E Ink Holdings Inc. and Subsidiaries

Consolidated Financial Statements for the Three Months Ended March 31, 2020 and 2019 and Independent Auditors' Review Report

Deloitte.

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INDEPENDENT AUDITORS' REVIEW REPORT

The Board of Directors and Shareholders
E Ink Holdings Inc.

Introduction

We have reviewed the accompanying consolidated financial statements of E Ink Holdings Inc. and its subsidiaries (collectively referred to as the "Group"), which comprise the consolidated balance sheets as of March 31, 2020 and 2019, and the consolidated statements of comprehensive income, changes in equity and cash flows for the three months then ended, and the related notes to the consolidated financial statements, including a summary of significant accounting policies (collectively referred to as the "consolidated financial statements"). Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and International Accounting Standard 34 "Interim Financial Reporting" endorsed and issued into effect by the Financial Supervisory Commission of the Republic of China. Our responsibility is to express a conclusion on the consolidated financial statements based on our reviews.

Scope of Review

Except as explained in the following paragraph, we conducted our reviews in accordance with Statement of Auditing Standards No. 65 "Review of Financial Information Performed by the Independent Auditor of the Entity". A review of consolidated financial statements consists of making inquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

Basis for Qualified Conclusion

As disclosed in Note 13 to the consolidated financial statements, the financial statements of some non-significant subsidiaries included in the consolidated financial statements were not reviewed. As of March 31, 2020 and 2019, the combined total assets of these non-significant subsidiaries were NT$1,618,274 thousand and NT$1,504,727 thousand, respectively, both representing 4% of the consolidated total assets, and the combined total liabilities of these non-significant subsidiaries were NT$405,163 thousand and NT$351,734 thousand, respectively, both representing 3% of the consolidated total liabilities; for the three months ended March 31, 2020 and 2019, the amounts of combined comprehensive loss of these non-significant subsidiaries were NT$(17,248) thousand and NT$(11,042) thousand, respectively, representing 3% and 1%, respectively, of the consolidated total comprehensive income or loss. Furthermore, the related information of the abovementioned non-significant subsidiaries as disclosed in Note 33 to the consolidated financial statements for the same reporting periods as those of the Group was also not reviewed.

Qualified Conclusion

Based on our reviews, except for the adjustments, if any, as might have been determined to be necessary had the financial statements of the non-significant subsidiaries as described in the preceding paragraph and the related information of these non-significant subsidiaries as disclosed in Note 33 to the consolidated financial statements been reviewed, nothing has come to our attention that caused us to believe that the accompanying consolidated financial statements do not present fairly, in all material respects, the consolidated financial position of the Group as of March 31, 2020 and 2019, and its consolidated financial performance and its consolidated cash flows for the three months then ended in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and International Accounting Standard 34 "Interim Financial Reporting" endorsed and issued into effect by the Financial Supervisory Commission of the Republic of China.

The engagement partners on the reviews resulting in this independent auditors' review report are Hui-Min Huang and Chih-Ming Shao.

Deloitte & Touche
Taipei, Taiwan
Republic of China

May 7, 2020

<u>*Notice to Readers*</u>

The accompanying consolidated financial statements are intended only to present the consolidated financial position, financial performance and cash flows in accordance with accounting principles and practices generally accepted in the Republic of China and not those of any other jurisdictions. The standards, procedures and practices to review such consolidated financial statements are those generally applied in the Republic of China.

For the convenience of readers, the independent auditors' review report and the accompanying consolidated financial statements have been translated into English from the original Chinese version prepared and used in the Republic of China. If there is any conflict between the English version and the original Chinese version or any difference in the interpretation of the two versions, the Chinese-language independent auditors' review report and consolidated financial statements shall prevail.

E INK HOLDINGS INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS
(In Thousands of New Taiwan Dollars)

	March 31, 2020 (Reviewed)		December 31, 2019 (Audited)		March 31, 2019 (Reviewed)	
ASSETS	**Amount**	**%**	**Amount**	**%**	**Amount**	**%**
CURRENT ASSETS						
Cash and cash equivalents (Notes 4 and 6)	$ 5,642,797	14	$ 7,047,106	17	$ 8,023,030	20
Financial assets at fair value through profit or loss (Notes 4 and 7)	2,507,700	6	2,455,299	6	1,874,225	5
Financial assets at amortized cost (Notes 4, 9 and 30)	6,873,540	17	7,526,246	18	5,037,874	12
Contract assets (Notes 4 and 21)	85,490	-	60,088	-	98,298	-
Notes and accounts receivable (Notes 4, 10, 21 and 29)	2,078,017	5	2,059,829	5	2,438,300	6
Other receivables (Note 4)	189,051	-	216,253	1	232,472	1
Current tax assets (Note 4)	22,934	-	22,011	-	43,772	-
Inventories (Notes 4 and 11)	2,396,311	6	1,941,702	5	2,231,264	5
Prepayments (Note 29)	207,522	1	192,732	-	269,705	1
Non-current assets held for sale (Notes 4 and 12)	128,769	-	109,745	-	10,396	-
Other current assets	699	-	3,049	-	85	-
Total current assets	20,132,830	49	21,634,060	52	20,259,421	50
NON-CURRENT ASSETS						
Financial assets at fair value through profit or loss (Notes 4 and 7)	542,587	1	60,285	-	-	-
Financial assets at fair value through other comprehensive income (Notes 4 and 8)	4,861,845	12	4,474,517	11	3,976,205	10
Investments accounted for using the equity method (Note 4)	137,179	-	147,694	-	86,255	-
Property, plant and equipment (Notes 4, 14, 22, 26 and 29)	4,028,806	10	4,104,317	10	4,443,294	11
Right-of-use assets (Notes 4, 15 and 22)	1,751,539	4	1,766,034	4	1,848,456	5
Goodwill (Notes 4 and 16)	6,740,911	17	6,720,745	16	6,789,887	17
Other intangible assets (Notes 4, 16 and 22)	1,318,184	3	1,387,096	3	1,672,472	4
Deferred tax assets (Note 4)	1,058,993	3	987,282	3	999,390	2
Other non-current assets (Notes 4, 29 and 30)	327,362	1	338,919	1	398,931	1
Total non-current assets	20,767,406	51	19,986,889	48	20,214,890	50
TOTAL	$ 40,900,236	100	$ 41,620,949	100	$ 40,474,311	100
LIABILITIES AND EQUITY						
CURRENT LIABILITIES						
Short-term borrowings (Notes 17 and 30)	$ 4,691,016	11	$ 4,557,832	11	$ 2,147,020	5
Short-term bills payable (Note 17)	555,937	1	579,887	1	659,747	2
Contract liabilities (Notes 4 and 21)	1,177,644	3	1,298,608	3	1,756,949	4
Notes and accounts payable (Note 29)	1,359,193	3	1,156,039	3	1,407,532	3
Other payables (Notes 18 and 26)	1,023,828	2	1,263,755	3	1,071,377	3
Current tax liabilities (Note 4)	207,684	1	146,121	-	168,606	-
Other current liabilities (Notes 4, 7, 12, 15 and 29)	247,867	1	204,433	1	209,935	1
Total current liabilities	9,263,169	22	9,206,675	22	7,421,166	18
NON-CURRENT LIABILITIES						
Contract liabilities (Notes 4 and 21)	824,400	2	1,024,259	3	1,570,381	4
Deferred tax liabilities (Note 4)	125,599	1	120,854	-	109,594	-
Lease liabilities (Notes 4, 15 and 29)	1,710,695	4	1,721,654	4	1,801,722	5
Net defined benefit liabilities (Note 4)	87,953	-	87,600	-	81,926	-
Other non-current liabilities (Notes 4, 17 and 29)	11,349	-	7,123	-	51,811	-
Total non-current liabilities	2,759,996	7	2,961,490	7	3,615,434	9
Total liabilities	12,023,165	29	12,168,165	29	11,036,600	27
EQUITY ATTRIBUTABLE TO OWNERS OF THE COMPANY (Notes 4, 20 and 25)						
Share capital	11,404,677	28	11,404,677	27	11,404,677	28
Capital surplus	10,306,993	25	10,306,993	25	10,280,947	25
Retained earnings						
Legal reserve	1,773,654	4	1,773,654	4	1,512,287	4
Special reserve	255,475	1	255,475	1	70,678	-
Unappropriated earnings	6,186,513	15	5,399,253	13	5,581,320	14
Total retained earnings	8,215,642	20	7,428,382	18	7,164,285	18
Other equity	(1,400,325)	(3)	(29,881)	-	368,216	1
Treasury shares	(110,032)	-	(110,032)	-	(184,900)	-
Total equity attributable to owners of the Company	28,416,955	70	29,000,139	70	29,033,225	72
NON-CONTROLLING INTERESTS (Note 20)	460,116	1	452,645	1	404,486	1
Total equity	28,877,071	71	29,452,784	71	29,437,711	73
TOTAL	$ 40,900,236	100	$ 41,620,949	100	$ 40,474,311	100

