full financial services as required for execution of the relevant business if the Customer chooses not to provide such information or if the information provided is incomplete.

- (2) The Customer agrees and declares that the Customer shall inform the person authorized based on this Agreement who has the right to make the transactions and such person who has the right to confirm the transactions, as well as the person designated to receive the documents or notifications under this Agreement (hereinafter collectively referred to as "the authorized/designated person") that the Bank may collect, process, use and/or internationally transmit the personal information of the authorized/designated person for the transactions made under this Agreement. The Customer shall be responsible for any request made to the Bank by the authorized/designated person in terms of the collection, process, usage and/or international transmission of their personal information.
 - (3) The Customer acknowledges that the Bank and other subsidiaries of the financial holding co., ltd. to which the Bank belongs may file, use, disclose, transfer or interactively use the Customer information for cross-selling according to the regulations such as [Financial Holding Company Act], [Financial Holding Company and Subsidiaries of Financial Holding Company Cross-selling Regulations], and [Agreement on Interactive Usage of the Customer Information] (if any) signed separately by the Customer. The Customer shall inform the Bank by visiting or via written notification at any time to request to change the usage scope of their information or stop the filing and usage of their information for cross-selling, and the Bank will remove the Customer from the cross-selling list immediately after the acceptance. For details of the confidentiality measures for the customer information, please refer to [The Confidentiality Measures of Taishin Financial Holdings and Its Various Subsidiaries for Customer] and the latest [The Confidentiality Measures of Taishin Financial Holdings and Its Various Subsidiaries for Customer Information] disclosed on the website of Taishin Financial Holdings and its various subsidiaries.
 - (4) The Customer agrees that for the purpose of the creditor's right transfer, the Bank may provide the relevant information of the Customer to the creditor's right transferee and the person who is in charge of the price identification check for the creditor's right for filing and using, only if the Bank shall urge these persons to carry out the duty of confidentiality according to the relevant regulations.
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(5) The Foreign Account Tax Compliance Act

- A. According to the Foreign Account Tax Compliance Act, the Bank must collect, process, use and/or internationally transmit the personal information of the Customer, including but not limited to name, date of birth, nationality, ID card number, passport number, the tax status and taxpayer registration number in U.S., contact information, financial situation, social activities and so on. The Customer hereby is informed and agrees to be cooperative for that the Bank shall follow the necessary measures, including the nationality and tax status information investigation against the Customer and the Beneficiary, as required by the domestic and foreign tax acts (including but not limited to the Foreign Account Tax Compliance Act and relevant laws of the Republic of China), treaties or international agreements, to disclose the tax status information and account information to the domestic and foreign government agencies (including the government of the Republic of China and Federal government of the United States) and the person who handles the tax withholding in accordance with the domestic and foreign tax acts. And the Bank shall handle the tax settlement for the Customer or terminate the transactions between the Customer and the Bank when the investigation result shows that the relationship between the Customer and the Bank is in accordance with the specific conditions specified in the domestic and foreign tax acts, treaties or international agreements (including but not limited to the situations, such as the Customer or the Beneficiary failed to provide the information or forms required by the aforementioned investigations honestly, or the Customer or the Beneficiary did not agree the Bank to make the aforementioned disclosure to the government of the Republic of China and Federal government of the United States).
- B. The descriptions based on the Foreign Account Tax Compliance Act for the relevant nouns mentioned in the preceding articles are as follows. In the event that there is any inconsistency between the descriptions and the contents in the Foreign Account Tax Compliance Act, the authoritative interpretations in the Foreign Account Tax Compliance Act shall prevail:
- i. The Foreign Account Tax Compliance Act: Refers to the U.S Foreign Account Tax Compliance Act, also known as 26 USC§1471 - §1474, or Internal Revenue Code Chapter 4, which includes the relevant administrative orders (including but not limited to 26 CFR Parts 1 and 301), instructions, tax forms and others issued by Internal Revenue Service.
 - ii. Treaties or International Agreements: Including but not limited to the intergovernmental agreement related to the execution of the Foreign Account Tax Compliance Act signed between the government of the Republic of China and the government of the United States or between the respective representatives or representative agencies of both governments.
 - iii. Beneficiary: Including but not limited to the account holder that the Customer has the funds automatically or regularly transferred to; if the Customer is a legal entity of a non-natural person, the beneficiary is the person who has direct or indirect equity interest, partnership interest, investment interest, and trust interest against the Customer, and other persons who do not hold the account directly but actually have the account-related interest based on the Foreign Account Tax Compliance Act.
 - iv. Nationality and Tax Status Information: Including but not limited to the nationality, dual nationality or permanent residence identification: Taxpayer Identification Number, Global Intermediary Identification Number; the official documents or other alternative documents issued by the U.S. Federal Government Internal Revenue Service, such as the United States tax Form W-8 BEN, Form W-8BEN-E, Form W-9, etc., and other account-related information that must be taken for investigation or obtained by the financial institutions in accordance with the Foreign Account Tax Compliance Act.
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- (6) **U.S. Person Identification:** The Customer hereby declares that if the Customer is an U.S. Person or non-U.S. Person but an Affiliate Conduit or non-U.S. Person but an person under the U.S. Person Guarantee defined in the [Interpretive Guidance and Policy Statement Regarding Compliance with Certain Swap Regulations] issued by the Commodity Futures Trading Commission (CFTC) on July 26th, 2013, when engaging in the Financial Transactions with the Bank, the Customer shall standardize the central settlement, central execution of the transactions, immediate transaction reporting, huge transactions reporting, the reporting to the swap transaction information store institutions and the transaction information maintenance in accordance with the Commodity Exchange Act, which is specified in the Chapter seven of the Dodd-Frank Wall Street Reform and Consumer Protection Act.
- (7) **Money Laundering Prevention:** The Customer agrees that the Bank (including the head office and its branches) may collect, process, use or internationally transmit the personal information of the Customer and the information related to all their business transactions for money laundering prevention, combating the terrorism funding activities, crime prevention, anti-terrorism, as well as within the specific purpose scopes set out by the related anti-terrorism legislation (including but not limited to the situations such as the Customer or their Financial Transactions or payments are investigated or their transaction payments/documents are seized by a foreign bank in accordance with the related money-laundering prevention or combating the terrorism funding activities, crime prevention and anti-terrorism legislation in its own country). If the information provided by the Customer includes the personal information of a third party (including but not limited to the company executives or ultimate beneficiaries), the Customer shall inform the third party and have them agree to the foregoing.

21. Outsourcing Terms

The Customer agrees that the Bank's accounts collection and payment activities, computer processing activities or other accompanying activities related to this Agreement (including but not limited to data input, processing and input of the information systems, development, monitoring and maintenance of the information systems, and the logistics work for processing the business-related information, customer information inputting, form printing, packaging, delivery and mailing, collection of creditor's rights receivable, internal auditing, data storage for forms and vouchers, electronic channel service and other outsourced businesses approved by the competent authority, etc.) can be handled by a appropriate third party, which is entrusted by the Bank when the Bank deems it necessary, in accordance with the related laws. The name of that outsourcing company (organization) that has commission of authority, cooperation or other relationships with the Bank will be disclosed by the Bank on its website in accordance with related laws.

22. Entire Agreement

- (1) Unless otherwise agreed by both parties, all provisions of this Agreement and its annexes shall be the entire agreement between both parties in terms of this Agreement, and shall supersede all the written agreements (including the principal contract for the Structured Product related transactions, general agreement for Forward exchange transactions, etc.) or verbal agreements and arrangements previously made between the Customer and the Bank, and except for the terms stated in this Agreement, both parties do not agree to other terms or obligations.
- (2) This Agreement shall remain in force and effect until it is terminated by either party in accordance with the provisions of this Agreement, and the obligations and responsibilities of both parties subject to this Agreement will continue to be valid after the individual transaction contracts termination.
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- (3) If the Customer has other general agreements (contracts) on Financial Transactions with the Bank's overseas branches, the Financial Transactions between the Customer and these overseas branches will be conducted under such agreements (contracts).
- (4) If the Customer signs the ISDA contract (including the ISDA Master Agreement and its Schedule) with the Bank after signing this Agreement, this Agreement will not be valid from the effective date of the ISDA contract. However, if the Customer does not check the box [Chapter II Article 1 regarding special provisions of Currency Option transaction does not apply] and/or [Chapter II Article 2 regarding special provisions of Structured Product transaction does not apply] in the Chapter II Article 3 "Other special provisions" of this Agreement, the Chapter II Article 1 regarding special provisions of Currency Option transaction and/or Chapter II Article 2 regarding special provisions of Structured Product transaction shall continue to be valid, and form part of the ISDA contract (within the scopes to which the unchecked articles does not apply).

23. Amendment of Agreement

The Bank may make amendments to the contents of this Agreement at any time and notify the Customer in writing. If the Customer fails to raise an objection to the Bank within seven Business Days after receiving the notice of amendments, the Customer will be deemed to have accepted the amendments; if the Customer raises an objection to the Bank after the above-mentioned seven Business Days, the objection shall be deemed invalid, and the Bank has the right not to accept it.

24. Applicable Law and Competent Court

- (1) The rights and obligations under this Agreement and all transactions directly or indirectly made for this Agreement or based on this Agreement are subject to the laws and orders of the Republic of China.
- (2) The Customer agrees to irrevocably accept the Taiwan Taipei District Court as the competent court of first instance between the Customer and the Bank, and agrees to waive the right to raise an objection for it for the reasons such as the inconvenience of the place. If the Customer is a company established outside Taiwan or does not have a residential address in Taiwan, they shall be agreed that the Bank and the competent court may send the relevant legal documents (including any pleadings, notifications, notice of entry of judgment or other notices) to the address of the Customer's process agent in Taiwan by mail. The name and residential address of the process agent are detailed in "Other special provisions" in Chapter II Article 3.

25. Limitation of Liability

- (1) The Customer agrees that the Bank shall not be liable for any loss caused by the exercise of the Bank's rights under this Agreement, or caused by the Bank's act or omission in good faith in accordance with this Agreement or individual transaction contracts.
- (2) The Customer agrees that transactions are made at its sole discretion based on this Agreement and individual transaction contracts, and are not dependent on any promises, commitments, views or opinions from the Bank or the Bank's staff, agents or representatives. The Customer shall remain solely responsible for all these transactions.
- (3) When the Bank conducts any transaction with a branch outside of the Republic of China (hereinafter referred to as "Overseas Branch"), the Bank's performance shall be subject to the laws, orders, rules and similar government actions in the jurisdiction where the overseas branch is located.

26. Taxes

Taxes resulting from this Agreement or individual transaction contracts, unless otherwise stipulated in this Agreement or individual transaction contracts (including confirmation), shall be undertaken respectively by both parties in accordance with relevant laws; and unless otherwise agreed in written consent by the Bank, the Customer shall not, for any reason, require the Bank to undertake the taxes that the Customer must bear.

27. Headline

The headline used in this Agreement is for convenience of reference and shall not affect the exact content and its interpretation in this Agreement.

28. The Number of Contracts

This Agreement is in duplicate. The original one is kept by the Bank, while the copy (including the "Taishin Financial Holdings and Its Various Subsidiaries Confidentiality Measures for Customer Information") is kept by the Customer.

29. Dispute Settlement

The Customer can contact the original branch, original sales unit that undertake the transactions or call customer complaint processing line: (02)2700-3166 (business hours: 09:00 a.m. - 17:30 p.m. from Monday to Friday).

Chapter II Special Agreed Terms

1. Currency Option Agreement

(1) Exercise of Option

A. Notice for Exercise

- i. Notice for the exercise of the American Option, unless otherwise agreed in written agreement, shall be made by the Buyer during the business hours on any Business Day, from the date of the Option transaction agreed by both parties to the due date that is deemed as the day when the Seller receives the notice, and the Option agreement shall be fulfilled on the Settlement Day.
 - ii. Notice for the exercise of the European Option, unless otherwise agreed in written agreement, only shall be made by the Buyer on the Due Day, and the European Option agreement shall be exercised during the agreed time period on the agreed Due Day and shall be fulfilled on the Settlement Day.
 - iii. Notice for the exercise of the Bermudian Option, unless otherwise agreed in written agreement, shall be made by the Buyer during the business hours on any Due Day for exercise agreed by both parties, and the Option agreement shall be fulfilled on the Settlement Day.
 - iv. The notice for the Option exercise: Oral or written notice; if the notice takes the oral form, a written notice needs to be supplemented after two Business Days, and if a written notice is not supplemented later, the validity of the oral notice will not be affected.
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B. Automatic Avoidance

Unless eligible for the automatic exercise of the Option, if the Seller does not receive the Buyer's notice for the exercise of the Option as of the due date, the Option shall not be exercised and shall automatically become invalid.

C. Automatic Exercise

If the Option has an intrinsic value on the Due Day and the Seller has not received the notice for the exercise, the Option shall be deemed to have been exercised before the due date, but this restriction shall not apply in the event that the confirmation stipulates otherwise that [automatic exercise is not applicable] or the Buyer has the contrary instructions in advance.

(2) Settlement

A. When the Buyer exercises the Call Option, the Seller shall sell the specified Currency amount of the Option to the Buyer on the Settlement Day while the Buyer shall pay the Seller the other Currency amount of the Option. When the Buyer exercises the Put Option, the Seller shall pay the Buyer the other Currency amount of the Option on the Settlement Day while the Buyer shall sell the specified Currency amount of the Option to the Seller.

B. When the Buyer exercises the Option, the actual settlement (i.e. total settlement) shall be made in principle. However, the settlement for the Currency Option of the NTD rate against the U. S. dollar shall adopt a non-actual settlement (i.e. net settlement) method.

C. Regardless of whether the actual settlement is raised by the Option Buyer or Seller, the payment instruction shall be delivered to the other party on the Due Day. The payment instruction shall be delivered in writing, and the payment shall be settled on the Settlement Day.

D. **When the settlement for the Currency Option of the NTD rate against the U. S. dollar are made on the Due Day, the two parties will take the NTD rate against the U. S. dollar at 11:00 a.m. on the Due Day as the fixing rate.** If the net settlement is adopted, only the difference will be settled on the Settlement Day.

E. **When the settlement for the Currency Option of the non-NTD rate against the U. S. dollar are made on the Due Day, the exercise time is subject to 2:00 p.m.** of Taipei time, and the Customer can square the Spot foreign exchange transactions bought/sold by the Bank for the settlement position before 3:30 p.m. of Taipei time on the Due Day, and make the actual settlement on the Settlement Day. Since the Spot transaction and the Option agreement have the same Settlement Day, the difference can also be used as the net settlement. **If the Customer has informed the Bank to make the net settlement but has not squared the Spot foreign exchange bought/sold by the Bank for the settlement position before the above-mentioned time, the Bank has the right to calculate the amount of the difference according to the market price at 3:30 p.m. of Taipei time on the Due Day.**

(3) Others

A. If the Customer is required to provide the deposits to the Bank in accordance with the individual transaction contract, the Bank will not be required to pay the Option Premium to the Customer until all the performance guarantees related to the Customer's Put Option are received.

B. In the event of any breach of contract by the Customer, the Bank may, in addition to the relevant provisions of Chapter I of this Agreement, decide to cease its obligation under the unexpired or

expired but unsettled Option payment in accordance with its own choice without paying any liquidated damages.

2. Structured Product transaction

(1) Definition

- A **Structured Product:** Refers to the Structured Product transaction that combines fixed income products with financial derivatives (such as Options). It may link a large number of subjects, including transactional contracts derived from interest rate, exchange rate, stock price, index, commodity, credit event or other interests and their combinations. Structured Product is not a general traditional savings account, but an investment. Its profit and loss are influenced by many factors, such as the price of the target asset, the volatility of the index or the performance, or the occurrence of the agreed credit event. In the situation where certain conditions are met, the profit of Structured Product may be higher than that of the common simple deposit rate; otherwise, it may reduce and erode the investment principal. The Bank does not promise to return all investment principal when the agreement is terminated before maturity, and capital preservation at maturity is depending on the condition set up. Each transaction that agreed by the Customer according to this Agreement takes the Transaction Confirmation as the voucher. Structured Product is not protected by deposit insurance.
- B **Investment Principal:** Refers to the investment amount of individual transaction contracts signed by the Customer.
- C **Profit:** Refers to the profit gained from individual transactions agreed by the Customer. Unless otherwise agreed in individual product specification/product development specification/Transaction Confirmation, the Bank does not guarantee the return rate at maturity; the profit is calculated in accordance with the profit calculation method at maturity stated in individual product specification/product development specification/Transaction Confirmation.
- D **Linked subjects:** Refers to linked subjects indicated in individual product specification/product development specification/Transaction Confirmation. With respect to exchange rate linked Structured Product transaction, the Currency of investment principal is regarded as base Currency and the other Currency of linked subjects as counter Currency.
- E **Collection period:** Refers to the collection period required to reach predetermined collection amount for specified products. The Bank is entitled to change the collection period.
- F **Predetermined collection amount:** Refers to the minimum total amount that the Bank is required to collect at the end of the collection period. The Bank is entitled to change the predetermined collection amount.
- G **Base period:** Refers to the base or the number of days in a year (such as, 365 days for pounds, 360 days for US dollars) that Currency for investment uses to calculate interest and profit based on international conventions
- H **Trade date, effective date, profit distribution date, predetermined Maturity Date:** Refers to the trade date, effective date, profit distribution date, predetermined Maturity Date indicated in individual product specification/product development specification/Transaction Confirmation.