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

(With Deloitte & Touche auditors' review report dated May 7, 2020)

E INK HOLDINGS INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In Thousands of New Taiwan Dollars, Except Earnings Per Share)
(Reviewed, Not Audited)

	For the Three Months Ended March 31			
	2020		2019	
	Amount	%	Amount	%
OPERATING REVENUE (Notes 4, 21 and 29)	$ 2,922,127	100	$ 2,954,772	100
OPERATING COSTS (Notes 11, 22 and 29)	1,572,850	54	1,701,432	58
GROSS PROFIT	1,349,277	46	1,253,340	42
OPERATING EXPENSES (Notes 22 and 29)				
Selling and marketing expenses	160,049	5	188,939	6
General and administrative expenses	528,979	18	621,843	21
Research and development expenses	592,012	20	550,057	19
Total operating expenses	1,281,040	43	1,360,839	46
INCOME (LOSS) FROM OPERATIONS	68,237	3	(107,499)	(4)
NON-OPERATING INCOME AND EXPENSES				
Interest income	77,821	3	81,934	3
Royalty income (Notes 4 and 21)	371,234	13	448,735	15
Other income (Note 29)	28,255	1	38,672	1
Interest expenses (Notes 14 and 29)	(26,708)	(1)	(18,559)	-
Net gain on foreign currency exchange (Note 32)	358,022	12	124,044	4
Net gain on fair value change of financial assets and liabilities at fair value through profit or loss	23,660	1	60,260	2
Other expenses	(11,908)	(1)	(22,687)	(1)
Total non-operating income and expenses	820,376	28	712,399	24
INCOME BEFORE INCOME TAX	888,613	31	604,900	20
INCOME TAX EXPENSE (Notes 4 and 23)	75,745	3	145,290	5
NET INCOME FOR THE PERIOD	812,868	28	459,610	15
OTHER COMPREHENSIVE INCOME (LOSS)				
Items that will not be reclassified subsequently to profit or loss:				
Unrealized gain (loss) on investments in equity instruments at fair value through other comprehensive income	(1,069,192)	(37)	550,270	19
	(1,069,192)	(37)	550,270	19

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E INK HOLDINGS INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In Thousands of New Taiwan Dollars, Except Earnings Per Share)
(Reviewed, Not Audited)

	For the Three Months Ended March 31			
	2020		2019	
	Amount	%	Amount	%
Items that may be reclassified subsequently to profit or loss:				
Exchange differences on translating the financial statements of foreign operations	$ (316,619)	(11)	$ 73,839	2
Share of other comprehensive income (loss) of associates and joint ventures accounted for using the equity method	(2,770)	-	1,894	-
	(319,389)	(11)	75,733	2
Other comprehensive income (loss) for the period, net of income tax	(1,388,581)	(48)	626,003	21
TOTAL COMPREHENSIVE INCOME (LOSS) FOR THE PERIOD	$ (575,713)	(20)	$ 1,085,613	36
NET INCOME ATTRIBUTABLE TO:				
Owners of the Company	$ 787,260	27	$ 438,048	15
Non-controlling interests	25,608	1	21,562	-
	$ 812,868	28	$ 459,610	15
TOTAL COMPREHENSIVE INCOME (LOSS) ATTRIBUTABLE TO:				
Owners of the Company	$ (583,184)	(20)	$ 1,066,926	36
Non-controlling interests	7,471	-	18,687	-
	$ (575,713)	(20)	$ 1,085,613	36
EARNINGS PER SHARE (Note 24)				
Basic	$ 0.69		$ 0.39	
Diluted	$ 0.69		$ 0.39	

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

(With Deloitte & Touche auditors' review report dated May 7, 2020) (Concluded)

E INK HOLDINGS INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
(In Thousands of New Taiwan Dollars)
(Reviewed, Not Audited)