(2) Payment and authorized deduction of investment amount

Customer, who intends to be a trader for Structured Products, shall open a deposit account in the Bank (if not opened already, and if the Customer is a member of fund subordinated to securities investment

trust limited liability company, he/she shall instruct and entrust the account to the custodial bank for fund contract) . The Customer shall deposit full amount in investment Currency as indicated for transactions agreed at the same time. Aforementioned procedures for account opening and agreed issues shall be conducted according to the covenant related to deposit business signed by the Customer as well as relevant regulations of the Bank.

The Customer shall pay the same amount of cash as investment principal that can be put to use at any time to the Bank at the effective date of individual transaction contracts (if the Customer is a member of fund subordinated to securities investment trust limited liability company, he/she shall instruct the custodial bank for fund to carry out the procedure. The Customer hereby authorizes the Bank to directly withdraw the same amount of money as that of instructed transactions by the Customer from any deposit account as Structured Product money that the Customer agrees to or instructs to agree to when the predetermined amount is successfully collected for "Structured Product" participated by the Customer (collection type) or at the confirmed effective date of instructed "Structured Product" (custom made type), and then deposit it to Structured Product account of the Customer according to Chapter I Article 7 of this Agreement (the account number shall be provided by the Bank and written on the Transaction Confirmation).The Customer agrees to cooperate on deduction business and deposits full amount of money for instructed transactions in the deposit Currency in any deposit account on the Business Day before the effective date. In the event of the Customer's inability to deposit or make up for the required payment (i.e. investment principal) on the Business Day before the effective date of individual transaction contracts leading to the Bank's inability to deduct money according to the preceding regulation, and in the event of inability to pay the same amount of cash as investment principal that can be put to use at any time in other ways, the Bank is entitled not to complete transactions based on conditions of the Structured Product. In addition, the Customer shall compensate the Bank for damages, losses and costs (including costs used to write off hedge part before the effective date by the Bank according to transaction instructions of the Customer) arisen from aforementioned problem.

(3) Special terms and conditions during collection period

In the event of collection period for Structured Product transactions between the Bank and the Customer, the Bank does not guarantee that predetermined collection amount will be reached for the product that the Customer intends to make during collection period. If actually collected amount does not reach the predetermined collection amount for the product specified by the Customer during collection period and the Bank does not change predetermined collection amount, then it shall be deemed that the collection amount is not reached. Actions shall be taken according to the following regulations in case of unreached collection amount:

- A The Bank shall notify the Customer by phone, fax or written notice of the situation as soon as possible, and the Bank shall not be held accountable for the Customer in case of unreached collection amount.
- B The Customer agrees that related transaction instructions automatically become invalid, and demand/comprehensive deposit interest of the Customer during collection period shall be handled in accordance with relevant regulations of the Bank.

(4) Taxes

- A. Various taxes that the Customer shall pay for individual transactions shall be paid in accordance with regulations in product description/product establishment notice/Transaction Confirmation of individual transactions, unless otherwise stipulated.
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- B.** For constructional product transactions (Structured Product transactions as one of constructional product transactions) engaged by individuals or profit-making enterprises with the Bank, the withholdings shall be calculated as follow: upon completion of transactions (referring to contract premature termination or settlement at maturity), the revenues during contract period minus costs and necessary expenses are deemed as the taxable income, which shall be withheld by the applicable withholding rate for the investor(i.e. the taxpayer): (i) The income of individuals who engaged in constructional product transactions shall be withheld pursuant to the law. For individuals living in the Republic of China, the applicable withholding rate shall be 10%. For other individuals, the withholding rate shall be 15%. The income of individuals after being withheld in accordance with regulations shall not be included in total comprehensive income; (ii) The income of profit-making enterprises who engaged in constructional product transactions shall be withheld pursuant to the law. For enterprises with a fixed place of business within the Republic of China, the applicable withholding rate shall be 10%. For other enterprises, the withholding rate shall be 15%.The income of profit-making enterprises after being withheld in accordance with regulations shall be included in the declaration of income tax of that year, and the withholdings can be applied for deduction from payable taxes. (iii) The Bank shall withhold taxes beforehand in accordance with tax law and relevant regulations. If the final income of the products gained by the Customer is zero or the income is not enough for deduction, the Bank will withhold taxes from the maturity amount which shall be returned to the Customer.
- C** Taxes arisen from individual transactions, except aforementioned income tax, shall be paid by both parties respectively pursuant to relevant decrees, and the Customer shall not request the Bank, on any ground, to bear the taxes which shall be paid by the Customer.
- D** In case of any newly added or changed taxation decrees, relevant regulations and interpretations from competent authorities, the Bank may directly deal with relevant tax issues for the Customer in accordance with these decrees, including but not limited to, withholding taxes from maturity amount which shall be returned to the Customer, providing detailed transaction information on the completed part of individual product transaction and other relevant information to related competent authorities or its specified organizations.

(5) Income distribution/Payment of maturity amount

- A.** On the "income distribution date", "predetermined Maturity Date" or "premature Termination Date" (if there are clauses for premature termination of transactions and the Bank has prematurely terminated transactions according to those clauses) indicated on product description/Transaction Confirmation of individual products, the Bank shall deposit income (if any) of transactions and maturity amount to any deposit account the Customer opened at the Bank or an account separately specified by the Customer, or convert the amount into negotiable securities or other assets by methods agreed by the Customer and the Bank (if the Customer is a member of fund subordinated to securities investment trust limited liability company, then it shall be paid or delivered to the fund's custodial bank by methods agreed in individual Transaction Confirmation).When it comes to the conversion of different currencies, the exchange rate shall be determined by the Bank pursuant to fair market value principle.
- B.** In case of the Customer terminating individual transaction contracts before maturity according to the following regulations of termination before maturity, the Bank shall deposit the amount (after deducting related expenses indicated in the following termination before maturity clauses and product description of the transaction) of termination before maturity
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of the transaction to any deposit account the Customer opened at the Bank or an account separately specified by the Customer within three Business Days after termination before Maturity Date or on another agreed Maturity Date.

(6) Termination before maturity/Premature termination

- A.** For individual transaction contracts that no prohibition of termination before maturity is agreed, the Customer may apply to the Bank for terminating these individual Structured Product transaction contracts (termination before maturity only applies to a whole transaction, not a part of it) before maturity by verbal, written or other methods agreed by the Bank after the lock-up period (if any) of the transaction contracts and within the period specified by the Bank. The Bank is the only party entitled to approve the termination or not, the Customer shall not raise any objections. The Bank is also entitled (but not obligated) to prematurely terminate Structured Product transaction contracts that are not yet due at that time under the following conditions: any default events or termination events indicated in Chapter I, General Terms and Conditions, Article 8 or Article 9 of this Agreement caused by the Customer; premature termination events agreed in Transaction Confirmation of individual Structured Products; individual Structured Products are under the circumstances of compulsory execution, sequestration, provisional injunction or other property preservation actions.
- B.** Unless otherwise stipulated in Transaction Confirmation of individual Structured Products, with regard to the amount for termination before maturity/premature termination in the preceding article, the Bank shall calculate net value of capital invested (service charges indicated in Transaction Confirmation of individual Structured Products shall be deducted) based on market value on Termination Date. The amount shall not apply to the income of primary products, and the Bank does not guarantee 100% return of investment principal. The Bank shall determine and calculate aforementioned market value, which holds complete binding force on the Customer. In addition, whether termination before maturity/premature termination is caused by the Customer's personal factors or decrees and regulations, or change of decrees, the Customer shall be liable for market losses arisen from termination before maturity/premature termination as well as losses and related expenses of the Bank.

(7) Prohibition of pledge and assignment of rights and obligations

Individual Structured Product transaction contracts formulated in accordance with this Agreement are assets linked to one or many subjects and have potential market risks. The Customer shall not pledge for investment principal from the Bank or establish pledge to anyone, nor assign rights or obligations under this Agreement and individual Structured Product transaction contracts to any third party other than the Bank. However, after being approved by the Bank and relevant articles are written in product description or Transaction Confirmation **(if the Customer is a member of fund subordinated to securities investment trust limited liability company, the products invested have a collection period, and articles that pledge may apply to the products are explicitly stipulated in product description provided by the Bank, then the prerequisite does not apply to the Customer, either; the same rule also applies in the event of regulations regarding prohibition or restriction of pledge pursuant to relevant decrees that restrain the Customer)**, the Customer shall pledge rights of Structured Product transactions to the Bank as collateral for its creditor's rights in accordance with general credit granting procedures. Related regulations regarding the pledge for the Bank's debt pursuant to general credit extension procedures are separately stipulated.

3 Other special provisions (check the box)

Chapter I Article 3 Item 3 Terms of electronic transmission system confirmation does not apply.

Chapter I Article 3 Item 3 Terms of electronic transmission system confirmation applies. The Customer agrees to confirm each transaction contract under this Agreement via electronic transmission system, and specifies following email accounts to receive notification of relevant information. In case of inconsistency between following email accounts and accounts of the Customer recorded on the application of corporate financial services network at the Bank, the following email accounts shall prevail to receive transaction information under this Agreement.

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The "loss deposit" referred to in Chapter I Article 6 does not apply.

The "loss deposit" referred to in Chapter I Article 6 applies.

The "loss limit" is _____ in _____ or equivalent amount in other currencies.

The "loss limit" of hedge Financial Transaction is USD 300,000 or equivalent amount in other currencies.

The "loss limit" of non-hedge Financial Transaction is _____ in _____ or equivalent amount in other currencies.

The Bank is entitled to adjust the amount of each "loss limit" mentioned above or valuation date at any time, and shall notify the Customer via verbal/written notice.

The name and address of the process agent referred to in Chapter I Article 24 shall be: _____ **No.18, Gong 4th Rd., Linkou Dist., New Taipei City.**

Chapter II Article 1 Special provisions of Currency Option transaction does not apply.

Chapter II Article 2 Special provisions of Structured Product transaction does not apply.

Other provisions:

The Customer hereby declares that he/she has carefully read this Agreement and terms and conditions listed in relevant documents, including but not limited to, each provision (including special provisions for the Customer's information) under "Other special provisions" in Article 3 of Chapter II and Description, Risks Disclosure Statement and Advance Notice of Financial Derivatives (Appendix 1) _____ (sign here), the Customer fully understands the content of this Agreement and accepts its clauses, and that he/she confirms to have been fully aware of risks arisen from engaging in derivatives transactions, agrees to assume risks of related investment and be liable for losses resulted from transactions. The Customer hereby declares that he/she has already acquired a copy of this Agreement, including Description, Risks Disclosure Statement and Advance Notice of Financial Derivatives.

Kind Regards,

Taishin International Bank

The Customer:

The Representative:

Address:

If the Customer is a trust company on behalf of its raised funds/private placements, and signs this Agreement jointly with the custodian bank, then this Agreement (appendix included) constitutes an agreement between securities investment trust fund (unified number:) and the Bank on financial derivatives transactions.

Date: July 23, 2019

This column is used for review by Taishin International Bank		
Supervisor	Transactor	Guaranty verification/verification seal

Appendix 1

Description, Risks Disclosure Statement and Advance Notice of Financial Derivatives

(Taishin International Bank hereby requests the Customer to carefully read this description, risks disclosure statement and advance notice)

"Financial Transaction" or "transaction" defined in this Agreement refers to Financial Transactions made from time to time between the Bank and the Customer, including but not limited to Spot or Forward transactions of Currency, Currency exchange, Currency Options, Forward Rate Agreement, Interest Rate Swap, Cross Currency Swap, asset swap, Structured Products, Credit Derivatives, Equity Derivatives, Commodity Derivatives, and all other financial derivative transaction contracts, with individual transaction types as follows. See product description or Transaction Confirmation of individual transactions for other matters not covered. Following gains and losses situational analysis for Financial Transactions (results of gains and losses situational analysis does not guarantee future performance) assumes that:

- a. The Customer has not requested premature termination or change of conditions since the trade date, and
- b. There are no credit risks at the Bank during product investment period.

1. Forward

Transactions that specify a future Business Day as the Settlement Day on the trade date, which deal with substantive settlement or balance settlement at a specific price and specified amount.

Example 1: The Customer buys in (or sells out) agreed notional amount at an agreed price on Forward Settlement Day.

Settlement situation:

The Customer buys in (or sells out) agreed notional amount in {Currency 1}, and sells out (or buys in) agreed notional amount in [Currency 2] on Forward Settlement Day

Gains and losses analysis: [relatively poor]

In the event of Spot rate less (or greater) than Forward rate on product Settlement Day, then absolute value of the "notional amount x (Spot rate - Forward rate)" valued in [Currency 2] is Customer's potential settlement losses from the transaction. If currencies exchange is required for contract transactions calculated, then the result might be subject to exchange rate fluctuation, which will result in further gains or losses.

Gains and losses analysis: [relatively good]

In the event of Spot rate greater (or less) than Forward rate on product Settlement Day, then absolute value of the result of "notional amount x (Spot rate - Forward rate)" valued in [Currency 2] is Customer's potential settlement gains from the transaction. If currencies exchange is required for contract transactions calculated, then the result might be subject to exchange rate fluctuation, which will result in further gains or losses.

Example 2: The Customer conducts a non-deliverable Forward transaction that buys (or sells) an agreed notional amount on the Forward settlement date

Settlement situation:

The Customer receives or pays "(fixing (or Forward) rate - Forward (or fixing) rate) x agreed notional amount/fixing rate" in [Currency 1] based on the fixing rate on the Forward settlement date

Gains and losses analysis: [relatively poor]

Assuming that the fixing rate on the product Fixing Date is less (greater) than the Forward rate, the absolute value of the result of "notional amount x (fixing rate - Forward rate)/fixing rate" valued in [Currency 1] shall be the settlement losses of the Customer from the transaction.

Gains and losses analysis: [relatively good]

Assuming that the fixing rate on the product Fixing Date is greater (less) than the Forward rate, the absolute value of the result of "notional amount x (fixing rate - Forward rate)/fixing rate" valued in [Currency 1] shall be the settlement gains of the Customer from the transaction.

Potential losses and the greatest possible risks for the Customer are (Maximum potential losses):

If the market price on the settlement date is not in favor of the Customer's settlement, the Customer may suffer a settlement loss at the end of the period with an amount that has no upper limit.

2. Currency Swap

Transactions that buy (or sell) a specified amount of foreign exchange in the Spot market, and at the same time sell (or buy) equivalent amount of foreign exchanges in the Forward market.

Example: A transaction that buys (sells) and sells (buys) the same amount of a Currency at the same time, but on different settlement dates. The Customer conducts a transaction that buys/sells (or sells/buys) an agreed notional amount in [Currency 1] in exchange for [Currency 2] in the Spot market and the Forward market at the same time

Settlement situation:

The Customer buys (or sells) an agreed notional amount in [Currency 1], and sells (or buys) the amount of "agreed notional amount x exchange rate at the beginning of the period" in [Currency 2].on the Spot settlement date

Gains and losses analysis: [relatively poor]

The cost of the Customer's debit and credit in [Currency 1] and [Currency 2] is the Forward rate point of the swap rates at the end and the beginning of the period.

Without consideration of the swap rate at the beginning of the period, assuming that the Spot rate on the final swap date is less (or greater) than the final swap rate, the absolute value of the result of "notional amount x (Spot rate - final swap rate)" valued in [Currency 2] shall be the Customer's losses of market price from the transaction.

Gains and losses analysis: [relatively good]

The cost of the Customer's debit and credit in [Currency 1] and [Currency 2] is the Forward rate point of the swap rates at the end and the beginning of the period.

Without consideration of the swap rate at the beginning of the period, assuming that the Spot rate on the final swap date is greater (or less) than the final swap rate, the absolute value of the result of "notional amount x (Spot rate - final swap rate)" valued in [Currency 2] shall be the Customer's gains of market price from the transaction.

Potential losses and the greatest possible risks for the Customer are (Maximum potential losses):

⊙ The cost of the Customer's debit and credit in [Currency 1] and [Currency 2] is the Forward rate point of the swap rates at the end and the beginning of the period. Without consideration of the swap rate at the beginning of the period, if the market price on the final swap date is not in favor of the Customer's settlement, the Customer may suffer a loss of market price at the end of the period with an amount that has no upper limit.

3. Interest Rate Swap

Transactions that use different interest rate indexes of a single Currency for purpose of swap to exchange a specified amount of interest or interest differential on a regular basis over a period of time. The types of Interest Rate Swap may be fixed-for-floating Interest Rate Swap, fixed-for-fixed Interest Rate Swap, and floating-for-floating Interest Rate Swap.

Example: The Customer conducts an Interest Rate Swap transaction in which the Customer pays a fixed (or floating) interest rate of the notional amount, and receives a floating (or fixed) interest rate on a regular basis over a certain period of time

Settlement situation:

The Customer pays (or receives) "an agreed notional amount x fixed rate x number of days based on the fixed interest rate", and receives (or pays) "the notional amount x floating rate x number of days based on floating interest rate" on the settlement date of each period; both parties swap the interest rate at regular intervals during the agreed period

Gains and losses analysis: [relatively poor]

Assuming that the Customer regularly pays a fixed (or floating) interest rate and regularly receives a floating (or fixed) interest rate from the first period (inclusive) to the last period (inclusive) of the first year, if the paid interest rate is greater than the received interest rate, then the analysis of differential gains and losses of the transaction shall be the cumulative losses (before tax) of the Customer in that year: (the paid interest rate - the received interest rate)%.

Gains and losses analysis: [relatively good]

Assuming that the Customer regularly pays a fixed (or floating) interest rate and regularly receives a floating (or fixed) interest rate from the first period (inclusive) to the last period (inclusive) of the first year, if the received interest rate is greater than the paid interest rate, then the analysis of differential gains and losses of the transaction shall be the cumulative gains (before tax) of the Customer in that year: (the received interest rate - the paid interest rate)%.

Potential losses and the greatest possible risks for the Customer are (Maximum potential losses):

If any paid interest rate of the Customer is greater than the received interest rate during the period of the contract, the Customer may suffer a settlement loss in that period with an amount that has no upper limit.

4. Cross Currency Swap

Transactions that exchange a specified amount of principal and interest between different currencies over a period of time, and may be an actual delivery or a balance settlement.

Example: The Customer conducts a Cross Currency Swap transaction in which the Customer buys/sells (or sells/buys) a specified amount of [Currency 1] in exchange for [Currency 2] over a period of time

Settlement situation:

[Notional amount 1] is the agreed notional amount of [Currency 1]

[Notional amount 2] is the [Currency 2] notional amount of [notional amount 1] x swap rate at the beginning of the period

[Notional amount 3] is the [Currency 2] notional amount of [notional amount 1] x swap rate at the end of the period

The Customer buys (or sells) [notional amount 1] and sells (or buys) [notional amount 2] on the Spot settlement date, and sells (or buys) [notional amount 1] and buys (or sells) [notional amount 3] on the Forward settlement date;

And the Customer regularly pays (or receives) a [Currency 1] interest of [notional amount 1] x [Currency 1] interest rate x number of days based on [Currency 1] interest rate, and the Customer regularly receives (or pays) a [Currency 2] interest of [notional amount 2] x [Currency 2] interest rate x number of days based on [Currency 2] interest rate

Gains and losses analysis of Interest Rate Swap

From the first period (inclusive) to the last period (inclusive) of the first year, the Customer regularly pays (or receives) [Currency 1] interest rate, and regularly receives (or pays) [Currency 2] interest rate.

Principal swap gains and losses analysis 1:

The cost of the Customer's debit and credit in [Currency 1] and [Currency 2] is the Interest Rate Swap.

Without consideration of the swap rate at the beginning of the period, assuming that the Spot rate on the final swap date is less (or greater) than the final swap rate, the absolute value of the result of "[notional amount 1] x (Spot rate - final swap rate)" valued in [Currency 2] shall be the Customer's losses of market price from the transaction.

Principal swap gains and losses analysis 2:

The cost of the Customer's debit and credit in [Currency 1] and [Currency 2] is the Interest Rate Swap.

Without consideration of the swap rate at the beginning of the period, assuming that the Spot rate on the final swap date is greater (or less) than the final swap rate, the absolute value of the result of "[notional amount 1] x (Spot rate - final swap rate)" valued in [Currency 2] shall be the Customer's gains of market price from the transaction.

Potential losses and the greatest possible risks for the Customer are (Maximum potential losses):

⊙ **Interest Rate Swap: If any paid interest rate of the Customer is greater than the received interest rate during the period of the contract, the Customer may suffer a settlement loss in that period with an amount that has no upper limit.**

⊙ **Principal swap: Without consideration of the swap rate at the beginning of the period, if the Spot rate on the final swap date is not in favor of the Customer's settlement, the Customer may suffer a loss of market price in that period with an amount that has no upper limit.**

5. Commodity Swap

Transactions that use commodity price as the underlying subject of a swap to exchange a specified quantity of fixed and floating prices on a regular basis during the agreed period.

Example: The Customer conducts a swap transaction in which the Customer acts as the payer of fixed (floating) prices and the payee of floating (fixed) prices

Settlement situation:

The Customer pays (or receives) "the specified quantity x fixed price", and receives (or pays) "the specified quantity x floating price" on the settlement date

Gains and losses analysis: [relatively poor]

Assuming that the fixed price is greater (or less) than the floating price, the absolute value of the result of "the specified quantity x (fixed price - floating price)" shall be the Customer's settlement losses from the transaction.

Gains and losses analysis: [relatively good]

Assuming that the fixed price is less (or greater) than the floating price, the absolute value of the result of "the specified quantity x (fixed price - floating price)" shall be the Customer's settlement gains from the transaction.

Potential losses and the greatest possible risks for the Customer are (Maximum potential losses):

If the paid price of the Customer is greater than the received price during the period of the contract, the Customer may suffer a settlement loss in that period with an amount that has no upper limit.

6. Option

The agreement that the Seller of the Option promises that the Buyer of the Option has the right (but not the obligation) to buy/sell an underlying asset from/to him when exercising the Option (including American, European, Bermuda, etc.), and an actual delivery or a balance settlement may be made when the agreement is performed.

(1)FX Call Option

Example: The Customer agrees to sell (or buy) a specified amount of [Currency 1] Call Option in exchange for [Currency 2] Put Option on a specific date in the future (European), and agrees that the price of buying and selling [Currency 1] in exchange for [Currency 2] shall be the exercise rate

Settlement situation:

1. The Buyer pays the Premium to the Seller at the beginning of the period;
2. If the fixing rate on the agreed Fixing Date is less than the exercise rate, the Option shall be invalid and there shall be no settlement between the Buyer and the Seller;
3. If the fixing rate on the agreed Fixing Date is greater than or equal to the exercise rate, the Customer shall have the obligation (or the right) to sell (or buy) a specified amount of [Currency 1], and buy (or sell) [Currency 2] with an amount of "the specified amount x exercise rate" on the settlement date.

(2) FX Put Option

Example: The Customer agrees to sell (or buy) a specified amount of [Currency 1] Put Option in exchange for [Currency 2] Call Option on a specific date in the future (European), and agrees that the price of buying

and selling [Currency 1] in exchange for [Currency 2] shall be the exercise rate

Settlement situation:

1. The Buyer pays the Premium to the Seller at the beginning of the period;
2. If the fixing rate on the agreed Fixing Date is greater than the exercise rate, the Option shall be invalid and there shall be no settlement between the Buyer and the Seller;
3. If the fixing rate on the agreed Fixing Date is less than or equal to the exercise rate, the Customer shall have the obligation (or the right) to buy (or sell) a specified amount of [Currency 1], and sell (or buy) [Currency 2] with an amount of "the specified amount x exercise rate" on the settlement date.

(3) Cap

Example: The Customer agrees to sell (or buy) a specified amount of Cap on a specific date in the future (European), and the agreed interest rate shall be the exercise interest rate

Settlement situation:

1. The Buyer pays the Premium to the Seller at the beginning of the period;
2. If the fixing interest rate on the agreed Fixing Date is less than the exercise interest rate, the Option shall be invalid and there shall be no settlement between the Buyer and the Seller;
3. If the fixing interest rate on the agreed Fixing Date is greater than or equal to the exercise interest rate, the Customer shall have the obligation (or the right) to pay (or receive) "a specified amount x (fixing interest rate - exercise interest rate)" on the settlement date.

(4) Floor

Example: The Customer agrees to sell (or buy) a specified amount of Floor on a specific date in the future (European), and the agreed interest rate shall be the exercise interest rate

Settlement situation:

1. The Buyer pays the Premium to the Seller at the beginning of the period;
2. If the fixing rate on the agreed Fixing Date is greater than the exercise interest rate, the Option shall be invalid and there shall be no settlement between the Buyer and the Seller;
3. If the fixing interest rate on the agreed Fixing Date is less than or equal to the exercise interest rate, the Customer shall have the obligation (or the right) to buy (or sell) "a specified amount x (exercise interest rate - fixing interest rate)" on the settlement date.

(5) Equity Call or Commodity Call

Example: The Customer agrees to sell (or buy) specified shares of call on a specific date in the future (European), and the agreed price shall be the Strike Price

Settlement situation:

1. The Buyer pays the Premium to the Seller at the beginning of the period;
2. If the fixing price on the agreed Fixing Date is less than the Strike Price, the Option shall be invalid and the Buyer and there shall be no settlement between the Buyer and the Seller;
3. If the fixing price on the agreed Fixing Date is greater than or equal to the Strike Price, the Customer shall have the obligation (or the right) to pay (or receive) "specified shares x (fixing price - Strike Price)" on the settlement date.

(6) Equity Put or Commodity Put

Example: The Customer agrees to sell (or buy) specified shares of put on a specific date in the future (European), and the agreed price shall be the Strike Price.

Settlement situation:

1. The Buyer pays the Premium to the Seller at the beginning of the period;
2. If the fixing price on the agreed Fixing Date is greater than the Strike Price, the Option shall be invalid and the Buyer and there shall be no settlement between the Buyer and the Seller;
3. If the fixing price on the agreed Fixing Date is greater than or equal to the Strike Price, the Customer shall have the obligation (or the right) to pay (or receive) "specified shares x (Strike Price - fixing price)" on the settlement date

Maximum potential losses and the greatest possible risks for the Customer are (Maximum potential losses):

© If this Agreement is terminated before maturity by the Customer, the commodity shall be calculated based on the market price, and in addition to being unable to settle on the basis of the settlement amount calculation, the Customer may also suffer losses of premature termination and even bear an unlimited loss in extreme cases.

All these derivatives above have their own corresponding commodity risk levels. The evaluation principles of commodity attribute of derivatives include these factors, such as fluctuation range, class of underlying assets, product days, financial derivatives risk index, and commodity complexity. Comprehensively evaluating and confirming the degree of commodity risk of these financial derivatives, which is divided into 1-6 levels from low to high:

Definition of product risk level:

1. The First Level is very conservative: the linked slight-volatility risk market, the market value or the profit and loss of the transaction are rarely influenced by the risk factors such as market changes and changes of policy and rule of law.
 2. The Second Level is conservative: the linked low-volatility risk market, the market value or the profit and loss of the transaction are rarely influenced by the risk factors such as market changes and changes of policy and rule of law.
 3. The Third Level is steady: the linked low-volatility to middle-volatility risk market, the market value or the profit and loss of the transaction are slightly influenced by the risk factors such as market changes and changes of policy and rule of law.
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4. The Fourth Level is growth: the linked middle-volatility to high-volatility risk market, the market value or the profit and loss of the transaction are moderately influenced by the risk factors such as market changes and changes of policy and rule of law.
5. The Fifth Level is positive: the linked high-volatility risk market, the market value or the profit and loss of the transaction are greatly influenced by the risk factors such as market changes and changes of policy and rule of law, and product structure may be diversified.
6. The Sixth Level is very positive: the linked extremely high-volatility risk market, the market value or the profit and loss of the transaction are significantly influenced by the risk factors such as market changes and changes of policy and rule of law, and product structure may be diversified or has a leverage structure, and the commodity complexity is high.

The Customer should take the financial commodity risk into full consideration and refer to the Bank's financial commodity risk level if he deals with financial derivatives not for the purpose of hedging. If the risk level exceeds the risk rating made by the Bank, the Customer should assess the operation situation and financial operating of the company prudently and understand the relevant risk of financial commodity, and has consulted or consider there is no need to consult expert advisors other than the Bank to fully understand before makes a trade decision.

This risk discloses the risks of all exchange rates, interest rates, stock prices, credits, indexes, futures, Options, structured commodities and all other financial derivatives that can't be disclosed in declaration and disclosure statement. Because of these risks, the Customer must understand the nature of the transactions that will be made and the risk levels that will be undertaken before conducts a transaction. The Customer should also consider carefully in terms of his operating experience, purposes, financial conditions and other points, and have a clear understanding of the nature of the transaction and the legal relationship of the relevant contracts signed, and the nature and level of the risks that may arise after the transaction, to consider deliberately whether such transactions are suitable for conducting.

General Risk (This risk potentially exists regardless of the type of the Financial Transaction)

1. **Premature termination:** If the Financial Transaction is not approved by the Bank, the Customer may not, in principle, terminate it early before the agreed Maturity Date. If the Bank agrees to terminate a contract in advance, the costs, losses or service charges incurred should be borne by the Customer, and the costs or losses include the costs incurred by writing off the hedge position of the commodity. The Customer may get a lower commodity yield than its pre-determined one, and even a negative yield.
 2. **The intervention of the supervision organization:** If the right of the Bank to deal with the open position is deprived or restricted due to its supervision organization or any other reasons, the Customer will be affected. Under such circumstances, the Customer may be asked to reduce the uncovered position with the Bank or unwind the position.
 3. **Electronic trading:** Undertake transactions on an electronic trading system, which may be different from undertaking transactions on other electronic trading systems. If the Customer undertakes transactions on an electronic system, he will be exposed to risks associated with the system including the failure of hardware and software. Failure of the system may result in the trade demand of the Customer is not executed according to the instructions, or even not executed at all.
 4. **Non-agent transactions:** The Customer and the Bank conduct a transaction with each other all on their own behalf, and the Bank and the Customer are each other's counterparty in terms of the transactions conducted.
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5. **Market risk:** The Customer may suffer a loss when the market quotation is detrimental to the Customer's position. If the market quotation changes drastically, the loss of the Customer's close position may exceed the originally expected one. The Bank only conducts a transaction when the market price of the stop-loss (limit) order or reservation order breaks through the specified price. These reservation orders may result in a failure of making a deal exactly at the price specified by the Customer due to the changes of the market quotation, and further cause a large (small) loss (profit) than the originally expected one. **In extreme cases, domestic and foreign markets or institutions may stop trading so that the position of the Customer can't be closed out, thus may lead to a larger (smaller) loss (profit).**
 6. **Credit risk:** The Customer must bear the credit risk of the Bank. The Customer must also bear the credit risk of the credit Reference Entity if the transaction conducted by the Customer is a credit derivative.
 7. **Tax risk:** The product traded by the Customer may generate taxes. Also, Tax Act or relevant specifications, interpretations of any responsible institutions may generate risks such as adding or changing taxes.
 8. **Risk of potential conflict of interest:** The Bank will conduct a transaction as a client or agent in the market where products are traded, including but not limited to buying and selling products. This may affect the price of the product at any point of time (whether it is a positive or negative impact). In addition, the Bank is the clearing institution of the product, and the interest of the Bank may conflict with the interest of the Customer within the above range.
 9. **The acquisition and extraction risk of the loss margin:** If the contract document signed by the Customer with the Bank has a loss margin or Mark-to-Market Loss clause, when the market situation is detrimental to the Customer and cause the mark-to-market loss to exceed the loss limit, the Customer should provide the loss margin of the differential section between the mark-to-market and the loss limit according to the notice of the Bank, to cover all losses arising from the calculation of the transaction at the market price during the remaining period of the transaction conducted by the Customer. The mark-to-market profit or loss of the financial derivatives is affected by factors such as the market price of the underlying asset. **When the market price is detrimental to the transaction of the Customer, the mark-to-market loss of the transaction is likely to be much larger than expected. When the adverse situation of the market is aggravated and/or the remaining period of the transaction conducted by the Customer is long, the loss margin mentioned above that need to be provided may be very large or much greater than expected. The Customer should cover the large amount of loss margin in a short time, but the market value of the other financial assets of the Customer may slump at this time. The ability of the Customer to cover the loss margin now may be far below the time when the market condition is normal, and the liquidity risk of fund procurement may be generated. The Customer understands that failure to fulfill the requirement for providing the loss margin, the transaction will be handled according to the contract documents or terminated early without the consent of the Customer, and the relevant losses and expenses will be undertaken by the Customer. The Customer may take tons of losses.**
 10. **Maximum risk exposure risk:** The Customer should carefully assess in advance the maximum amount of risk exposure (or calculate the maximum amount of risk exposure generated by other undue contracts of the same type), and the appropriate hedge position of the relevant Currency holdings or expected cash outflows. **If a financial derivative is not for hedging, its maximum possible loss amount may be infinite, and if it is a structured commodity that has a multiplier clause, the trade loss will enlarge due to the multiplier effect when the the market price is not favorable to the Customer. For the financial derivatives traded for the purpose of hedging, if the transaction amount is larger than the real demand, the excess part will bear the risk of no coverage by the substantial position.**
 11. **Terminating the transaction early:** The Customer terminates the transaction early before the contract expires, and if the market price is not conducive to the transaction of the Customer, the Customer may bear
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huge transaction losses. The derivatives with a long day will take higher risks. And if the market price is not conducive to the transaction of the Customer, the Customer will bear higher transaction losses of early termination.

12. **Derivative transactions** may be related to, or based on, interest exchange rates, currencies, securities, commodities and other underlying assets. **Under certain market conditions, the Customer may suffer relevant losses or gain considerable interests; the result may be detrimental or beneficial to the Customer and will lead to huge losses or high profits in terms of the highly leveraged of the quota or the transaction. The Customer should bear the losses caused by all risks (the amount may be fairly large). And the Bank is not responsible for any risks arising from the quota or the transaction. Therefore, the Customer should consider carefully his financial conditions, experience, targets and other relevant conditions to determine whether these transactions are suitable for conducting. The Customer must also make sure that he has been fully aware of the nature of any quotas and transactions, the contractual relationship that he will get into, and the nature and degree of the risk taken by him. This instruction cannot disclose all the risks and other important notices of the derivative transaction. The Bank recommends that the Customer obtains independent legal and investment opinions before conducting any quotas or transactions.**
13. **The Customer may request the Bank to provide a description of the risks of the transaction when the transactional contract is established, and start to make a transaction request to the Bank in the way specified by the Bank after the Customer agrees to understand the risks of the transaction. Once the transaction is established, all profits and losses will be fully borne by the Customer, and the investor cannot require the Bank to assume any responsibilities for insufficient risk perception or other reasons.**

Structured Product Risk

1. **Structured Product** refers to the Structured Product transaction that combines fixed income products with financial derivatives (most of which are Options and swap contracts). It can link to a wide range of underlying, including transactional contracts derived from interest rate, exchange rate, stock price, index, commodity, credit event or other interests and their combinations. Structured Product is not a general savings, but an investment. Its profit and loss are influenced by many factors, such as the market price of the underlying asset, the condition of the product, the mechanism of exiting the market early, or the occurrence of the agreed credit event. **In the situation where certain conditions are met, the profit of Structured Product may be higher than that of the common simple deposit rate; otherwise, it may reduce and erode the investment principal. The Bank doesn't promise to return all investment principal when the agreement is terminated before maturity, and modest capital preservation at maturity is depending on the condition set up.**
 2. **"Principal protected Structured Product"** refers to the condition where the Customer uses all or part of the fixed income generated by the original capital of investment for paying or exchanging financial derivatives (Options and swap contracts) when conducting a Structured Product transaction. If the trend of the underlying asset or product condition of the financial derivatives (Options and swap contracts) meets the expectation of the Customer, the remuneration of the product condition can be obtained; on the contrary, if the trend of the underlying asset or product condition of the financial derivatives (Options and swap contracts) does not meet the expectation of the Customer, the maximum probable loss is achieving nothing in the case where the Customer always owns the product prior to the date due and the credit risk has not occurred in the Bank. **"Non-principal protected Structured Product"** refers to the condition where the Customer uses all or part of the fixed income generated by the original capital of investment or the principal for paying or exchanging financial derivatives (Options and swap contracts) when conducting a Structured Product transaction. If the trend of underlying asset or product condition of the financial derivatives (Options and swap contracts) meets the expectation of the Customer, the remuneration of the product condition can
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be obtained; however, if the trend of underlying asset or product condition of the financial derivatives (Options and swap contracts) does not meet the expectation of the Customer, it is probably that the risk side of the financial derivative (Options and swap contracts) transaction is executed, and the Customer should transfer the matured principal to an agreed Currency or security or other agreed assets, or draw the amount of money lower than the original capital of investment (that is there is a loss of the original capital of investment) according to the agreed conversion condition of the original capital of investment and expired product condition.