	Equity Attributable to Owners of the Company											
							Other Equity					
	Share Capital			Retained Earnings								
	Shares (In Thousands)	Amount	Capital Surplus	Legal Reserve	Special Reserve	Unappropriated Earnings	Exchange Differences on Translating the Financial Statements of Foreign Operations	Unrealized Gain (Loss) on Financial Assets at FVTOCI	Treasury Shares	Total	Non-controlling Interests	Total Equity
BALANCE AT JANUARY 1, 2019	1,140,468	$ 11,404,677	$ 10,243,293	$ 1,512,287	$ 70,678	$ 5,138,085	$ (181,328)	$ (74,147)	$ (184,900)	$ 27,928,645	$ 385,799	$ 28,314,444
Net income for the three months ended March 31, 2019	-	-	-	-	-	438,048	-	-	-	438,048	21,562	459,610
Other comprehensive income (loss) for the three months ended March 31, 2019, net of income tax	-	-	-	-	-	-	78,608	550,270	-	628,878	(2,875)	626,003
Total comprehensive income for the three months ended March 31, 2019	-	-	-	-	-	438,048	78,608	550,270	-	1,066,926	18,687	1,085,613
Share-based payments	-	-	37,654	-	-	-	-	-	-	37,654	-	37,654
Disposal of investments in equity instruments at fair value through other comprehensive income	-	-	-	-	-	5,187	-	(5,187)	-	-	-	-
BALANCE AT MARCH 31, 2019	1,140,468	$ 11,404,677	$ 10,280,947	$ 1,512,287	$ 70,678	$ 5,581,320	$ (102,720)	$ 470,936	$ (184,900)	$ 29,033,225	$ 404,486	$ 29,437,711
BALANCE AT JANUARY 1, 2020	1,140,468	$ 11,404,677	$ 10,306,993	$ 1,773,654	$ 255,475	$ 5,399,253	$ (937,787)	$ 907,906	$ (110,032)	$ 29,000,139	$ 452,645	$ 29,452,784
Net income for the three months ended March 31, 2020	-	-	-	-	-	787,260	-	-	-	787,260	25,608	812,868
Other comprehensive loss for the three months ended March 31, 2020, net of income tax	-	-	-	-	-	-	(301,901)	(1,068,543)	-	(1,370,444)	(18,137)	(1,388,581)
Total comprehensive income (loss) for the three months ended March 31, 2020	-	-	-	-	-	787,260	(301,901)	(1,068,543)	-	(583,184)	7,471	(575,713)
BALANCE AT MARCH 31, 2020	1,140,468	$ 11,404,677	$ 10,306,993	$ 1,773,654	$ 255,475	$ 6,186,513	$ (1,239,688)	$ (160,637)	$ (110,032)	$ 28,416,955	$ 460,116	$ 28,877,071

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

(With Deloitte & Touche auditors' review report dated May 7, 2020)

E INK HOLDINGS INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS
(In Thousands of New Taiwan Dollars)
(Reviewed, Not Audited)

	For the Three Months Ended March 31	
	2020	**2019**
CASH FLOWS FROM OPERATING ACTIVITIES		
Income before income tax	$ 888,613	$ 604,900
Adjustments for		
Depreciation expenses	182,418	194,947
Amortization expenses	117,683	113,066
Expected credit loss recognized on accounts receivable	5,874	-
Net gain on fair value changes of financial assets and liabilities at fair value through profit or loss	(23,660)	(60,260)
Interest expenses	26,708	18,559
Interest income	(77,821)	(81,934)
Compensation costs of share-based payments	-	37,654
Share of loss (gain) of associates and joint ventures accounted for using the equity method	7,746	(1,559)
Net gain on disposal of property, plant and equipment	(265)	(5,771)
Net loss on disposal of investments	567	-
Impairment loss	-	16,526
(Reversal of) write-downs of inventories	(5,739)	45,471
Net unrealized loss (gain) on foreign currency exchange	54,873	(11,218)
Changes in operating assets and liabilities		
Financial assets mandatorily classified as at fair value through profit or loss	-	7,934
Contract assets	(19,642)	86,980
Notes and accounts receivable	(28,754)	(188,487)
Other receivables	12,889	15,425
Inventories	(429,146)	(342,775)
Prepayments	(13,945)	49,859
Other current assets	2,350	(65)
Contract liabilities	(336,435)	(17,867)
Notes and accounts payable	180,839	67,840
Other payables	(213,890)	(223,551)
Other current liabilities	22,913	28,923
Net defined benefit liabilities	786	1,280
Cash generated from operations	354,962	355,877
Income tax paid	(55,296)	(31,925)
Net cash generated from operating activities	299,666	323,952
CASH FLOWS FROM INVESTING ACTIVITIES		
Acquisition of financial assets at fair value through other comprehensive income	(1,459,268)	-
Proceeds from disposal of financial assets at fair value through other comprehensive income	-	6,718

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E INK HOLDINGS INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS
(In Thousands of New Taiwan Dollars)
(Reviewed, Not Audited)

	For the Three Months Ended March 31	
	2020	**2019**
Acquisition of financial assets at amortized cost	$ (4,512,278)	$ (4,217,121)
Proceeds from disposal of financial assets at amortized cost	5,047,658	3,542,778
Acquisition of financial assets at fair value through profit or loss	(595,184)	-
Acquisition of property, plant and equipment	(192,623)	(131,404)
Proceeds from disposal of property, plant and equipment	386	6,002
Acquisition of other intangible assets	(4,349)	(38,134)
Decrease in other non-current assets	14,218	4,382
Interest received	94,196	66,260
Net cash used in investing activities	(1,607,244)	(760,519)
CASH FLOWS FROM FINANCING ACTIVITIES		
Increase in short-term borrowings	122,998	667,020
Increase (decrease) in short-term bills payable	(23,950)	95,025
Repayment of the principal portion of lease liabilities	(17,878)	(17,031)
Increase (decrease) in other non-current liabilities	4,159	(1,977)
Interest paid	(28,788)	(17,317)
Net cash generated from financing activities	56,541	725,720
EFFECTS OF EXCHANGE RATE CHANGES ON THE BALANCE OF CASH AND CASH EQUIVALENTS HELD IN FOREIGN CURRENCIES	(153,272)	38,771
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(1,404,309)	327,924
CASH AND CASH EQUIVALENTS AT THE BEGINNING OF THE PERIOD	7,047,106	7,695,106
CASH AND CASH EQUIVALENTS AT THE END OF THE PERIOD	$ 5,642,797	$ 8,023,030

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

(With Deloitte & Touche auditors' review report dated May 7, 2020) (Concluded)

1. GENERAL INFORMATION

E Ink Holdings Inc. (the "Company") was incorporated in June 1992 in the Hsinchu Science Park. The Company's shares have been listed on the Taipei Exchange (TPEx) Mainboard since March 30, 2004. The Company mainly researches, develops, manufactures and sells electronic paper display panels.