3. Structured Product transaction has the characteristics of the financial derivative (Options and swap contracts) (such as exchange rate, interest rate, commodity, credit, stock price or stock price index) transaction that engages in single or multiple underlying assets, and involves many risks which will probably be great. Therefore, the Customer should take account of his financial situation and risk taking ability before conducting this transaction. The following items should be paid attention to during the transaction:
 - (1) The five main factors that affect the price of the financial derivatives (Options and swap contracts) are as follows: the volatility of single or multiple underlying assets, the market price or the Forward market price curve of the underlying asset, the product condition, the expiration time of the product, and the existence of the mechanism for the product to exit the market early. The changes of the price of the financial derivatives are not necessarily beneficial to the Customer when the changes of one or two above items are beneficial to the Customer. The investor should comprehensively assess the positive or negative effects caused by the various factors to make an appropriate trade decision.
 - (2) For financial derivatives (Options and swap contracts), it is necessary to further assess their maximum possible loss according to the individual product conditions when the market changes are detrimental to them. The probable maximum loss may include the loss of the original capital of investment if trading “non-principal protected Structured Product”.
 - (3) When the position of the financial derivatives (Options and swap contracts) is detrimental to the Customer, the Customer uses the Spot or Forward Option in the market or the swap contract to avoid the market risk. But the risk is not necessarily smaller than that of buying back or selling the financial derivatives directly in the market, depending on the product conditions traded.
 - (4) The only way for financial derivatives (Options and swap contracts) to be liquidated in advance should be buying or selling the financial derivatives traded before directly in the market, rather than trading in the Spot or Forward Option or swap contract market.
 - (5) The execution of the order of financial derivatives (Options and swap contracts) depends on the market situation, and the transaction may not be concluded at a predetermined price when the market fluctuates drastically.
 4. The Customer understands the market related to the investment underlying of a "Structured Product" may be affected by laws, regulations or policies, which may cause the market to stop transactions, terminate transactions, close down or other risks.
 5. **The degree of the risks faced by the Customer varies with the designs and conditions of "Structured Products". The main risks include but are not limited to the principal conversion risk, market interest rate risk, investment underlying applicability risk, principle loss risk, liquidity risk, reinvestment risk regarding acceleration of maturity, midway termination risk, credit risk, taxation risk, exchange risk, country risk, legal risk, product conditions change risk, etc. The Customer may require the Bank to provide instructions on the risks of a transaction before the establishment of the transaction contract. The Customer agrees to make a transaction request to the Bank in the manner prescribed by the Bank after understanding the transaction risks. Once the transaction is established, the Customer shall be**
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responsible for all profits and losses, and shall not require the Bank to assume any responsibility for insufficient risk perception or other reasons.

6. In principle, the Customer shall not terminate the contract or withdraw the money in advance before the agreed Maturity Date of the "Structured Product", unless approved by the Bank. If the Bank agrees with the Customer to terminate the contract or withdraw the money in advance, the resulting costs, losses or fees generated by the Bank shall be borne by the Customer. The costs or losses include the costs incurred by the Bank in writing off the hedge position of the product. The Customer may get a return rate lower than the preset rate of the product, or even a negative return rate (i.e. damaging investment principal).
 7. For any other Financial Transactions, the Customer must clearly understand all relevant legal requirements (including investment restrictions), and the Customer shall consider the legal, taxation, and accounting influence imposed by the Financial Transaction. When appropriate, the Customer shall also consider consulting with appropriate consultants on the products to invest and the special environment to get assisted in understanding the risks involved. If the Customer is a financial adviser or agent, various risks mentioned above shall also be assessed based on the Customer or his/her relevant circumstances.
 8. When the Customer and the Bank conduct a "Structured Product" transaction, the Customer shall understand that the Bank is a contractual object for the Customer, and is by no means a financial adviser or a trustee for its trust.
 9. **Warnings on investing in Structured Products:**
 - (1) **This product is a complex financial product and must be explained by an expert before investing. If investors cannot fully understand this product, do not invest.**
 - (2) **This product is not a deposit but an investment which is not covered by deposit insurance.**
 - (3) **The investor shall read product descriptions and risk disclosure statements before investing, and shall understand and judge for himself/herself, and be responsible for his/her own profits and losses.**
 - (4) **This product is an investment-oriented product. The investor shall bear the market risk of this product and the credit risk of Taishin Bank by himself/herself.**
 - (5) **The investor shall not sign or seal relevant documents without clearly understanding the product descriptions, contract terms and the whole document content.**
 - (6) **The investor's midway terminating the contract may result in the recoverable money lower than the investment principal.**
 - (7) **The maximum possible loss is the entire investment principal.**
 - (8) **The degree of the risks faced by the investor varies with the designs and conditions of Structured Products. For cash settlement, there may risks of part or all interest, principal loss or other losses; for non-cash settlement, the principal may convert to underlying assets as agreed, and probably the investor must bear the credit risks of the Bank and the issuer of the underlying assets.**
 - (9) **The factors that affect the price changes of financial derivatives are extremely complex. The risks disclosed by the Bank only cover the major part of the risks. It may not be able to expatiate on the transaction risks and factors affecting market quotations. Therefore, the investor shall fully**
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understand the nature of the Structured Product, and related financial, accounting, taxation or legal issues before transaction, and assess his/her own financial status and risk tolerance, and then decide whether to invest.

Option Transaction Risk

1. **The risk of selling Options is generally higher than the risk of buying Options:** although the Customer could exclusively obtain the Premium when selling Options, he/she may bear a loss much bigger than the Premium: the obligation of the Customer's selling Options is unlimited, and with the rise and fall of the prices of underlying assets (foreign exchanges, stocks, interest rates, raw materials, etc.), **the Customer's loss may be unlimited, while the profit is only limited to the Premium.** The Customer must bear the risk that the Buyer exercises the Option when selling an Option. At that time, the Customer is obligated to settle in cash, or buy, sell or deliver relevant equities. Involved risk may be reduced if the Customer holds a corresponding relevant equity or underlying asset, or another Option "covered Option". In addition, as an Option Seller, the Customer must understand that he/she needs to bear market price fluctuations and other risks. When there are losses according to market assessment, the Customer should provide a deposit to the Bank as agreed. If the deposit provided is much larger than expected, there may be a liquidity risk with regard to fund transferring. If the Customer fails to fulfill the obligation to provide a deposit, so that the Bank terminates the transaction in advance, then the Customer may bear huge losses.

The market also has novel Options with different risk patterns. When the Customer undertakes an Option transaction, he/she shall first understand his/her rights and obligations, evaluate his/her risk tolerance, and then make the transaction. For example, for European Knock-in Options, the rights and obligations of the Option Buyer and Seller come into effect at the prices-comparing point when the market price knocks effective conditions, and then risks arise as stated above; for American Knock-out Options, there is no knock events after the transaction is undertaken and before the prices-comparing point, and the rights and obligations of this American Knock-out Option's Buyer and Seller are the same as general Options, but if the market price has knocked failure conditions at any time, the rights and the obligations will become invalid in advance; for digital Options, the risk of the Option Seller will rise and fall as the prices of underlying assets (foreign exchanges, stocks, interest rates, raw materials, etc.) change, and the loss will be a fixed amount, the profits will be only limited to the Premium. Furthermore, if the Customer undertakes a structured transaction with a complex pattern (covering multiple groups of Options with different Maturity Dates), for example: the product condition is to leave in advance when periodic profits accumulate to the target price, with the rise and fall of the prices of underlying assets (foreign exchanges, stocks, interest rates, raw materials, etc.), the rights and obligations of the Customer may terminate in advance. If the rights and obligations don't terminate in advance, the Customer's losses may be unlimited. Also please notice that the amount of money regarding the Customer's rights and the amount regarding the obligations do not necessarily have to be equal. The amount regarding the Customer's obligations may be multiple of the amount regarding the rights (leverage operation), resulting in the loss multiple of the profit. When the market is not in favor of the calculation direction of the delivery amount for the investor, the delivery amount may be amplified due to the leverage factor, and the investor will face delivery losses and suffer significant losses. **In the worst case, the Customer's loss may have no upper limit.** After the transaction day, the marked to market value will be affected by various market factors, depending on the underlying (foreign exchanges, stocks, interest rates, raw materials, etc.). For example, if the Customer undertakes a structured foreign exchange transaction with a complex pattern, he/she will be affected by market factors such as interest rates, exchange rates, credit spreads and related Currency fluctuations. When the relevant market factors are not favor of the calculation direction of the delivery amount for the investor, the transaction loss will be amplified due to the leverage factor, and the market price of the product will drop rapidly, probably causing huge transaction loss.

As the financial market changes, the Customer will be exposed to more and more single or complex structured Option transactions. The content above does not cover all kinds of Option transactions and

corresponding risks, nor does it mean the Option transactions not listed here involve no risks. Therefore, the Customer must judge for himself/herself the Option to be transacted, the transaction and corresponding risks. The Bank does not forecast or guarantee any market conditions.

2. **Exchange and swap risk:** Profits or losses incurred in contract transactions calculated in Foreign Currency (regardless of whether the transaction is conducted in his/her own jurisdiction or elsewhere), the unit Currency to be exchanged will likely be affected by exchange rate fluctuations. If the investor conducts a transaction with a Foreign Currency, and chooses to exchange the delivery Currency for local Currency when delivery, he/she may encounter profits or losses due to exchange rate fluctuations.
3. **Structured policy:** It may not be effective to set certain instructions (such as "stop-loss orders" or "stop-limit orders" permitted by local laws) to control losses to a certain extent. Because the market may not allow clinching a deal at a preset price, and it may also make relevant orders fail to be exercised. In addition, when using a combination position policy (such as Spot or Forward transactions) to hedge against the risk of financial derivative transactions, the risk is not necessarily less than the risk of buying or selling the financial derivative directly in the market, and vice versa.
4. **Liquidity risk, transaction suspension or restriction, and price relationship:** market conditions (such as Currency cannot be circulated) and/or some market regulation (such as transactions are suspended for any Currency due to the price restriction, government intervention or interruption of the trading system) may lead to difficulties in or inability to completing/complete transactions or closing/close positions. If such a situation occurs after the Customer sells a Option, the risk of loss to the Customer may increase. The normal price relationship between related assets and futures or Options may not exist. For example, under extreme market conditions, Spot contracts related to stock Options are regulated by price restrictions, and only unilateral Buyer or Seller market remains, so the appeared transaction price is actually not a true transaction price, but the price is still used to execute the Option's rights and obligations when the Option is mature. Therefore, it's hard to judge what a "fair price" is for the Customer due to a lack of relevant reference asset prices. When the Customer undertakes a structured transaction with a complex pattern which lacks liquidity due to its combination of many financial derivatives, if he/she terminates the contract in advance, there may be a spread between the actual transaction price and the original asset value of the product. As a result, the Customer may suffer a loss with regard to midway termination when he/she sells the product before maturity. And even the Customer must hold the product until its maturity once the market completely loses liquidity. Long term structured transactions with complex patterns have high risks. When the market price is not in favor of transactions for the Customer, he/she will bear big transaction losses with regard to early termination. When the Customer applies for midway termination of the contract, the value of the product will be calculated based on the market price on the termination day, not the calculation description of the original delivery amount. **The calculation of the price regarding midway termination involves complex derivative calculations and risks. If the market price is not in favor of the transaction for the Customer, he/she will bear huge transaction losses. In the worst case, there is no upper limit to the possible loss.**

Swap Transaction Risk

1. Swap means that the Customer agrees to undertake **a single or a series of transaction(s) that swap(s) an underlying asset for another** within a certain period in the future. The swappable underlying assets include foreign exchanges, interest rates, credit defaults, and raw materials, etc. The Customer will face the price risk arising from changes in the prices of the market underlying assets after undertaking such transactions. With the passage of time, this swap transaction may result in a loss without an upper limit due to a drastically changing market.
 2. **Liquidity risk, transaction suspension or restriction:** market conditions (such as Currency, credit, target bonds cannot be circulated) and/or some market regulation (such as transactions are suspended for any
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Currency, raw material or rate underlying due to the price restriction, government intervention or interruption of the trading system) may lead to difficulties in or inability to completing/complete transactions or closing/close positions. If such a situation occurs after the Customer undertakes a swap transaction, the risk of loss to the Customer may increase.

Other Financial Transaction risks

Spot, Forward, Forward Rate Agreement, Interest Rate Swap, Currency Swap, Cross Currency Swap, Credit Derivatives, Equity Derivatives, ECB/CB asset swap, Commodity Derivatives and other financial product transactions are also involved with or based on interest rate, exchange rate, Currency, securities, products, credit and/or other assets. Content above does not cover all kinds of Financial Transactions and their risks, and it does not mean that there are no risks for the uncovered Financial Transactions. Therefore, the Customer shall still, in its sole discretion, decide the Financial Transactions to be made and assess their risks.

Risks of RMB financial derivatives (Structured Product included)

When making the transaction with the RMB financial derivatives involved, in addition to the underlying asset risks and the various secondary-risk portfolios from the financial derivatives, the Customer might also be at the following risks when dealing with this kind of transaction since now the RMB is still subject to the relevant regulations of the Republic of China and Mainland China:

1. The Customer shall fully understand the risk that the transaction will also be affected by other factors in addition to the market when involved with RMB financial derivatives and shall fully understand the valuation results:
 - (1) In addition to the effect of general market fluctuation factors, the transaction involved with RMB financial derivatives is also subject to the law or policy changes in Mainland China or other regions; or the supply and demand of RMB funds in the market may be affected due to the limitation of the RMB clearing service, leading to a greater fluctuation range of the exchange rate, interest rate or other related underlying asset, which will affect the profit and loss on the transaction gains, as well as the market price assessment.
 - (2) When the Customer makes the transaction involved with RMB, the attainability, liquidity and transferability of RMB might be affected due to the RMB clearing service, non-public market transactions or special circumstances, which then will further cause the greater transaction risks or the valuation of loss.
 2. The Customer shall fully understand that the buy/sell or clearing and settlement of RMB will be subject to the relevant regulations:
 - (1) Different from the other foreign currencies, the buy/sell limit of RMB shall be in accordance with the relevant regulations regarding the Foreign Currency transaction. In the event that the Customer receives and pays in RMB for the financial derivatives, the buy/sell limit of RMB, time period and related procedures shall be aware of.
 - (2) The RMB assets and debts originally possessed by the Customer or his/her receipt and payment obligations arisen from the transactions might be under the influence of the supply and demand of the RMB funds in the market due to the subject to law or policy changes or the limitation of the RMB clearing service, which then will affect the clearing and settlement of the relevant transactions. Although the Bank has conducted the follow-up work to the already accepted RMB cases, it shall dedicate itself to search for other solutions and methods. However, if necessary, it is possible for the Bank to use another Currency for clearing and settlement according to the market exchange rate at that time.
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3. The Customer shall fully understand that the RMB exchange rate and other price may apply to the underlying assets in different markets, which will affect the clearing and settlement of the transactions, as well as market price assessment result:

RMB exchange rate is currently categorized into the RMB exchange rate in the mainland China and the RMB exchange rate out of the mainland China, and there might also be many exchange rate indicators for the latter with their respective transaction markets. Different exchange rate indicators might derive the interest rate or other related underlying assets that applies to different circumstances. Aforementioned indicators might be more similar or dissimilar due to the market liquidity and other factors, which affects the price of the applicable underlying assets derived from them. The financial derivatives, clearing and settlement, and the market price assessment of different exchange rates or underlying assets are based on the different situation, each item is in accordance with its respective content in the agreed contract. The Customer shall fully understand the applicable exchange rate, interest rate, and the price of related underlying assets for the transaction, and shall, in its sole discretion, evaluate the derived transaction risks and losses before making the transaction.

The description and risk disclosure statement and advance notice for the above financial derivatives did not cover all the risks and related considerations for all financial product transactions, and it does not mean that there are no risks for the uncovered financial product transactions included in the Customer's transactions. Therefore, if the Customer is not fully aware of all risks of this type of transaction and has not decided the applicability in its sole discretion, they shall not make this type of transaction, and is recommended to actually complete financial planning and risk assessment before the transaction, in order to avoid unbearable losses arisen from it.

The Customer has carefully read through this "Description, Risks Disclosure Statement and Advance Notice of Financial Derivatives", and confirms to have fully understand general risks for engaging in transactions described here, and agrees to assume risks of related investment and be liable for losses resulted from transactions. The Customer hereby declares that he/her has already acquired a copy of this document.

Kind Regards

Taishin International Bank

The Customer:

The Representative:

Address:

Date: July 23, 2019

Appendix 2

Power of Attorney for Authorized Transaction Personnel and Authorized Confirmation Personnel (Confirmation Seals and Signatures)

To: Taishin International Bank (hereinafter referred to as "the Bank")

Date: July 23, 2019

With respect to each transaction and relevant stated matters involved in "General Agreement for Financial Transaction" signed between the Drafter of Power of Attorney and the Bank, the Drafter of Power of Attorney hereby authorizes the following authorized transaction personnel as his/her agents, and any of such persons are authorized to propose a transaction request to the Bank, complete a transaction or perform the relevant instructions via oral, written or other agreed forms on behalf of the Drafter; In addition, the following authorized confirmation personnel and the seals and signatures on file (i.e. confirmation seals and signatures) are authorized to confirm each Financial Transaction agreed by the Bank on behalf of the Drafter of Power of Attorney. This Power of Attorney remains valid until the Bank confirms to receive the original copy of the written amendment notice from the Drafter of Power of Attorney.

In addition, the Drafter of Power of Attorney acknowledges and promises that authorized transaction personnel and authorized confirmation personnel for a transaction may not be the same person, which shall be managed by the Drafter on their own.

Authorized transaction personnel

Authorized transaction personnel	Name	Title	Seals and signatures
Transaction personnel 1	CHOU,HUI-YING	Administrator	CHOU,HUI-YING
Transaction personnel 2	LIN,WEI-CHEN	Administrator	LIN,WEI-CHEN
Transaction personnel 3			
Transaction personnel 4			

Authorized confirmation personnel and their confirmation

- Confirmation personnel of the Bank and any confirmation personnel appointed by the Drafter of Power of Attorney may confirm a transaction in advance on the phone on the transaction day. If no confirmation personnel is appointed by the Drafter, the Bank shall not confirm the transaction on the phone, and shall perform the Transaction Confirmation only by confirming the seals and signatures instead:

Authorized confirmation personnel	Name	Title	Phone number
Confirmation personnel 1	CHENG,CHING-YING	Section Manager	(02)8227-9189 #5802
Confirmation personnel 2	LI,HSIAO-LAN	Section Manager	(02)8227-9189 #5806
Confirmation personnel 3	TSAI,JUI-LUNG	Department Manager	(02)8227-9189 #5801

- Delivery details for Power of Attorney and market value assessment report
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Recipient Name	Title	Phone number	Fax number
CHOU,HUI-YING	Administrator	(02)8227-9189 #5810	(02)2601-9995
LIN,WEI-CHEN	Administrator	(02)8227-9189 #5807	(02)2601-9995
Email: Winny_Chou@aoi.com.tw Julia_Lin@aoi.com.tw		Delivery address: No.18, Gong 4th Rd., Gong'er Industrial Park, Linkou Dist., New Taipei City 24452, Taiwan	

3. Official written confirmation is the Transaction Confirmation issued by the Bank in accordance with the provisions in General Agreement for Financial Transaction, stamped and sealed with following confirmation seals and signatures by the Drafter of Power of Attorney:

Confirmation Seals and Signatures

The Drafter of Power of Attorney:

The Representative:

Address:

This column is used for review by Taishin International Bank		
Supervisor	Responsible person	Guaranty verification/check seal

Appendix 3

Power of Attorney for Authorized Transaction Personnel and Confirmation Seals (Dedicated for Investment Trust Fund)

To: Taishin International Bank (hereinafter referred to as "the Bank")

Date: _____

With respect to each Financial Transaction between the Bank and " securities investment trust fund" (hereinafter referred to as "the Fund") raised/privately offered by " securities investment trust limited liability company" (the drafter of Power of Attorney, hereinafter referred to as "the Trust Company") and safekept by " bank limited liability company" (the drafter of Power of Attorney, hereinafter referred to as "the Custodian Bank") , the Custodian Bank of drafter acknowledges and agrees that the Trust Company of the drafter authorizes following authorized transaction personnel as agents, any of whom is authorized to propose a transaction request to the Bank, complete a transaction or perform relevant instructions regarding the Fund via verbal, written or other agreed forms on behalf of the drafter. The drafter authorizes following authorized confirmation personnel respectively to confirm each Financial Transaction, on behalf of the drafter, agreed by the Bank by phone. In addition, the Custodian Bank of the drafter authorizes following recorded seals and signatures (i.e. confirmation seals and signatures) to be used in written confirmation of each Financial Transaction agreed by the Fund and the Bank on behalf of the drafter. This Power of Attorney remains valid until the Bank confirms to receive the original copy of the written amendment notice from the Drafter of Power of Attorney.

In addition, the Drafter of Power of Attorney acknowledges and promises that authorized transaction personnel and authorized confirmation personnel for a transaction may not be the same person, which shall be managed by the Drafter on their own.

Authorized transaction personnel

	Name	Title	Seals and signatures
Transaction personnel 1			
Transaction personnel 2			
Transaction personnel 3			

Authorized confirmation personnel and their confirmation methods

- Confirmation personnel of the Bank and any confirmation personnel appointed by the Trust Company may confirm a transaction in advance on the phone on the transaction day. If the Custodian Bank also appoints confirmation personnel, the Bank may also separately confirm with that confirmation personnel appointed by the Custodian Bank on the phone:

[Confirmation personnel appointed by the Trust Company]			
Authorized confirmation personnel	Name	Title	Phone number
Confirmation personnel 1			

Confirmation personnel 2			
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[Confirmation personnel appointed by the Custodian Bank] (the Custodian Bank shall decide for itself whether to appoint anyone)

Authorized confirmation personnel			
Confirmation personnel 1	Name	Title	Phone number
Confirmation personnel 2			

2. Delivery methods for Power of Attorney and market price assessment report

Recipient's name			
	Title	Phone number	Fax number
Email:			

3. Official written confirmation is the Transaction Confirmation issued by the Bank in accordance with the provisions in General Agreement for Financial Transaction, stamped and sealed with following confirmation seals and signatures by the Custodian Bank:

Confirmation seals (dedicated seals for fund special account of the Custodian Bank)

The Drafter of Power of Attorney: Securities investment trust limited liability company



The Representative:

The Drafter of Power of Attorney: Bank limited liability company

The Representative:

Address:

This column is used for review by Taishin International Bank		
Supervisor	Responsible person	Guaranty verification/check seal

Appendix 4

The Customer Information Confidentiality Measures of Taishin Financial Holding Co., Ltd. and Its Various Subsidiaries

Taishin Financial Holding Co., Ltd., which was founded on February 18th, 2002, owns the Bank, security companies and other subsidiaries and provides the customers with one-stop shopping products and services. Taishin Financial Holding Co., Ltd. and its various subsidiaries will adhere to the strictest security measures previously adopted by its various subsidiaries for the customer information, and takes the necessary confidentiality measures to safeguard the information provided by the customers. The Customer Information Confidentiality Measures of Taishin Financial Holding Co., Ltd. and Its Various Subsidiaries are hereby explained as follows:

The Customer Information Confidentiality Measures of Taishin Financial Holding Co., Ltd. and Its Various Subsidiaries shall be implemented in compliance with the Financial Holding Company Act, Financial Holding Company and Subsidiaries of Financial Holding Company Cross-selling Regulations (hereinafter referred to as "the Cross-selling Regulations"), Personal Information Protection Act (including the Personal Information Protection Act that has already been amended but yet not promulgated and implemented) and the related laws of the competent authorities. Also, each subsidiary shall abide by the regulations of other relevant laws (including but not limited to Article 48 Item 2 of the Banking Law), in order to properly implement the customer information confidentiality measures.

1. Customer Information Collection

Each subsidiary of Taishin Financial Holding Co., Ltd. has your personal information on file, because you have already been a customer of Taishin Financial Holding Co., Ltd. and its various subsidiaries, or because you have provided your information during marketing activities held by Taishin Financial Holding Co., Ltd. and its various subsidiaries.

2. Store, Safeguard the Customer Information and the Maintenance

The various subsidiaries of Taishin Financial Holding Co., Ltd. has taken the strict measures to safeguard the customer information. In addition to the information transmission by using the existing security encryption methods (such as SSL, SET, etc.) and the creation of the firewalls to prevent hacking and illegal access to the customer information, customer information databases have also been built in accordance with related operation standards, and the professional staff haven been appointed to control the access to databases pursuant to business rights and liabilities, in order to safeguard the personal information of the customers. Anyone

without official authorization from any subsidiaries of Taishin Financial Holding Co., Ltd is strictly prohibited from accessing the customer information.

3. Information Classification, Application Scope and Project

Your personal information includes basic information, billing information, credit information, investment information, insurance information, and etc. The definition of all the information is to Article 10 of the Cross-selling Regulations.

According to the regulations of the competent authorities and the Cross-selling Regulations, in case of the disclosure, referral or interactive usage of the customer information between the subsidiaries of Taishin Financial Holding Co., Ltd., the information being disclosed, referred to or interactively used shall not contain the transaction information and other relevant information other than the customer's basic information, unless otherwise stipulated in laws or based on the agreed contract signed by customer or the written consent.

4. Subjects that the Information May Be Disclosed To

The subsidiaries of Taishin Financial Holding Co., Ltd. shall disclose, transfer or interactively use your basic information, billing information, credit information, investment information, insurance information, and etc. for marketing in accordance with the law, agreed contract signed by customer or the written consent; where a court or other organizations with investigation right pursuant to the law legally request Taishin Financial Holding Co., Ltd. or its subsidiaries to provide the customer information, Taishin Financial Holding Co., Ltd. or its subsidiaries are obliged to disclose or provide such relevant information.

Where the subsidiaries of Taishin Financial Holding Co., Ltd. perform the credit investigation for the purpose of the transaction management with Joint Credit Information Center, the clearing house, or organizations in the same industry, the customer information may be exchanged and disclosed according to applicable laws.

5. Intended Use of the Customer Information

According to applicable laws and in compliance with the Article III stated above, your basic information, billing information, credit information, investment information and insurance information may be disclosed, referred to or interactively used between the subsidiaries of Taishin Financial Holding Co., Ltd. for marketing, in order to provide you with more integral and convenient investment and finance products and services.

6. Customer Information Confidentiality for Outsourcing Work

Where the subsidiaries of Taishin Financial Holding Co., Ltd. entrust other organizations with the work with the customer information involved, the subsidiaries of Taishin Financial Holding Co., Ltd. must request the entrusted organizations to strictly follow the confidentiality measures of the subsidiaries of Taishin Financial Holding Co., Ltd., and must request such organizations not to disclose your information to any third party. In addition, the subsidiaries shall check and supervise the entrusted organizations at any moment for compliance.

7. Change and Modification for the Customer Information

In case of any changes in your personal information, you can notify the customer service center of the subsidiaries of Taishin Financial Holding Co., Ltd. at any moment to request for modification or supplement.

8. The Customer's Opt-Out Right Exercise

You can notify the customer service center of the subsidiaries of Taishin Financial Holding Co., Ltd. at any moment to have the interactive usage of your personal information for marketing or business promotion activities stopped.

The subsidiaries of Taishin Financial Holding Co., Ltd. reserve the right to amend the confidentiality measures, and will announce the related information about those measures on the Internet or other public disclosure channels approved by the competent authorities; the same procedure applies in case of amendment of those measures. If you have other questions related to confidentiality measures, you can consult with Taishin Financial Holding Co., Ltd. or its subsidiaries at any time.

The subsidiaries of Taishin Financial Holding Co., Ltd. currently include:

Taishin International Bank Co., Ltd.

Taishin Securities Co., Ltd.

Taishin Financial Insurance Broker Co., Ltd.

Taishin Securities Investment Advisory (TSIA) Co., Ltd.

Taishin Securities Investment Trust Co., Ltd.

Taishin Asset Management Co., Ltd.

Taishin Marketing Consultant Co., Ltd.

Taishin Venture Capital Investment Co., Ltd.

In case of any addition to or change of the above subsidiaries in the future, the relevant information will be announced and disclosed on the official website of Taishin Financial Holding Co., Ltd. and its various subsidiaries.



Taishin International Bank

Credit Facility Agreement



台新國際商業銀行
Taishin International Bank

LN-131

Credit Facility Agreement

The Customer of this Agreement (hereinafter referred to as "the Customer") hereby has made an agreement with Taishin International Bank (hereinafter referred to as "**the Bank**") on that, for any credit facility transactions made with the Bank now and in the future, if the total amount of credit granted is within the scope of any of the following:

(1. NTD (Amount);

2. (Currency) (Amount);

3. NTD 100 million and USD 1 million, the Customer agrees to perform its duties in accordance with the contents of the credits and the following terms:

Chapter I Common Terms of Credit Facility

1. **All debts mentioned in this Agreement shall refer to the bills, loans, advances, pledges and other related debts etc., and their interests, deferred interests, liquidated damage, compensation for damages as well as all expenses needed for those liabilities. If the Customer signs several credit facility agreements successively or simultaneously, the Customer is aware of that the total amount of his/her liability shall be the sum of the amount and scope of those credit facility agreements.**
 2. Calculation of interests, discount interests, guarantee and service fees, exchange rates, and deferred interests and liquidated damages:
 - (i) Interests and repayment method: shall be in accordance with the interest rate, calculation method and repayment method described in the "Loan Drawdown Application" or other relevant documents.
 - (ii) Discount interests: shall be set by the Bank based on relevant interest rate index of the money market.
 - (iii) Guarantee and service fees: shall be paid at the rate verified by the Bank in accordance with the Bank's regulations when dealing related businesses.
 - (iv) Foreign exchange rate: in the case of a foreign currency debt, it shall be converted into an amount in NTD at the Bank's board selling exchange rate on the trading day or the day when the debt occurs. When paying off the debts, the amount of repayment shall be converted into NTD at the board selling exchange rate on the date of repayment. If the amount of advances paid by the Bank under this Agreement exceeds the total amount of credit due to changes in exchange rates or other reasons, the excess shall still be paid by the Customer immediately.
 - (v) Deferred interests and liquidated damages: unless otherwise agreed, if the Customer fails to repay the principal under this Agreement, deferred interests shall be paid at the interest rate of a previously appointed time; and if the Customer has any delay in payment of the principal or interests, starting from the maturity date of the principal and from the interest paying day, liquidated damages within less than six months of the overdue time shall be paid at 10% of the above interest rate, liquidated damages that's delayed more than six months after the due time shall be paid at 20% of the above interest rate.
 - (vi) Liquidated damages for repayment in advance: When repaying in advance at the agreed interest rate of the money market loan capital cost additional fixed interest, if the money market capital cost interest rate of a period of the same days from the date of repayment to the original agreed loan maturity date appointed by the Bank is lower than the original cost interest rate of the original loan on the advance repayment day, the Customer shall agree to pay the liquidated damages which shall be calculated on the basis of the
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repayment principal at the interest rate differential from the date of repayment to the original maturity date of the loan.

- (vii) **The calculation and payment methods of the interests, discount interests, deferred interests, liquidated damages and others of NTD loans mentioned in this Agreement are based on an annual interest rate, and the interest calculation shall be on a basis of a 365-day cycle, which also works for a leap year.**

The calculation and payment methods of the interests, discount interests, deferred interests, liquidated damages and others of foreign currency loan mentioned in this Agreement are based on an annual interest rate, and the interest calculation shall be on a basis of a 365-day cycle, (applicable currencies are GBP/HKD/SGD/ZAR) or of a 360-day cycle (currencies other than the above-mentioned currencies), which also works for a leap year.

- (viii) For the calculation of interests, discount interests, guarantee and service fees, etc., as set out in this Agreement, if it fails to properly reflect the costs of the Bank's acquisition of related funds due to market disruption, the Bank may renegotiate with the Customer, and shall not be subject to the original loan notice or any other agreements.

The money market loan capital costs mentioned above refers to the loan pricing costs of the Bank's business unit provided by the capital movement unit of the Bank.