The consolidated financial statements of the Company and its subsidiaries, collectively referred to as the "Group", are presented in New Taiwan dollars, the functional currency of the Company.

2. AUTHORIZATION OF FINANCIAL STATEMENTS

The Group's consolidated financial statements were reported to the board of directors and issued on May 7, 2020.

3. APPLICATION OF NEW AND REVISED STANDARDS AND INTERPRETATIONS

a. Initial application of the amendments to the International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), IFRIC Interpretations (IFRIC), and SIC Interpretations (SIC) (collectively referred to as the "IFRSs") endorsed and issued into effect by the Financial Supervisory Commission (FSC)

   The initial application of the amendments to the IFRSs endorsed and issued into effect by the FSC did not have material impact on the Group's accounting policies.

b. The IFRSs issued by IASB but not yet endorsed and issued into effect by the FSC

New, Amended or Revised Standards and Interpretations	Effective Date Announced by IASB (Note)
Amendments to IFRS 10 and IAS 28 "Sale or Contribution of Assets between An Investor and Its Associate or Joint Venture"	To be determined by IASB
IFRS 17 "Insurance Contracts"	January 1, 2021
Amendments to IAS 1 "Classification of Liabilities as Current or Non-current"	January 1, 2022

   Note: Unless stated otherwise, the above New IFRSs are effective for annual reporting periods beginning on or after their respective effective dates.

   As of the date the consolidated financial statements were issued, the Group is continuously assessing the possible impact that the application of the above standards and interpretations will have on the Group's consolidated financial position and consolidated financial performance and will disclose the relevant impact when the assessment is completed.

4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

a. Statement of compliance

These interim consolidated financial statements have been prepared in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and IAS 34 "Interim Financial Reporting" endorsed and issued into effect by the FSC. Disclosure information included in these interim consolidated financial statements is less than the disclosure information required in a complete set of annual consolidated financial statements.

b. Basis of preparation

The consolidated financial statements have been prepared on the historical cost basis except for the financial instruments which are measured at fair value and net defined benefit liabilities which are measured at the present value of the defined benefit obligation less the fair value of plan assets.

The fair value measurements, which are grouped into Levels 1 to 3 based on the degree to which the fair value measurement inputs are observable and based on the significance of the inputs to the fair value measurement in its entirety, are described as follows:

1) Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities;

2) Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for an asset or liability, either directly (i.e., as prices) or indirectly (i.e., derived from prices); and

3) Level 3 inputs are unobservable inputs for an asset or liability.

c. Classification of current and non-current assets and liabilities

Current assets include:

1) Assets held primarily for the purpose of trading;

2) Assets expected to be realized within 12 months after the reporting period; and

3) Cash and cash equivalents unless the asset is restricted from being exchanged or used to settle a liability for at least 12 months after the reporting period.

Current liabilities include:

1) Liabilities held primarily for the purpose of trading;

2) Liabilities due to be settled within 12 months after the reporting period; and

3) Liabilities for which the Group does not have an unconditional right to defer settlement for at least 12 months after the reporting period.

Assets and liabilities that are not classified as current are classified as non-current.

d. Basis of consolidation

The consolidated financial statements incorporate the financial statements of the Company and the entities controlled by the Company (i.e., its subsidiaries). Income and expenses of subsidiaries acquired or disposed of during the period are included in the consolidated statement of comprehensive income from the effective date of acquisition up to the effective date of disposal, as appropriate. When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies into line with those used by the Company. All intra-group transactions, balances, income and expenses are eliminated in full upon consolidation. Total comprehensive income of subsidiaries is attributed to the owners of the Company and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

Changes in the Group's ownership interests in subsidiaries that do not result in the Group losing control over the subsidiaries are accounted for as equity transactions. The carrying amounts of the Group's interests and the non-controlling interests are adjusted to reflect the changes in their relative interests in the subsidiaries. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received is recognized directly in equity and attributed to the owners of the Company.

When the Group loses control of a subsidiary, a gain or loss is recognized in profit or loss and is calculated as the difference between (i) the aggregate of the fair value of the consideration received and any investment retained in the former subsidiary at its fair value at the date when control is lost and (ii) the assets and liabilities and any non-controlling interests of the former subsidiary at their carrying amounts at the date when control is lost. The Group accounts for all amounts recognized in other comprehensive income in relation to that subsidiary on the same basis as would be required if the Group had directly disposed of the related assets or liabilities.

See Note 13 and Tables 8 and 9 for detailed information on subsidiaries (including the percentages of ownership and main business).

e. Business combinations

Acquisitions of businesses are accounted for using the acquisition method. Acquisition-related costs are generally recognized as expenses as they are incurred.

Goodwill is measured as the excess of the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree, and the fair value of the acquirer's previously held equity interest in the acquiree over the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed.

Non-controlling interests that are present ownership interests and entitle their holders to a proportionate share of the entity's net assets in the event of liquidation may be initially measured either at fair value or at the non-controlling interests' proportionate share of the recognized amounts of the acquiree's identifiable net assets. The choice of the measurement basis is made on a transaction-by-transaction basis. Other types of non-controlling interests are measured at fair value.

f. Foreign currencies

In preparing the financial statements of each individual group entity, transactions in currencies other than the entity's functional currency (i.e., foreign currencies) are recognized at the rates of exchange prevailing at the dates of the transactions.

At the end of each reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Exchange differences on monetary items arising from settlement or translation are recognized in profit or loss in the period in which they arise.

Non-monetary items measured at fair value that are denominated in foreign currencies are retranslated at the rates prevailing at the date when the fair value was determined. Exchange differences arising from the retranslation of non-monetary items are included in profit or loss for the period except for exchange differences arising from the retranslation of non-monetary items in respect of which gains and losses are recognized directly in other comprehensive income, in which cases, the exchange differences are also recognized directly in other comprehensive income.