3. The Customer agrees that, regardless of the time limit of the claims, for all types of deposits deposited by the Customer in the head office and branches of the Bank and all claims to the Bank, the right of set-off can be exercised to offset all debts the Customer owed to the Bank after the Customer has been notified, while all the bank books and credentials issued to the Customer by the Bank shall be inefficient within the scope of offset. However, provided that there is a prohibition against the offset by law, or that the Customer has stated that those may not be offset, or that it is on the basis of voluntary service or a payment made by a third party to the Customer through the Bank for a transaction, the offset shall not be exercised.
4. When the Customer pays off the debts or amortizes the debts, the debts of the Customer shall be required to be paid off in the order of various fees, liquidated damages, interests, deferred interests and principal in accordance with the provisions of Article 323 of the Civil Code. If there is more than one debt and the Customer's payment is insufficient to cover all the debts, the debts shall be offset in accordance with the provisions of Article 321 or 322 of the Civil Code. However, when the Bank handles its internal accounting under relevant laws and regulations, the total amount of its claims shall still be calculated in the above order of compensation.
5. For any changes of the name, organization, contents of the corporation article, seal, representatives, limits of the representative's permission, notice address, etc., or other changes that may affect the Bank's rights and interests, the Customer must immediately notify the Bank of those in writing. If the Customer fails to notify the changes, the Customer shall be liable for any consequent disputes or damages caused to the Bank. If the Customer violates the above notification obligation of address change, or if **the notice of the Bank cannot be served due to causes that are imputed to the Customer, the mailing and delivery of the last notice address of the Bank shall be deemed to have arrived after a usual postal period.**
6. In the following cases, all debts of the Customer owed to the Bank (including the guarantee balance that has not yet been reimbursed by the Bank), shall lose the benefits of the time limit, the Bank may request the Customer to pay off the debts, however, in the exercise of the acceleration clause in accordance with the causes set forth in sections 6 to 11, the Bank shall notify the Customer in advance of a reasonable period of time.
- (i) The Customer fails to pay off the principal or refuses to accept or pay any debt as agreed.
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- (ii) The Customer has applied for settlement, adjudication of bankruptcy, or corporation reorganization under the bankruptcy law, or has been informed by the clearing house of transaction refusal (regardless of whether the transaction relation has been resumed or not), or the Customer's business has been shut down or the debts are being settled.
 - (iii) The Customer has the obligation to provide collaterals as agreed yet has failed to provide them.
 - (iv) When any of his/her heirs declares to be heir in tail or abandons inheritance because of the Customer's death.
 - (v) The confiscation of the main property of the Customer for criminal reasons has been declared.
 - (vi) The Customer fails to pay any interests as agreed.
 - (vii) When the collaterals are sealed up, or the collaterals are lost and damaged, or the value of the collateral decreases or is insufficient to pledge the claims, or the guarantor has a bad credit, and the request the Bank made to replace him/her has failed.
 - (viii) The Customer is under the circumstances of compulsory execution, sequestration, provisional injunction or other property preservation actions that may put the Bank at risk of being unable to collect compensation.
 - (ix) The actual use of the funds of the Customer's debts to the Bank is not in conformity with the approved use of the Bank.
 - (x) **Under objective circumstances where major adverse changes occur in management, operation, or financial conditions of the Customer, the Bank may be at risk of not being fully compensated for the claims.**
 - (xi) **For credit facility transactions, the statements made or documents (including transaction vouchers and relevant transaction documents) provided by the Customer are in violation of good faith such as being false or concealed, or has violated this Agreement or the commitment, or any objective circumstance occurs where other bad credit problems are found.**
7. **If the Customer is under circumstances that match the causes of Article 6, the Bank may reduce or terminate the approved amount limit at any time, and if it involves any disputes or expenditures of a third party, the Customer shall be fully responsible for it; the Bank shall also have the rights to request the Customer to pay off each debt, and dispose the collaterals directly without notifying the Customer, so as to offset the debts owed to the Bank and all the expenses incurred as a result of the punishment. If any other assets and property of the Customer are store in the Bank, the bank shall have the right to retain them. And if the Bank has difficulty in obtaining funds, thus it has to adjust the date and amount of the loan, provided that the Bank has charged a commitment fee and have not made the loan, the commitment fee shall be returned to the Customer in proportion of the amount of the loan not yet transferred.**
8. Under circumstances where the credit facility deeds of the Customer's debts owed to the Bank are lost or damaged, the Customer shall be willing to make a correction in accordance with the intent of the Bank, or to carry out the debts based on the amount as described in the copies of the original documents, miniature copies, account books, bookkeeping notes and computer-generated documents that are kept by the Bank.
9. When the Customer applies for the credit facility service, **he/she must issue one or more protest waived as required by the Bank, and must authorize the Bank to fill in the maturity date of the promissory**
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note, and submit it to the Bank for keeping, and for serving as a means to pay off the Customer's debts to the Bank with this Agreement as a proof of authorization. If the Customer fails to perform the terms set out in this Agreement or in other deeds, the Bank may exercise the rights in the instrumental laws with this promissory note. **The Customer also acknowledges that the promissory note delivered to the Bank shall be a means of compensating the Customer's debts under this Agreement, that is, the so-called indirect payment in Civil Code and shall coexist with the Customer's debts under this Agreement.**

10. If all notes issued, endorsed, accepted or guaranteed by the Customer are not paid, accepted or are not to be prompted or accepted, upon receipt of the Bank's notice, the Customer must pay off the loan immediately regardless of the situations. For the above unpaid promissory note, the Customer agrees to waive the Bank's notification obligation set out under Article 89 of the Law of Negotiable Instruments.
 11. The Customer shall be willing to accept the Bank's supervision over the use of the credit, the audit of business financial affairs, the examination and supervision of collaterals, and the inspection of relevant account books, statements (including the consolidated financial statements of related companies), receipts and documents. When the Bank deems it necessary, it may also require the Customer to fill in and submit the above credit investigation documents on time, or provide an account statement signed by an accountant that is approved by the Bank, and may request the signing accountant to provide a working paper. However, the Bank does not have the obligation to monitor, audit, examine, supervise and inspect them. The Customer shall be willing to accept the Joint Credit Information Center (hereinafter referred to as "Joint Credit Information Center") inspect relevant account books, statements and receipts and documents. When the Joint Credit Information Center deems it necessary, it may also require the Customer to fill in and submit the above credit investigation documents on time, or provide an account statement signed by an accountant that is approved by the Center, and may request the signing accountant to provide a working paper. However, the Joint Credit Information Center does not have the obligation to inspect them.
 12.
 - (i) **The Customer agrees that within the scope of business registration special cases and specific purposes, the information of the Customer may be collected, processed and used by the Bank, or may be internationally transmitted, or may be provided to a third party authorized by the Bank for handling its affairs on its behalf, (including but not limited to agencies that are authorized to conduct market research).**
 - (ii) **When the Bank and other subsidiaries of Taishin Financial Holding Co., Ltd. to which the Bank belongs interactively use the customer information in compliance with laws and regulations such as the Financial Holding Company Act, Financial Holding Company and Subsidiaries of Financial Holding Company Cross-selling Regulations and Personal Information Protection Act, except for the name and address, such information being interactively used must not contain other basic information (including but not limited to information such as unified ID number, date of birth, age, sex, e-mail, telephone number, occupation) and transaction information on account, credit, investment, insurance and other information related, unless otherwise stipulated in laws or based on the agreed contract signed by the Customer or the written consent.**
 - (iii) **The Customer agrees disagrees to provide other information and transaction information on accounting, credit, investment and insurance besides name and address to the following subsidiaries of Taishin Financial Holding Co., Ltd., and use the above-mentioned information interactively in accordance with the foregoing provisions. In case of any addition to or change of the subsidiaries, the relevant information will be announced and disclosed on the official website of Taishin Financial Holding Co., Ltd. If the Customer does not tick it, it means that he/she agrees the**
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criteria shall be subject to what indicated in the Agreement on Interactive Usage of the Customer Information that was signed most recently by the Customer.

Taishin Financial Holding Co., Ltd.

Taishin International Bank Co., Ltd.

Taishin Securities Co., Ltd.

Taishin Financial Insurance Broker Co., Ltd.

Taishin Securities Investment Trust Co., Ltd.

Taishin Securities Investment Advisory (TSIA) Co., Ltd.

Taishin Asset Management Co., Ltd.

Taishin Venture Capital Investment Co., Ltd.

Stamp with the reservation seal for this Agreement

- (iv) **In case of any changes in the Customer's personal information, he/she can notify the customer service center of the subsidiaries of Taishin Financial Holding Co., Ltd. at any moment to request for modification or supplement.
The Customer also can notify the customer service center of the Bank (Tel No. 0800-023-123) at any moment to stop the interactive usage of the Customer's personal information and cross-selling or business promotion activities.**
 - (v) **The Customer agrees that the Bank can provide the Customer's information to the Joint Credit Information Center to file and use, and agrees that the Joint Credit Information Center can provide the filed information to other members for reference. And if it is the case that transfers to the credit guarantee of the middle and small-sized enterprises credit guarantee fund, the Customer also agrees that the fund queries and uses the Customer's customs declaration document at the Joint Credit Information Center within the duration of the Customer's debtor-creditor relationship and the business scope defined by the fund's donation charter due to business needs.**
 - (vi) **The Customer agrees that the Bank, for specific purpose of the credit assignment, provides the Customer's debt-related information to the creditor's rights assignee and the person who is in charge of the price identification check for the creditor's right for filing, but the bank shall urge these information users not to leak such information to third parties in accordance with the Banking Law, the Personal Information Protection Act and the security stipulations of other relevant laws.**
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13. **The Customer knows and agrees that the Bank's accounts collection and payment activities, computer processing activities or other accompanying activities related to this Agreement (including but not limited to data input, processing and input of the information systems, development, monitoring and maintenance of the information systems, marketing, form printing, packaging, delivery and mailing, data storage for forms and vouchers, accounts collection and legal procedures, property valuation business and other outsourced businesses approved by the competent authority, etc.) can be handled by an appropriate third party, which is entrusted by the Bank when the Bank deems it necessary, in accordance with the provisions of the competent authority; the Customer agrees that the Bank can submit the information of the Customer to the third party to undertake the related works.**
14. If the Customer is a domestic (legal) person or a foreign (legal) person, and has various debt relationships with the Bank, the establishment conditions, methods and validity of his/her legal actions are applicable to the laws of the Republic of China. The Customer fulfills the debt and uses the location of the Bank as the place of performance, all the actions at law that occurred due to this Agreement, regardless of whether the domicile or nationality of the Bank or the Customer has changed, the Customer agrees to accept the Taiwan Taipei District Court or N/A District Court as the competent court of first instance of both parties. If the Customer is a company established outside the Republic of China or does not have a residential address in the Republic of China, they shall be agreed that the Bank and the competent court may send the relevant legal documents (including any pleadings, notifications, notice of entry of judgment or other notices) to the address of the Customer's process agent in the Republic of China by mail. The name and residential address of the process agent are detailed in "Other special provisions" in Chapter IV.
15. **The Customer agrees that the creditor's rights owned by the Bank against the Customer shall be granted to a trust institution in accordance with the Article 6 of the Financial Assets Securitization Act and the related laws, and agrees that the Bank shall make an announcement instead of a notice for such granting or transfer; the Customer also agrees that the bank shall make an announcement instead of a notification when granting the creditor's rights for the purpose of financial assets securitization. And if the assets trust or transfer involves a person responsible for the debts, the Customer shall be regarded as acknowledged if they do not object to it during the period of the Bank's announcement.**
16. **The signatures and seals on this Agreement are confirmed by the Customer, and thereafter the transactions between the Customer and the Bank shall take effect under either the signatures or seals, or seals or signatures style of the agreement transaction (or authorization) on the Transaction Agreement signed separately with the Bank.**
17. In addition to the terms of this Agreement and related credit facility deeds, if there is any unaccomplished matter, the Customer is willing to follow the agreements and various transfer applications agreed separately with the Bank, or the "Uniform Customs and Credits", "Uniform Rules for Collection" and "International Guarantee Letter Practice" awarded by the International Chamber of Commerce and the terms concluded by the international rules interpreted by the terms of trade, and agrees that they are part of this Agreement.

Chapter II

Special Terms of Individual Credit Facility

Section I (Guarantee) Overdraft

18. The Customer agrees to disburse in accordance with the conditions approved by the Bank and the method of disbursement. If the contract expires during the overdraft period and the contract facility is not approved by the Bank, the principal and interest shall be paid in full. Within the agreed period, if the actually used average balance is less than half of the limit, the Customer is willing to pay the credit facility commitment fee in accordance with the Bank regulations.

Section II General (Guarantee) Loan

19. The Customer shall pay off the loan according to the agreed repayment method.

Section III Advancing domestic fare and discount

(I) Common Terms

20. **The Customer hereby expressly declares that if the Customer provide the bills to borrow or discount from the Bank, whether or not it is defective for the bills, causing the Bank suffers damage, the Customer is willing to abandon the benefits of the time limit to pay off all debts in a timely manner and to compensate the Bank for damages. The refusal to pay off and compensate shall not be made on the pretext of the defect of the bills, or the incompleteness of the legal procedure notice, or the statute of limitations.**

(II) Special terms and conditions for domestic fare advanced

21. The Customer should issue "Loan Drawdown Application ", "list of ticket receivable" and provide ticket receivable approved by the bank when reusing the fare quota approved by the bank during the specified period of time, and request the bank to appropriate funds once for all or by time within the quota range verified and approved by the bank. The exchange gain of the ticket receivable at maturity is deposited with "special account for compensation of domestic fare advanced"; and it is agreed that:

a. The bank is authorized, depending on its authorized signatory's seal, to draw money from this special account at any time to compensate all debts that the Customer owes the bank, and uses this agreement as the proof of the authorization.

b. The Customer may not break into the savings in the special account without the consent of the bank; and the account does not provide a passbook except providing a bank statement at the request of the Customer.

(III) Special terms and conditions for discount

22. The Customer agrees with the bank that the Customer can request the bank, depending on the note approved by the bank, to discount within the limit approved by the bank; and the Customer should pay off the discount funds by the deadline when the discount note expires or when the Customer receives the notice of payment.
23. For the debt arising from the discount that the Customer applies for according to this agreement, although its amortization period is after the period of the request of the discount according to the record of the discount note, the Customer should still be liable for satisfaction according to the regulation of this agreement.

Section IV Authorized acceptance

24. The Customer agrees with the bank that the Customer can issue drafts within the conditions approved by the bank and ask the bank for acceptance, and the maximum duration from the acceptance date to the due date for the drafts for which acceptance is applied is discussed separately by both parties.

Section V Authorized guarantee

25. The amount of money, time limit, content and so on of the items guaranteed by the bank on behalf of the Customer (appointer) are subject to the guarantee document issued by the bank. However, when the actual tax amount payable calculated by the Tax Collection Office exceeds the original guarantee amount, the Customer should agree to adjust the total guarantee amount at any time and bear the responsibilities of paying for all tax amount payable and late fees.
26. The duration of the quota is from the date of contract to the date when the Customer pays off all payables of the items guaranteed by the bank. In addition, the Customer promises to pay cash immediately according to the balance that should be paid when the guaranty liability is not discharged to the bank as the provisional disbursement when any situation in the article VI happens, and if there is a balance left after discharging of the bank's guarantee liability, this balance should be returned by the bank without interest.
27. The Customer should pay the guarantee commission to the bank and pay in full in the agreed payment method, and if the tax payable exceeds the original bonded amount because of the actual tax payable calculated by the Tax Collection Office, the Customer should pay the extra differentials of the guarantee commission. When the items guaranteed by the bank on behalf of the Customer expires and the Customer requests for facility and the bank renews the guarantee, the Customer should pay the deferred guarantee commission according to the regulation of the bank. However, if the duration of guarantee period is shortened, the Customer may not request a return of the paid fees. For postage and other charges (if any), the Customer should pay them separately.
28. When the items guaranteed by the bank on behalf of the Customer expires, the Customer should carry out these items on time and inform the bank at any time by post of the disposal situation, and at that time, if the guarantee payment is paid by the bank because of the failure of the carrying out of the items by the Customer due to the Customer's delay, the Customer should pay the interest and penalty generated from the date when the bank pays the guarantee payment to the date when the Customer pays off to the bank.
29. When the guarantee amount is counted by foreign currencies, the risk of the changes in exchange rate is borne wholly by the Customer. And if the bank suffers a loss due to the changes in exchange rate of the foreign currencies, the Customer would bear all responsibilities of compensation. Unless otherwise agreed, the foreign currency amount guaranteed in this contract is calculated by the highest exchange rate during the guarantee period or decided by the bank when converting to the NTD.
30. When the Customer fails to fulfill the items agreed with the third party creditor, the bank can perform the guarantor liabilities directly and unconditionally based on the letter of guarantee issued by this contract once the third party creditor notice the bank, in written form, fulfill the guaranty liability. The Customer neither can claim for liability exemption based on the defenses between the Customer and the third party creditor or any third party, nor can claim for liability exemption for the reason of force majeure circumstances (such as natural disaster, earthquake, war and so on) or for any other reasons.
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Section VI