Non-monetary items that are measured at historical cost in a foreign currency are translated using the exchange rate at the date of the transaction and are not retranslated.

For the purposes of presenting consolidated financial statements, the assets and liabilities of the Group's foreign operations (including subsidiaries, associates and joint ventures in other countries that use currencies that are different from the currency of the Company) are translated into New Taiwan dollars using exchange rates prevailing at the end of each reporting period; and income and expense items are translated at the average exchange rates for the period. The resulting currency translation differences are recognized in other comprehensive income and attributed to the owners of the Company and non-controlling interests.

On a disposal of the Company's entire interest in a foreign operation or a disposal involving loss of significant influence over a subsidiary that includes a foreign operation, all of the exchange differences accumulated in equity in respect of that operation attributable to the owners of the Company are reclassified to profit or loss.

g. Inventories

Inventories consist of raw materials, semi-finished goods, finished goods and work in progress and are stated at the lower of cost or net realizable value. Inventory write-downs are made by item, except where it may be appropriate to group similar or related items. The net realizable value is the estimated selling price of inventories less all estimated costs of completion and costs necessary to make the sale. Inventories are recorded at the weighted-average cost on the balance sheet date.

h. Investments in associates and joint ventures

An associate is an entity over which the Group has significant influence and which is neither a subsidiary nor an interest in a joint venture. A joint venture is a joint arrangement whereby the Group and other parties that have joint control of the arrangement have rights to the net assets of the arrangement.

The Group uses the equity method to account for its investments in associates and joint ventures.

Under the equity method, investments in an associate and a joint venture are initially recognized at cost and adjusted thereafter to recognize the Group's share of the profit or loss and other comprehensive income of the associates and joint ventures. The Group also recognizes the changes in the Group's share of equity of associates and joint ventures attributable to the Group.

Any excess of the cost of acquisition over the Group's share of the net fair value of the identifiable assets and liabilities of an associate or a joint venture at the date of acquisition is recognized as goodwill, which is included within the carrying amount of the investment and is not amortized.

When the Group subscribes for additional new shares of an associate and a joint venture at a percentage different from its existing ownership percentage, the resulting carrying amount of the investment differs from the amount of the Group's proportionate interest in the associate and joint venture. The Group records such a difference as an adjustment to investments with the corresponding amount charged or credited to capital surplus - changes in equity of associates and joint ventures accounted for using the equity method and investments accounted for using the equity method. If the Group's ownership interest is reduced due to the additional subscription of the new shares of the associate and joint venture, the proportionate amount of the gains or losses previously recognized in other comprehensive income in relation to that associate and joint venture is reclassified to profit or loss on the same basis as would be required if the investee had directly disposed of the related assets or liabilities. When the adjustment should be debited to capital surplus, but the capital surplus recognized from investments accounted for using the equity method is insufficient, the shortage is debited to retained earnings.

When the Group's share of losses of an associate and a joint venture equals or exceeds its interest in that associate and joint venture, the Group discontinues recognizing its share of further losses. Additional losses and liabilities are recognized only to the extent that the Group has incurred legal obligations, or constructive obligations, or made payments on behalf of that associate and joint venture.

The entire carrying amount of the investment (including goodwill) is tested for impairment as a single asset by comparing its recoverable amount with its carrying amount. Any impairment loss recognized is not allocated to the goodwill and other assets that form part of the carrying amount of the investment. Any reversal of that impairment loss is recognized to the extent that the recoverable amount of the investment subsequently increases.

The Group discontinues the use of the equity method from the date on which its investment ceases to be an associate and a joint venture. Any retained investment is measured at fair value at that date and the fair value is regarded as its fair value on initial recognition as a financial asset. The difference between the previous carrying amount of the associate and the joint venture attributable to the retained interest and its fair value is included in the determination of the gain or loss on disposal of the associate and the joint venture. The Group accounts for all amounts previously recognized in other comprehensive income in relation to that associate and joint venture on the same basis as would be required if that associate had directly disposed of the related assets or liabilities.

When the Group transacts with its associates and joint ventures, profits and losses resulting from the transactions with the associates and joint ventures are recognized in the Group's consolidated financial statements only to the extent of interests in the associates and the joint ventures that are not related to the Group.

i. Property, plant and equipment

Property, plant and equipment are initially measured at cost and subsequently measured at cost less accumulated depreciation and accumulated impairment loss.

Property, plant and equipment in the course of construction are carried at cost, less any recognized impairment loss. Cost includes professional fees and borrowing costs eligible for capitalization. Such assets are depreciated and classified to the appropriate categories of property, plant and equipment when completed and ready for their intended use.

Depreciation on property, plant and equipment is recognized using the straight-line method. Each significant part is depreciated separately. The estimated useful lives, residual values and depreciation methods are reviewed at the end of each reporting period, with the effects of any changes in estimates accounted for on a prospective basis.

On derecognition of an item of property, plant and equipment, the difference between the sales proceeds and the carrying amount of the asset is recognized in profit or loss.

j. Goodwill

Goodwill arising from the acquisition of a business is carried at cost as established at the date of acquisition of the business less accumulated impairment loss.

For the purpose of impairment testing, goodwill is allocated to each of the Group's cash-generating units or groups of cash-generating units (referred to as "cash-generating units") that is expected to benefit from the synergies of the combination.

A cash-generating unit to which goodwill has been allocated is tested for impairment annually, or more frequently when there is an indication that the unit may be impaired, by comparing its carrying amount, including the attributed goodwill, with its recoverable amount. However, if the goodwill allocated to a cash-generating unit was acquired in a business combination during the current annual year, that unit shall be tested for impairment before the end of the current annual year. If the recoverable amount of the cash-generating unit is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit pro rata based on the carrying amount of each asset in the unit. Any impairment loss is recognized directly in profit or loss. An impairment loss recognized for goodwill is not reversed in subsequent periods.

If goodwill has been allocated to a cash-generating unit and the entity disposes of an operation within that unit, the goodwill associated with the operation disposed of is included in the carrying amount of the operation when determining the gain or loss on disposal and is measured on the basis of the relative values of the operation disposed of and the portion of the cash-generating unit retained.

k. Intangible assets

1) Intangible assets acquired separately

Intangible assets with finite useful lives that are acquired separately are initially measured at cost and subsequently measured at cost less accumulated amortization and accumulated impairment loss. Amortization is recognized on a straight-line basis. The estimated useful lives, residual value, and amortization methods are reviewed at the end of each reporting period, with the effects of any changes in estimates accounted for on a prospective basis.