Issuing letter of credit and import financing

(I) Common Terms

31. For the draft issued by the domestic and foreign sight letter of credit and usance letter of credit (hereinafter referred to as letter of credit) under this agreement, the Customer should still be liable for satisfaction although the expiring date of the draft is after the duration verified and approved by the bank; and when applying to the bank for issuing letter of credit, the Customer should check and submit the transfer application and the relevant documents required by the bank, and apply to the bank for making advances. The Customer is willing to pay off every debt according to the regulations of this agreement, and will take no exception to it for the reasons of application for issuing letter of credit or for other reasons.
 32. When applying to the bank for issuing letter of credit, the Customer recognizes that each sum of money listed in the transfer application and its interest and all expenses are the sum of money of the payment or advance guaranteed by the bank on behalf of the Customer (if the Customer has self-prepared margin, they are the differentials after deducting of the margin), and agrees to authorize the bank to pay the fare of the draft under each letter of credit with the relevant documents (such as the transfer application and (or) the draft under its letter of credit) as credentials. The Customer is willing to pay off every debt mentioned above according to the regulations of this agreement.
 33. The Customer acknowledges and agrees that if the drafts and the relevant documents mentioned under the Letter of Credit in this Agreement, on the surface, are considered to be complied with the terms of the Letter of Credit and honored by the Bank after review, the Customer shall pay the relevant amount to the Bank on the Settlement Day. If the Customer does not pay off or deposit the fare within the time limit for repayment, according to this Agreement, the deferred interests and liquidated damages shall be calculated from the date of disbursements or the expiring date of the drafts, and shall be paid. Even though or if the drafts and relevant documents mentioned above are proved to be untrue, or counterfeit and altered, or flawed afterwards (including the situations such as the actual quality and quantity of the goods are inconsistent with the related description on the documents), the Bank shall not be liable for all of it, and the Customer shall never refuse to pay off for any reasons. The Customer shall still take the responsibility to pay off the advance payment made by the Bank, the principal and interest on the loan, as well as all expenses originated from it according to the provisions of this Agreement. If there are any benefit-related damages caused to the Bank, the Customer shall still be liable for them.
 34. For the goods purchased with the advance payment or the loan, (including the goods in transit), if the Bank suffers any loss due to the default on the contract or delay in delivery by the seller, or there are any other force majeure events, the Customer shall be responsible for it. If the Letter of Credit expires, the Bank can cancel it directly, and use the refunds of the remittance to offset the balance of the advance payment and /or the loan made under this Agreement.
 35. When the goods, specification, unit price, total amount and delivery condition listed on the Import Letter of Credit signed by the Bank at the request of the Customer, or on the Letter of guarantee for production of bill of lading or the Endorsement of Bill of Lading stated under Collection are inconsistent with those described in later delivered shipping document, the Customer shall be responsible for the outstanding balance repayment, acceptance of bill, payment and all other procedures based on the condition listed in the shipping document delivered to the Bank. If the Bank suffers any losses due to the inconsistency of the contents between the document signed by the Bank and the documents delivered, the Customer shall take responsibility to make compensation for all the loss. The contents in that Delivery against Bank Guarantee or that Endorsement of Bill of Lading are deemed as the appendixes of this Agreement, with which the Customer shall comply.
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36. The Customer agrees to mortgage the purchased material and the collateral provided separately (such as the personal property and real property) together as the guarantee, and agrees that the Bank shall gain the pledge of rights for all the delivery roof of the procurements (such as import license and the relevant bills of lading), and the Bank shall gain the Chattel Pledge of the purchased material once it is delivered. Also, the Customer agrees to purchase the insurance for the material mentioned above, take the Bank as the primary beneficiary, and use this Agreement as the basis in writing for defining the Pledge.
37. In the event that the Customer is unable to repay the advance payment and the loan under each import according to this Agreement, or the Bank considers that the financial situation of the Customer is getting worse obviously, or the Bank suffers any loss or has the risk of suffering the loss due to the failure of performing the custom and delivery-related procedures in a timely manner after the delivery of the shipping document, the advance payment and the loan are deemed as maturity in real time, and the Bank has the right to choose to request the compensation in NTD based on the exchange rate from the date of delay, and for protecting the creditor's right, the Bank can make entry and pick up the delivery on behalf of the Customer, and auction, or dispose the imported goods and other collateral (including disposal method, prices, time and so on) to offset the balance of the principal and interest on the Bank's advance payment, as well as all expenses and losses originated from the disposal (including the taxes, warehouse rental fee, transport fee and other expenses paid to make entry and pick up the delivery). If it is still insufficient, the Customer shall be jointly and severally liable for making up the difference.
38. For the goods in each import, the Customer shall obtain the prior consent of the Bank in terms of the insurance types and insurance conditions in the event that the goods are imported based on **FOB, C&F** or similar price terms, and the original copy of the insurance policy and premium receipt shall be given to the Bank for keeping in the event that the proper insurance is purchased with the Bank being the primary beneficiary, while the expenses required for purchasing the insurance are all borne by the Customer,. If the Customer delays to arrange the insurance matter or fails to renew the insurance once it expires, the Bank has the right to handle these procedures on behalf of the Customer, but the Bank has no obligation to have it insured on behalf of the Customer. If the insurance expenses are paid in advance by the Bank, the Customer shall repay them immediately; if there is any delay, the Bank may include such fees in the amount of credit and the interest shall be counted according to the provisions of this Agreement.

(II) The Issue of Domestic Letter of Credit

39. In order to make the purchase within the Republic of China, the Customer needs to request the Bank to issue the domestic sight Letter of Credit and usance Letter of Credit in a revolving manner within the approved credit limit, and honor the draft with the Bank being as the drawee, which is signed and issued by the beneficiary (specified in the Letter of Credit) according to the provisions of the above Letters of Credit.
40. Unless otherwise agreed, if the Customer delays to repay the advance payment and the principal and interest on the loan under each Letter of Credit, he or she is willing to pay the deferred interests and liquidated damages that shall be calculated based on the prime lending rate set by the Bank on the date of disbursements plus the annual percentage rate of 2.25%, starting from the date of disbursements or the date of repayment.

(III) The Issue of Foreign Letter of Credit

41. In order to apply for the exchange settlement in the Bank for the overseas purchase now or in the future, hereby based on the proportion of the approved limit by the Bank, the Customer prepares the security deposit by themselves according to the contract and requests the Bank to issue the Letter of Credit and pay the foreign currency loan in advance in a revolving manner (hereinafter referred to as the advance payment) within the approved credit limit, or accept the Delivery against Bank Guarantee/Endorsement
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of Bill of Lading, while the Bank agrees to use foreign currency to make the advance payment or include this payment converted as NTD into the Customer's loan account and have it transferred to repay the advance payment mentioned above when the relevant documents received.

42. The Customer agrees that, the Bank shall advance or (and) accept the Letter of Credit issued for his/her application in accordance with relevant laws and regulations and conventional practices, by this time, the Customer shall submit the documents required and the agreed import license (if any) to the Bank as stipulated in the transfer application, and the Customer shall also be willing to use the shipping documents and goods under each Letter of Credit as the guarantee for the Bank's advances and/or loans under that Letter of Credit, and this Agreement shall be used as a proof of collaterals provided and the advances or loans of the Bank.
43. Upon arrival of the shipping documents under each Letter of Credit and after a notice (written or verbal) has been given by the Bank, the Customer shall pay or accept the fare of the draft under each Letter of Credit within the reasonable liquidation period stipulated in the "Uniform Customs and Credits"; however, if the Bank has advanced the fare first, the Customer shall pay off each advance within ten days after the Bank has issued a notice (written or verbal) and pay the interests and related expenses, and shall conduct the exchange settlement based on the spot foreign exchange selling rate set by the Bank on the day of repayment, or repay them with its own foreign exchange funds.
Under any one of the following circumstances, the method of paying off shall be as follows:
- (i) If the goods are delivered under the Letter of Credit at sight, and the shipping documents have not been delivered up to the point where shipping guarantee needs to be applied, the Customer shall be willing to pay off immediately, and the same shall apply in case that the Customer applies for an endorsement of sub-bill of lading.
 - (ii) In the event of partial shipments of the goods, the amounts of the partial shipments shall be repaid in advance on the basis of the proportion of the amount of the Letter of Credit and/or the advances.
 - (iii) If the shipping documents are delivered only after the expiry of the validity period of the Letter of Credit, and meet the requirements at the time of handling documentary bills, the Customer shall be willing to pay off immediately.
 - (iv) With the Bank's approval to change the loan to other foreign currency loan or NTD loan, the relevant regulations of the Bank regarding foreign currency loans or NTD loans must be followed.
44. The period of advance or acceptance under each Letter of Credit must not exceed the maximum number of days approved by the Bank, and the date of repayment of each debt shall be determined on the maturity date of each draft or on the maturity date notified by the Bank.
45. For each advance and loan under this credit facility, if they are repaid within the time limit of liquidation set out in the preceding article, interests for the portion of NTD and foreign currency advances shall be calculated at the loan interest rate agreed by the Bank from the actual date of disbursements (that is the debit date of the Bank's deposit counterpart for a Letter of Credit with an authorized debit clause; and the date when the Bank makes the account and sends the payment message for a Letter of Credit without an
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authorized debit clause) of the Bank to the date of repayment set forth in the preceding article.

46. When the Customer defers repayment of the advances or the principal and interest of the loan under each Letter of Credit, he or she shall be willing to pay deferred interests and liquidated damages as agreed at the foreign currency lending rate shown on the Bank's bulletin board at that time, starting from the date of disbursements or the date of repayment.
47. If the Customer fails to repay this loan within the agreed time limit, the Bank may directly convert the debt to a NTD loan, and the Customer shall have no objection to the preceding exchange date, exchange rate amount, interest rate, etc. However, the Bank has no obligation to do the conversion.
48. Relevant clauses in this Agreement shall also apply to the letter of credit financing issued by the Bank that is entrusted by the Customer.
49. Due to causes and factors that are not imputable to the Bank, errors or delays occur when a communication agency is delivering the Letter of Credit of this Agreement, or technical terminological interpretation errors occur, and all or part of the documents, or goods or the quality, quantity or value of the goods written in the documents are lost, damaged or delayed, or have not arrived at the place of delivery, and the goods are lost or damaged whether in transit or after the delivery as a result of not purchasing insurance, insufficient insurance coverage, or any third party's blockage or detention and other factors, the Bank shall not be liable for any of those. Under any of the above circumstances, the amount of the Letter of Credit shall still be paid in full by the Customer.

(VI) Import Collection Financing

50. The Customer acknowledges that the amount stated in each transfer application and its interests and all expenses incurred are the amount of the payment or advance guaranteed by the Bank on behalf of the Customer, and agrees to authorize the Bank to pay the fare of the draft or O/A under each D/A or D/P with the transfer application and/or relevant documents as credentials. The Customer shall be willing to pay off every debt arising from the above application for import collection financing in accordance with the provisions of this Agreement.
 51. If the Customer applies import collection D/A or D/P, or shipping guarantee or endorsement of sub-bill of lading under the import collection, or O/A for convenience of present or future exchange settlement transactions at the Bank to purchase goods from abroad, the Bank may approve foreign currency advances, or direct accounting of the NTD loan and repayment of the above advances through transfer upon arrival of the documents.
 52. The Customer agrees that the Bank shall advance or (and) accept the foreign import collection payment for goods in accordance with relevant laws and regulations and conventional practices, and the Customer must submit the documents required and the agreed import license (if any) to the Bank as stipulated in the transfer application, and the Customer shall also be willing to use the shipping documents and goods under each import collection as the guarantee for the Bank's advances and/or loans under that import collection, and this Agreement shall be used as a proof of the collaterals provided and the advances or loans.
 53. When the Customer imports goods and materials by way of import collection, with the consent of the Bank, the Customer may apply for shipping guarantee or endorsement
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of sub-bill of lading to the Bank within the agreed amount limit, and when transferring each time, the Customer must provide the shipping guarantee or endorsement of sub-bill of lading applications and the relevant documents required by the Bank. The Customer acknowledges that, according to the contents of each application and the amount and terms agreed in relevant deeds and documents, he/she shall be liable for the damages to the Bank until the Customer completes the bill acceptance or payment when the foreign documents are delivered to the Bank.

Section VII Outward Bill and Export Finance

(I) Outward Bill

54. Since the date of this Agreement is signed, any terms stipulated in this section shall apply to the documentary draft(s) and/or receipt(s) issued or endorsed by the Customer, whether the negotiation or discount to the Bank is made directly by the Customer or through other people, it should be the same, unless required by the Bank, there is no need to re-enter this Agreement for each negotiation or discount.
55. The Customer is willing to provide the shipping documents (they are used to apply to the Bank for negotiation or discount) and the relevant goods to the Bank as collateral, in order to guarantee the amount of money, interest and any related charges in the documentary draft(s) and/or receipt(s) issued or endorsed by the Customer of the Bank.
56. The Customer acknowledges that the negotiation or discount made by the Bank against the Customer is an advance rather than a buyout, and the Bank reserves the right to claim to a restitution at any time. After the documentary draft(s) and/or receipt(s) are negotiated or discounted by the Bank, if the draft and/or subsidiary documents were not in conformity with the conditions set out in the letter of credit, or due to any other reason, the discount or correspondent bank of the Bank refused to deal with the documentary draft(s) and/or receipt(s), or the bank issued the letter of credit refused payment, or the other party rejected the goods due to the quality and quantity of the goods are found to be different on delivery or other occasions, or any other reason, the Customer shall take full responsibility, upon the Bank's notice, the Customer shall immediately reimburse the Bank the amount of money, interest (The interest rate is subject to the foreign currency borrowing rate of the Bank on the date of negotiation) and any other accompanying fees of the draft. And the Customer still authorizes the Bank, if the Bank or the Bank's correspondent bank deems it necessary, the Bank may present a guarantee to the bank issued or accepted the letter of credit without noticing the Customer, and the Customer shall take full responsibility for the guarantee.
57. If any bank (the bank issued, accepted, conformed the letter of credit, drawee bank and so on) related to the letter of credit is declared bankruptcy, seizure, provisional attachment, provisional injunction and auction due to insolvency, or when it is filing for bankruptcy or settlement, the Customer shall immediately reimburse the Bank the amount of money, interest and any other accompanying fees of the negotiation or discount.
58. The Customer authorizes the Bank or the Bank's correspondent bank to send documentary bill(s) and/or receipt(s) by any means that the Bank or the Bank's correspondent bank deems appropriate.
59. If documentary bill(s) and/or receipt(s) is damaged or lost in delivery, or is deemed damaged or lost, or is wrongly delivered, etc., causing delay in delivery to the place of payment. Upon the Bank's notice, the Customer shall provide the Bank the documentary bill(s) and/or receipt(s) again according to the records retained by the Bank, or immediately reimburse the Bank the amount of money, interest and any other accompanying fees of the negotiation or discount according to the Bank's instructions.
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60. If the documentary bill cannot be accepted by the payer, or cannot be paid by the payer or the acceptor due to foreign intervention, or the draft is unable to pay, or the remittance cannot be remitted to the Bank, because of the local laws and regulations or any other reason, whether the draft and/or subsidiary documents are returned or not, the Customer agrees to provide the collateral upon the Bank's notice that it must increase the collateral. Otherwise, the Customer is willing to immediately reimburse the amount of money, interest and any other accompanying fees of the draft without objection.
 61. If the creditor's rights of the draft is not established due to the documentary bill lacks of essential items that it should have, or the creditor's rights of the draft is eliminated due to aging or lack of formalities, the Customer is still willing to reimburse the Bank the face amount of the draft, together with the interest accrued before or after the expiry of the draft, and all accompanying fees.
 62. In the event of any damage to the Bank due to defects in draft and/or subsidiary documents, the Customer is willing to reimburse for any damages the Bank suffers for any reason.
 63. The Bank does not have the responsibility to identify the authenticity of the seal, signature and text written by the Customer on the draft or any other documents. If the seal, signature or text is forged, altered or stolen, the Customer is still willing to reimburse for any damages the Bank suffers.
 64. The Customer authorizes the Bank, or any of the Bank's managers, or agents, or draft and/or receipts holders to (but not necessarily) insure all insurance against the collateral of the draft and/or receipts, including robbery, shore fires, etc. All insurance premiums and related expenses can be added to the draft amount, which will be borne by the Customer. In addition, the Bank has the priority of compensation for the draft and/or receipts, the collateral, together with the above fees, and may directly dispose of the collateral to cover the Bank's creditor's rights, other related expenses, or the fees related to insurance which are paid by other third parties, without affect the Bank's right to request other draft debtors. Also, the bank may sell some of the collateral to cover the necessary freight, premiums and other expenses. At the same time, the Bank may represent the Customer to handle all necessary incidents and charge for this service. If the Bank does not object to the specified wharf or warehouse, the Customer shall transfer the goods to a public or private wharf or warehouse in accordance with the instructions of the payer or the acceptor.
 65. The Customer authorizes the Bank, or any of the Bank's managers, or agents, or draft and/or receipts holders to accept the conditional acceptance of the payer, and after payment of the draft on the maturity date, he/she may hand over the subsidiary documents that are accompanied by the draft as guarantees to the payer or the acceptor. Such authorization may also apply to participation in acceptance.
 66. The Customer authorizes the Bank to deliver the goods to anyone in batches at any time before the maturity of the draft if it is deemed appropriate by the Bank, acceptor, or its representative (but it's not mandatory). When all or part of the goods are delivered, an appropriate amount of money shall be charged, which shall be in a reasonable proportion to the value of the goods listed on the invoice or to the amount of money written in the guaranteed draft. The interpretation of the corresponding amount of money above shall be determined by the Bank.
 67. The Customer authorizes the Bank, or any manager or agent of the Bank, or the draft and /or documents holder, and when the draft is presented for acceptance but rejected by the acceptor, or when the draft is mature but the payer refuses to pay, the Customer waives the requirement for a certificate of protest. For the above-mentioned refusal to accept or pay, or the payer's or acceptor's stopping to pay, declaring bankruptcy, or carrying out liquidation before the maturity of the bill, the Bank may sell all or part of the collateral of the draft and/or documents in such a way as is deemed appropriate by the Bank or the holder of the draft and/or documents (whether or not the draft has been conditionally or absolutely accepted by the acceptor), and use the proceeds to pay the bill and its remittance fee after deducting the service fee
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and commission. And if there is a balance, the Bank or the holder of the draft and/or documents may use it to pay off the Customer's other bills (whether or not they are guaranteed), the Customer's borrowings from the Bank, or other debts that Customer is obligated to pay to the Bank. For the damage or loss of insured goods, the Customer authorizes the Bank to obtain compensation in accordance with the insurance policy, deduct the service fee, and handle the remaining net amount of money using the above method, the same as the case of disposing and selling other goods.