2) Internally-generated intangible assets - research and development expenditures

Expenditures on research activities are recognized as expenses in the period in which they are incurred.

An internally-generated intangible asset arising from the development phase of an internal project is recognized if, and only if, all of the following have been demonstrated:

a) The technical feasibility of completing the intangible asset so that it will be available for use or sale;

b) The intention to complete the intangible asset and use or sell it;

c) The ability to use or sell the intangible asset;

d) How the intangible asset will generate probable future economic benefits;

e) The availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset; and

f) The ability to measure reliably the expenditures attributable to the intangible asset during its development.

The amount initially recognized for internally-generated intangible assets is the sum of the expenditures incurred from the date when such an intangible asset first meets the recognition criteria listed above. Subsequent to initial recognition, such intangible assets are measured on the same basis as intangible assets that are acquired separately.

3) Intangible assets acquired in a business combination

Intangible assets acquired in a business combination and recognized separately from goodwill are initially recognized at their fair value at the acquisition date. Subsequent to initial recognition, they are measured on the same basis as intangible assets that are acquired separately.

4) Derecognition of intangible assets

On derecognition of an intangible asset, the difference between the net disposal proceeds and the carrying amount of the asset is recognized in profit or loss.

l. Impairment of tangible and intangible assets other than goodwill

At the end of each reporting period, the Group reviews the carrying amounts of its tangible and intangible assets, excluding goodwill, to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss. When it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs. Corporate assets are allocated to the smallest group of cash-generating units on a reasonable and consistent basis of allocation.

The recoverable amount is the higher of fair value less costs to sell and value in use. If the recoverable amount of an asset or cash-generating unit is estimated to be less than its carrying amount, the carrying amount of the asset or cash-generating unit is reduced to its recoverable amount, with the resulting impairment loss recognized in profit or loss.

When an impairment loss is subsequently reversed, the carrying amount of the corresponding asset or cash-generating unit is increased to the revised estimate of its recoverable amount, but only to the extent of the carrying amount (net of amortization or depreciation) that would have been determined had no impairment loss been recognized for the asset or cash-generating unit in prior years. A reversal of an impairment loss is recognized in profit or loss.

m. Non-current assets held for sale

Non-current assets are classified as held for sale if their carrying amounts will be recovered principally through a sale transaction rather than through continuing use. This condition is regarded as met only when the sale is highly probable and the non-current asset is available for immediate sale in its present condition. To meet the criteria for the sale being highly probable, the appropriate level of management must be committed to the sale, which should be expected to qualify for recognition as a completed sale within 1 year from the date of classification.

Non-current assets classified as held for sale are measured at the lower of their previous carrying amount and fair value less cost to sell. Recognition of depreciation of those assets would cease.

n. Financial instruments

Financial assets and financial liabilities are recognized when the Group becomes a party to the contractual provisions of the instruments.

Financial assets and financial liabilities are initially measured at fair value. Transaction costs that are directly attributable to an acquisition or issuance of financial assets and financial liabilities (other than financial assets and financial liabilities at fair value through profit or loss) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition or issuance of financial assets or financial liabilities at fair value through profit or loss are recognized immediately in profit or loss.

1) Financial assets

All regular way purchases or sales of financial assets are recognized and derecognized on a trade date basis.

a) Measurement category

Financial assets are classified into the following categories: Financial assets at fair value through profit or loss (FVTPL), financial assets at amortized cost and investments in equity instruments at FVTOCI.

i. Financial assets at FVTPL

Financial assets are classified as at FVTPL when such a financial asset is mandatorily classified or designated as at FVTPL. Financial assets mandatorily classified as at FVTPL include mutual funds, investments in equity instruments which are not designated as at FVTOCI and debt instruments that do not meet the amortized cost criteria or the FVTOCI criteria, with any dividends, interest earned and gains or losses on remeasurement recognized in non-operating income and expenses. Fair value is determined in the manner described in Note 28.

ii. Financial assets at amortized cost

Financial assets that meet the following conditions are subsequently measured at amortized cost:

i) The financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows; and

ii) The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Subsequent to initial recognition, financial assets at amortized cost, including cash and cash equivalents, notes and accounts receivable and other receivables are measured at amortized cost, which equals to gross carrying amount determined using the effective interest method less any impairment loss. Exchange differences are recognized in profit or loss.

Cash equivalents include time deposits and repurchase agreements collateralized by notes, with original maturities within 3 months from the date of acquisition, which are highly liquid, readily convertible to a known amount of cash and are subject to an insignificant risk of changes in value. These cash equivalents are held for the purpose of meeting short-term cash commitments.

iii. Investments in equity instruments at FVTOCI

On initial recognition, the Group may make an irrevocable election to designate investments in equity instruments as at FVTOCI. Designation at FVTOCI is not permitted if the equity investment is held for trading or if it is contingent consideration recognized by an acquirer in a business combination.

Investments in equity instruments at FVTOCI are subsequently measured at fair value with gains and losses arising from changes in fair value recognized in other comprehensive income or loss and accumulated in other equity. The cumulative gain or loss will not be reclassified to profit or loss on disposal of the equity investments, instead, they will be transferred to retained earnings.

Dividends on these investments in equity instruments are recognized in profit or loss when the Group's right to receive the dividends is established, unless the dividends clearly represent a recovery of part of the cost of the investment.

b) Impairment of financial assets and contract assets

The Group recognizes a loss allowance for expected credit losses on financial assets at amortized cost (including notes and accounts receivable) and contract assets.

The Group always recognizes lifetime Expected Credit Loss (ECLs) for notes and accounts receivable and contract assets. For all other financial instruments, the Group recognizes lifetime ECLs when there has been a significant increase in credit risk since initial recognition. If, on the other hand, the credit risk on a financial instrument has not increased significantly since initial recognition, the Group measures the loss allowance for that financial instrument at an amount equal to 12-month ECLs.

Expected credit losses reflect the weighted average of credit losses with the respective risks of a default occurring as the weights. Lifetime ECLs represents the expected credit losses that will result from all possible default events over the expected life of a financial instrument. In contrast, 12-month ECLs represents the portion of lifetime ECLs that is expected to result from default events on a financial instrument that are possible within 12 months after the reporting date. The Group recognizes an impairment gain or loss in profit or loss for all financial instruments with a corresponding adjustment to their carrying amount through a loss allowance account.

c) Derecognition of financial assets

The Group derecognizes a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another party.

On derecognition of a financial asset at amortized cost in its entirety, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognized in profit or loss. On derecognition of an investment in an equity instrument at FVTOCI, the cumulative gain or loss that had been recognized in other comprehensive income or loss is transferred directly to retained earnings, without reclassifying to profit or loss.

2) Equity instruments

The repurchase of the Company's own equity instruments is recognized in and deducted directly from equity. No gain or loss is recognized in profit or loss on the purchase, sale, issue or cancellation of the Company's own equity instruments.

3) Financial liabilities

a) Subsequent measurement

Except financial liabilities at FVTPL, all financial liabilities are carried at amortized cost using the effective interest method. Financial liabilities are classified as at FVTPL when such financial liabilities are held for trading and are stated at fair value, with any gain or loss arising on remeasurement recognized in profit or loss.

b) Derecognition of financial liabilities

The difference between the carrying amount of a financial liability derecognized and the consideration paid, including any non-cash assets transferred or liabilities assumed, is recognized in profit or loss.

4) Derivative financial instruments

The Group enters into a variety of derivative financial instruments, including foreign exchange forward contracts and interest rate swaps, to manage its exposure to interest rate and foreign exchange rate risks.

Derivatives are initially recognized at fair value at the date the derivative contracts are entered into and are subsequently remeasured to their fair value at the end of each reporting period. The resulting gain or loss is recognized in profit or loss immediately. When the fair value of a derivative financial instrument is positive, the derivative is recognized as a financial asset; when the fair value of a derivative financial instrument is negative, the derivative is recognized as a financial liability.

Derivatives embedded in hybrid contracts that contain financial asset hosts within the scope of IFRS 9 are not separated; instead, the classification is determined in accordance with the entire hybrid contract. Derivatives embedded in non-derivative host contracts that are not financial assets within the scope of IFRS 9 (e.g. financial liabilities) are treated as separate derivatives when they meet the definition of a derivative, their risks and characteristics are not closely related to those of the host contracts and the host contracts are not measured at FVTPL.

o. Provisions

Provisions (included in other current liabilities) are measured at the best estimate of the discounted cash flows of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation.

Provisions for the expected cost of warranty obligations to assure that products comply with agreed-upon specifications are recognized on the date of sale of the relevant products at the best estimate by the management of the Group of the expenditures required to settle the Group's obligations.

p. Revenue recognition

The Group identifies the contracts with the customers, allocates the transaction price to the performance obligations, and recognizes revenue when performance obligations are satisfied.

1) Revenue from sale of goods

Sales of products are recognized as revenue when the goods are delivered to the customer's specific location because it is the time when the customer has full discretion over the manner of distribution and price to sell the goods. Revenue and accounts receivable are recognized concurrently.

The Group does not recognize revenue on materials delivered to subcontractors because this delivery does not involve a transfer of control.

2) Licensing revenue

If the patented technology licensed by the Group can remain functional without any updates or technical support and the Group is not obliged to undertake activities that will change the functionality of the licensed patented technology, the licensed patented technology has significant stand-alone functionality and the Group recognizes revenue at the point in time at which the license of patented technology transfers. If the Group is obliged to undertake activities that will change the functionality of the licensed patented technology, the licensed patented technology does not have significant stand-alone functionality and the Group recognizes revenue on a straight-line basis over the life of the agreements. Royalty agreements that are based on sales are recognized by reference to the underlying agreements. Royalties receivable that the Group does not have a present right to payment of the royalties is recorded as contract assets and reclassified to accounts receivable after the Group fulfills the remainder of the performance obligation. Proceeds of royalties received but which have not met the conditions of revenue recognition are recorded as contract liabilities, current and non-current, respectively, based on the remaining contract periods.

q. Leases

At the inception of a contract, the Group assesses whether the contract is, or contains, a lease.

1) The Group as lessor

Leases are classified as finance leases whenever the terms of a lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases. Lease payments from operating leases are recognized as income on a straight-line basis over the terms of the relevant leases.

2) The Group as lessee

The Group recognizes right-of-use assets and lease liabilities for all leases at the commencement date of a lease, except for short-term leases and low-value asset leases accounted for applying a recognition exemption where lease payments are recognized as expenses on a straight-line basis over the lease terms.

Right-of-use assets are initially measured at cost, which comprises the initial measurement of lease liabilities adjusted for lease payments made at or before the commencement date, plus any initial direct costs incurred. Right-of-use assets are subsequently measured at cost less accumulated depreciation and impairment losses and adjusted for any remeasurement of the lease liabilities. Right-of-use assets are presented on a separate line in the consolidated balance sheets.

Right-of-use assets are depreciated using the straight-line method from the commencement dates to the earlier of the end of the useful lives of the right-of-use assets or the end of the lease terms.

Lease liabilities are initially measured at the present value of the lease payments. The lease payments are discounted using the interest rate implicit in a lease, if that rate can be readily determined. If that rate cannot be readily determined, the Group uses the lessee’s incremental borrowing rate.

Subsequently, lease liabilities are measured at amortized cost using the effective interest method, with interest expense recognized over the lease terms. When there is a change in a lease term, or a change in future lease payments resulting from a change in an index or a rate used to determine those payments, the Group remeasures the lease liabilities with a corresponding adjustment to the right-of-use-assets. However, if the carrying amount of the right-of-use assets is reduced to zero, any remaining amount of the remeasurement is recognized in profit or loss. Lease liabilities are presented on a separate line in the consolidated balance sheets.

r. Borrowing costs

Borrowing costs directly attributable to an acquisition, construction or production of qualifying assets are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale.

Other than stated above, all other borrowing costs are recognized in profit or loss in the period in which they are incurred.

s. Employee benefits

1) Short-term employee benefits

Liabilities recognized in respect of short-term employee benefits are measured at the undiscounted amount of the benefits expected to be paid in exchange for the related services.

2) Retirement benefits

Payments to defined contribution retirement benefit plans are recognized as expenses when employees have rendered services entitling them to the contributions.

Defined benefit costs (including service cost, net interest and remeasurement) under the defined benefit retirement benefit plans are determined using the projected unit credit method. Service cost (including current service cost and past service cost) and net interest on the net defined benefit liabilities are recognized as employee benefits expense in the period they occur. Remeasurement, comprising actuarial gains and losses and the return on plan assets (excluding interest), is recognized in other comprehensive income in the period in which it occurs. Remeasurement recognized in other comprehensive income is reflected immediately in retained earnings and will not be reclassified to profit or loss.