68. Unless otherwise agreed, the holder of the draft issued by the Customer may exempt from making a certificate of protest when exercising the right of recourse. Although the Customer waives the requirement for a certificate of protest, the Customer has no objection if the Bank or the Bank's correspondent bank considers it necessary to have a certificate of protest. Wherever a protest for nonpayment or nonacceptance is made, it is legal and valid for the Customer and does not require any proof.
69. If the net proceeds from selling the goods are insufficient to pay the amount written on the draft and /documents (including the exchange difference under the exchange currency rate at that time), the Bank, any manager or agent of the Bank, or the draft and/or documents holder are hereby authorized to issue a draft to the Customer to obtain compensation for the insufficient amount, without affecting the right to press for the insufficient amount from other endorsers. And the Customer agrees that the bill presented by the Bank or the holder of the draft and/or documents is the evidence of the sale of the goods and the evidence of the loss. The Customer shall promptly pay when the draft presented.
70. Regardless of the occurrence of the sale of goods, the Bank, any manager or agent of the Bank, or the draft and/or documents holder are hereby authorized to accept payment from the payer or acceptor before the maturity of the draft, and deliver the bill of lading and other shipping documents to the payer or the acceptor after the bill is paid off. If the Bank or the draft and /or documents holder allows paying in advance, the rebate can be calculated in accordance with the current interest rates at the place where the bill is paid.
71. If the shipping documents will be delivered after the draft is accepted, the Customer authorizes the bank to deliver the shipping documents which are collateral of the draft to the acceptor after the draft is accepted by the acceptor. In this case, if the draft is mature and the acceptor does not pay or only partially pay, the Customer shall be responsible for any resulting occurrence. The Customer shall reimburse the Bank for the entire amount or part of the amount owed by the draft, and the resulting remittance fee and service fee, and guarantee that the Bank will not suffer any damage as a result, or that the Bank or the draft holder has the priority to be paid with money of selling the collateral.
72. If the draft payer refuses acceptance or payment, or the collateral has arrived at the destination port prior to the maturity of the draft, the Customer authorizes the Bank or correspondent bank of the Bank to take any measures that the Bank or correspondent bank of the Bank deem necessary to maintain such goods, such as the unloading, customs declaration, storage, insurance of the draft collateral. The expenses incurred in taking the above-mentioned measures, as well as any damage caused by the negligence of the practitioners participating in the unloading, customs declaration, storage, insurance, and wars, natural disasters, or other force majeure factors shall be borne by the Customer.

(II) Export Finance

73. The export financing is limited to support the necessary capital turnover before or after the Customer's export, and the Customer shall export in accordance with the terms and periods in the letter of credit issued by a foreign bank, signed export contract, export order, or other export documents. If it is time to repay, and the Customer cannot repay with the foreign exchange from selling the exports, but repays with other income, the originally agreed loan interest rate shall be applied since the date of the appropriation, except as otherwise agreed between the Customer and the Bank.
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74. The letter of credit provided by the Customer must meet the following:
- (I) An irrevocable letter of credit that determines the Customer as the beneficiary or an irrevocable letter of credit that transfers to the Customer by the beneficiary.
 - (II) The bank that issued the letter of credit is recognized by the Bank.
75. The Customer agrees to deposit the aforementioned letter of credit, export contract, or export order (all including amendments) in the Bank and to undertake the transaction of outward documentary bills or collection in the Bank. The Customer also authorizes the Bank to directly compensate for the loan principal and interest as well as all the debts of the Customer at the Bank with the payments received at the documentary bill date of outward documentary bills and at the notification dates of the entry of the export collection, inward remittance, and clean collection. This Agreement is used as a proof of authorization.
76. For the bills, orders, and letters of credit provided by the Customer under this contract, if the payment is received before the expiration date of the corresponding loan, the Customer agrees that the Bank can directly offset the loan in advance.
77. If the Customer undertakes the transaction of outward bills in the Bank but the payment is refused abroad, or if payment isn't received when the export collection expires, or if there are other foreign buyers failing to pay as agreed, the Customer is willing to pay off immediately without any conditions.

Section VIII

Buy Foreign Currency Bills (Or Buy Clean Bills)

78. In accordance with the provisions of the "Acquisition and Exchange of Foreign Currency Bills Agreement" and other agreements, the Customer will request the Bank to buy the foreign currency bills (or buy clean bills) under the conditions approved by the Bank.

Section IX Currency Conversion of Foreign Currency Loans

79. The Customer applies to convert foreign currency loans in according with the "Application for Currency Conversion in Foreign Exchange Service", and agrees to abide by the following terms. If any subsequent dispute or loss is caused by changes in the exchange rate, it is the sole responsibility of the Customer.
80. The Customer agrees to convert the balance of foreign currency loans into the agreed new currency based on the exchange rate negotiated with the Bank. In addition, the collateral of the original loan is still the collateral of the converted loan, and the interest rate calculation method, due date and method of repayment shall be determined according to the original agreement.
81. The loan interest before the conversion shall be paid off before the conversion, and the Customer may convert it into NTD for delivery, according to the spot selling exchange rate shown by the Bank on the clearing day. The Customer agrees to calculate the converted principal and interest based on the interest rate applicable to the new currency loan negotiated with the bank, and deliver it to the Bank on the date of payment as originally agreed. If the Customer's payment is delayed, the Bank may collect the liquidated damages according to the original agreement.
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Section X Miscellaneous

82. In the case of other financial products that are not specified in this Agreement, the Customer agrees to enter into related credit contracts with the Bank.

Chapter III Entrusted Debiting and Withdrawing

The Customer hereby authorizes the Bank to directly debit his/her account and transfer all the money he/she owes the Bank listed below to the Bank, with the deposit account _____, at branch/department of the Bank:

(i) Loans, advances, bank acceptances, guaranteed principals and interests, liquidated damages, service charges, registered fees and other related expenses.

(ii) Payments, commissions, service charges, telegram charges and other related expenses for inward/outward documentary bills.

(iii): The others:

The Bank will not be required to make subsequent collection of the withdrawal slips for the Customer regarding the aforementioned behavior of the Bank's directly debiting and transferring. The Customer fully acknowledges such withdrawals without any objection, and the deposit balance of the aforementioned account shall be subject to the balance recorded in the Bank. In the event of any future entanglements, it is understood that the Customer is solely responsible for such matters, and it has nothing to do with the Bank, and the Customer is willing to abandon all claims.

Chapter IV Other Special Provisions

: The name and address of the process agent referred to in Chapter I Article 14 are:

Kind Regards

Taishin International Bank

The Customer:

Seal checked by:

(Original reservation seal)
Legal representative
Unified number:

The original (copy) of this Agreement has been received is not required from the Bank

The Customer:

Seal checked by:

(Original reservation seal)
Legal representative
Unified number:

The original (copy) of this Agreement has been received is not required from the Bank

The Customer:

Seal checked by:

(Original reservation seal)
Legal representative
Unified number:

The original (copy) of this Agreement has been received is not required from the Bank

Responsible Person	Reviewer	Supervisor

The Customer:

Seal checked by:

(Original reservation seal)
Legal representative
Unified number:

The original (copy) of this Agreement has been received is not required from the Bank



The Customer:

Seal checked by:

(Original reservation seal)
Legal representative
Unified number:

The original (copy) of this Agreement has been received is not required from the Bank

The Customer:

Seal checked by:

(Original reservation seal)
Legal representative
Unified number:

The original (copy) of this Agreement has been received is not required from the Bank

Responsible Person	Reviewer	Supervisor

Date:

July 23, 2019



Power of Attorney

I. The drafter of this Power of Attorney _____

_____ (hereinafter referred to as "the Authorizer") hereby expressly and irrevocably authorizes Taishin International Bank Co., Ltd. (that is Taishin Bank, hereinafter referred to as "the Bank") that, where the Authorizer, on the basis of an import permit and/or other relevant documents approved by the Bureau of Foreign Trade or its designated institutions, upon the delivery of all or part of the goods under the Letter of Credit that is entrusted to be issued by the Bank, if the Authorizer fails to make payments to retire the documents in respect of each Letter of Credit issued by the Bank, or the Authorizer entrusted the Bank to issue Letters of Credit and all of them are deemed to have expired in accordance with the agreed claims of the relevant credit facility deeds, the Bank may apply for approval from the Bureau of Foreign Trade to make custom declaration and take delivery of goods on behalf of the Authorizer, and may auction or dispose the imported goods freely.

II. The Authorizer also earnestly declares that the acts such as custom declaration and taking delivery of goods conducted by the Bank in accordance with this Power of Attorney can be seen as the acts of the Authorizer, which shall have the binding effectiveness on the Authorizer.

Kind Regards

Taishin International Bank

The Drafter of Power of Attorney: _____ (Please stamp with the original reservation seals of the company and the person in charge)

Address:

Authorization Date of Power of Attorney:

Responsible Person	Reviewer	Supervisor



Power of Attorney

- I. The drafter of this Power of Attorney _____ (hereinafter referred to as "the Authorizer") hereby expressly and irrevocably authorizes Taishin International Bank Co., Ltd. (that is Taishin Bank, hereinafter referred to as "the Bank") that, where the Authorizer, on the basis of an import permit and/or other relevant documents approved by the Bureau of Foreign Trade or its designated institutions, upon the delivery of all or part of the goods under the Letter of Credit that is entrusted to be issued by the Bank, if the Authorizer fails to make payments to retire the documents in respect of each Letter of Credit issued by the Bank, or the Authorizer entrusted the Bank to issue Letters of Credit and all of them are deemed to have expired in accordance with the agreed claims of the relevant credit facility deeds, the Bank may apply for approval from the Bureau of Foreign Trade to make custom declaration and take delivery of goods on behalf of the Authorizer, and may auction or dispose the imported goods freely.
- II. The Authorizer also earnestly declares that the acts such as custom declaration and taking delivery of goods conducted by the Bank in accordance with this Power of Attorney can be seen as the acts of the Authorizer, which shall have the binding effectiveness on the Authorizer.

Kind Regards

Taishin International Bank

The Drafter of Power of Attorney: _____ (Please stamp with the original reservation seals of the company and the person in charge)

Address:

Authorization Date of Power of Attorney:

Responsible Person	Reviewer	Supervisor



Power of Attorney

- I. The drafter of this Power of Attorney _____ (hereinafter referred to as "the Authorizer") hereby expressly and irrevocably authorizes Taishin International Bank Co., Ltd. (that is Taishin Bank, hereinafter referred to as "the Bank") that, where the Authorizer, on the basis of an import permit and/or other relevant documents approved by the Bureau of Foreign Trade or its designated institutions, upon the delivery of all or part of the goods under the Letter of Credit that is entrusted to be issued by the Bank, if the Authorizer fails to make payments to retire the documents in respect of each Letter of Credit issued by the Bank, or the Authorizer entrusted the Bank to issue Letters of Credit and all of them are deemed to have expired in accordance with the agreed claims of the relevant credit facility deeds, the Bank may apply for approval from the Bureau of Foreign Trade to make custom declaration and take delivery of goods on behalf of the Authorizer, and may auction or dispose the imported goods freely.
- II. The Authorizer also earnestly declares that the acts such as custom declaration and taking delivery of goods conducted by the Bank in accordance with this Power of Attorney can be seen as the acts of the Authorizer, which shall have the binding effectiveness on the Authorizer.

Kind Regards

Taishin International Bank

The Drafter of Power of Attorney: _____ (Please stamp with the original reservation seals of the company and the person in charge)

Address:

Authorization Date of Power of Attorney:

Responsible Person	Reviewer	Supervisor

Taishin Financial Holdings and Its Various Subsidiaries Confidentiality Measures for Customer Information

Taishin Financial Holding Co., Ltd., which was founded on February 18th, 2002, owns the bank, security companies, investment trust companies and other subsidiaries and provides the customers with one-stop shopping products and services. Taishin Financial Holding Co., Ltd. and its various subsidiaries will adhere to the strict security measures previously adopted by its various subsidiaries for the customer information, and takes the necessary confidentiality measures to safeguard the information provided by the customers. Taishin Financial Holdings Co., Ltd and its various subsidiaries confidentiality measures for customer information are explained as follows:

The Customer Information Confidentiality Measures of Taishin Financial Holding Co., Ltd. and Its Various Subsidiaries shall be implemented in compliance with the Financial Holding Company Act, Financial Holding Company and Subsidiaries of Financial Holding Company Cross-selling Regulations (hereinafter referred to as "the Cross-selling Regulations"), Personal Information Protection Act and the related laws of the competent authorities. Also, each subsidiary shall abide by the regulations of other relevant laws (including but not limited to Article 48 Item 2 of the Banking Law), in order to properly implement the customer information confidentiality measures.

I. Change and Modification for the Customer Information

In case of any change in personal information of customers, they may notify the customer service center of subsidiaries of Taishin Financial Holdings Co., Ltd at any moment to request for modification or supplement.

II. The Customer's Opt-Out Right Exercise

You can notify the customer service center of the subsidiaries of Taishin Financial Holding Co., Ltd. at any moment to have the interactive usage of your personal information for marketing or business promotion activities stopped.

The Taishin Financial Holding Co., Ltd. and its subsidiaries reserve the right to amend the confidentiality measures, and will announce and disclose the related information about those measures on the Internet or other public disclosure channels approved by the competent authorities; the same procedure applies in case of amendment. If you have other questions related to confidentiality measures, you can consult with Taishin Financial Holding Co., Ltd. or its subsidiaries at any time.

The subsidiaries of Taishin Financial Holding Co., Ltd. currently include:

Taishin International Bank Co., Ltd.

Taishin Securities Co., Ltd.

Taishin Financial Insurance Broker Co., Ltd.

Taishin Securities Investment Advisory (TSIA) Co., Ltd.

Taishin Securities Investment Trust Co., Ltd.

Taishin Asset Management Co., Ltd.

Taishin Venture Capital Investment Co., Ltd.

In case of any addition to or change of the above subsidiaries in the future, the relevant information will be announced and disclosed on the official website of Taishin Financial Holding Co., Ltd. and its various subsidiaries.

Promissory Note

With this note, a total of NTD 100 million

shall be paid unconditionally to _____ or his/her designated person on _____ (Date)

And the related covenants are as follows:

- | | | |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| 1. | This promissory note authorizes Taishin Bank to fill the maturity date, and exempts it from the obligations of issuing a Certificate of Protest and the notification obligation set out under Article 89 of the Law of Negotiable Instruments | Drawer:
Address: |
| 2. | The interest rate of this promissory note shall be calculated as follows from the issuing date of this note:
<input type="checkbox"/> The basic lending rate of Taishin Bank and the additional annual percentage rate of Interests are counted flexibly.
(If there are any changes or adjustments in the above-mentioned basic lending rate or the additional rate, the interests shall be counted based on the changed or adjusted rate.)
<input type="checkbox"/> Others:
If the payment for the principal and interests mentioned above is delayed, | Drawer
Address:

Drawer
Address: |
| | for those delayed part with the overdue time less than six months, liquidated damages shall also be paid with, at 10% of the previously agreed interest rate; for those delayed part with the overdue time more than six months, the liquidated damages shall be paid with, at 20% of the previously agreed interest rate. | Drawer |
| 3. | Place of payment: | Address: |

Date: July 23, 2019

Endorsee	
Endorser	
Endorser's address	
Endorsement date	
Note:	

The endorser agrees that this promissory note authorizes Taishin Bank to fill the maturity date and exempts it from the obligations of issuing a Certificate of Protest and the notification obligation set out under Article 89 of the Law of Negotiable Instruments

Promissory Note

With this note, a total of USD 1 million

shall be paid unconditionally to _____ or his/her designated person on _____ (Date)

And the related covenants are as follows:

1. This promissory note authorizes Taishin Bank to fill the maturity date, and exempts it from the obligations of issuing a Certificate of Protest and the notification obligation set out under Article 89 of the Law of Negotiable Instruments

Drawer:

Address:

2. The interest rate of this promissory note shall be calculated as follows from the issuing date of this note:

- The basic lending rate of Taishin Bank and the additional annual percentage rate of Interests are counted flexibly.
(If there are any changes or adjustments in the above-mentioned basic lending rate or the additional rate, the interests shall be counted based on the changed or adjusted rate.)

Drawer

Address:

- Others:
If the payment for the principal and interests mentioned above is delayed,
for those delayed part with the overdue time less than six months, liquidated damages shall also be paid with, at 10% of the previously agreed interest rate; for those delayed part with the overdue time more than six months, the liquidated damages shall be paid with, at 20% of the previously agreed interest rate.

Drawer

Address:

Drawer

Address:

3. Place of payment:

Date: July 23, 2019

Endorsee	
Endorser	
Endorser's address	
Endorsement date	
Note:	

The endorser agrees that this promissory note authorizes Taishin Bank to fill the maturity date and exempts it from the obligations of issuing a Certificate of Protest and the notification obligation set out under Article 89 of the Law of Negotiable Instruments.

Certification

I, Chih-Hsiang (Thompson) Lin, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Applied Optoelectronics, 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 and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 8, 2019

/s/ CHIH-HSIANG (THOMPSON) LIN

CHIH-HSIANG (THOMPSON) LIN

President and Chief Executive Officer

Certification

I, Stefan J. Murry, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Applied Optoelectronics, 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 and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 8, 2019

/s/ STEFAN J. MURRY

STEFAN J. MURRY

Chief Financial Officer

Certification

Pursuant to the requirement set forth in Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and Section 1350 of Chapter 63 of Title 18 of the U.S. Code (18 U.S.C. § 1350), Chih-Hsiang (Thompson) Lin, President and Chief Executive Officer of Applied Optoelectronics, Inc. (the “Company”), and Stefan J. Murry, Chief Financial Officer and Senior Vice President of the Company, each hereby certifies that, to the best of his knowledge:

1. The Company’s Quarterly Report on Form 10-Q for the period ended June 30, 2019, to which this Certification is attached as Exhibit 32.1 (the “Quarterly Report”) fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act; and
2. The information contained in the Quarterly Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

In Witness Whereof, the undersigned have set their hands hereto as of the 8th day of August, 2019.

/s/ CHIH-HSIANG (THOMPSON) LIN

CHIH-HSIANG (THOMPSON) LIN

President and Chief Executive Officer

/s/ STEFAN J. MURRY

STEFAN J. MURRY

Chief Financial Officer

This certification accompanies the Quarterly Report to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Applied Optoelectronics, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Quarterly Report), irrespective of any general incorporation language contained in such filing.