Pension cost for an interim period is calculated on a year-to-date basis by using the actuarially determined pension cost rate at the end of the prior financial year.

t. Share-based payment arrangements

The fair value at the grant date of share-based payments is expensed on a straight-line basis over the vesting period, based on the Group’s best estimates of the number of shares or options that are expected to ultimately vest, with a corresponding increase in capital surplus - employee share options. It is recognized as an expense in full at the grant date if vested immediately. The grant date of treasury shares transferred to employees is the date on which the board of directors approves the transaction.

At the end of each reporting period, the Group revises its estimate of the number of equity instruments expected to vest. The impact of the revision of the original estimates is recognized in profit or loss such that the cumulative expenses reflect the revised estimate, with a corresponding adjustment to capital surplus - employee share options.

u. Taxation

Income tax expense represents the sum of the tax currently payable and deferred tax. Interim period income taxes are assessed on an annual basis and calculated by applying to an interim period’s pre-tax income the tax rate that would be applicable to expected total annual earnings. The effect of a change in tax rate resulting from a change in tax law is recognized in profit or loss or other comprehensive income or loss, consistent with the accounting for the transaction itself which gives rise to the tax consequence. Current tax and deferred tax is recognized in profit or loss, however, current tax and deferred tax related to other comprehensive income or loss is recognized in other comprehensive income or loss.

1) Current tax

According to the Income Tax Law, an additional tax of unappropriated earnings is provided for as income tax in the year the shareholders approve to retain the earnings.

Adjustments of prior years' tax liabilities are added to or deducted from tax provision in the current period.

2) Deferred tax

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities and the corresponding tax bases used in the computation of taxable profit.

Deferred tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets are generally recognized for all deductible temporary differences and unused loss carryforwards to the extent that it is probable that taxable profit will be available against which those deductible temporary differences can be utilized.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries and associates, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments are only recognized to the extent that it is probable that there will be sufficient taxable profit against which to utilize the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the assets to be recovered. A previously unrecognized deferred tax asset is also reviewed at the end of each reporting period and recognized to the extent that it has become probable that future taxable profit will allow the deferred tax asset to be recovered.

Deferred tax liabilities and assets are measured at the tax rates that are expected to apply in the period in which the liabilities are settled or the assets are realized, based on tax rates and tax laws that have been enacted or substantively enacted by the end of the reporting period. The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

5. CRITICAL ACCOUNTING JUDGMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY

In the application of the Group's accounting policies, management is required to make judgments, estimations and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimations and associated assumptions are based on historical experience and other factors that are considered relevant. Actual results may differ from these estimations.

The Group considers the economic implications of the novel coronavirus when making its critical accounting estimations. The estimations and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimations are recognized in the period in which the estimations are revised if the revisions affect only that period or in the period of the revisions and future periods if the revisions affect both current and future periods.

Impairment of Goodwill

Determining whether goodwill is impaired requires an estimation of the value in use of the cash-generating units to which goodwill has been allocated. The calculation of the value in use requires management to estimate the future cash flows expected to arise from the cash-generating unit and a suitable discount rate in order to calculate the present value. Where the actual future cash flows are less than expected, a material impairment loss may arise.

6. CASH AND CASH EQUIVALENTS

	March 31, 2020	December 31, 2019	March 31, 2019
Cash on hand	$ 599	$ 579	$ 1,318
Checking accounts and demand deposits	1,529,093	1,570,259	1,534,555
Cash equivalents (investments with original maturities of less than 3 months)			
Time deposits	3,478,950	5,086,317	5,817,062
Repurchase agreements collateralized by notes	634,155	389,951	670,095
	$ 5,642,797	$ 7,047,106	$ 8,023,030

The market rate intervals of demand deposits, time deposits and repurchase agreements collateralized by notes at the end of the reporting periods were as follows:

	March 31, 2020	December 31, 2019	March 31, 2019
Demand deposits	0.01-1.15%	0.01-1.15%	0.01-1.15%
Time deposits	0.45-3.11%	0.45-2.9%	0.35-4.33%
Repurchase agreements collateralized by notes	0.5-2.6%	2.2%	0.53-2.95%

7. FINANCIAL INSTRUMENTS AT FAIR VALUE THROUGH PROFIT OR LOSS

	March 31, 2020	December 31, 2019	March 31, 2019
Financial assets - current			
Non-derivative financial assets			
Mandatorily measured at FVTPL - mutual funds	$ 2,507,700	$ 2,455,299	$ 1,874,225
Financial assets - non-current			
Non-derivative financial assets			
Mandatorily measured at FVTPL - perpetual bonds	$ 513,935	$ -	$ -
Hybrid financial assets			
Mandatorily measured at FVTPL - overseas unlisted shares	28,652	60,285	-
	$ 542,587	$ 60,285	$ -

(Continued)

	March 31, 2020	December 31, 2019	March 31, 2019
Derivative financial liabilities (included in other current liabilities)			
Held for trading - foreign exchange forward contracts	$ 19,724	$ -	$ -

(Concluded)

At the end of the reporting period, the outstanding foreign exchange forward contract not under hedge accounting was as follows:

	Currency	Maturity Date	Notional Amount (In Thousands)
March 31, 2020			
Sell	USD/KRW	2020.05-2020.06	USD45,000/KRW54,143,500

The Group entered into foreign exchange forward contracts to manage exposures to exchange rate fluctuations of foreign currency denominated assets and liabilities. However, those contracts did not meet the criteria of hedge effectiveness and, therefore, were not accounted for using hedge accounting.

8. FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME

	March 31, 2020	December 31, 2019	March 31, 2019
Investments in equity investments - non-current			
Domestic listed shares	$ 4,226,032	$ 3,577,384	$ 3,288,691
Overseas listed shares	578,086	845,286	632,907
Domestic unlisted shares	35,261	34,014	37,459
Overseas unlisted shares	22,466	17,833	17,148
	$ 4,861,845	$ 4,474,517	$ 3,976,205

The Group holds the above investments in equity instruments for long-term strategic purposes and expects to gain profit through long-term investments. Accordingly, the management elected to designate these investments in equity instruments as at FVTOCI as they believe that recognizing short-term fluctuations in these investments' fair value in profit or loss would not be consistent with the Group's strategy of holding these investments for long-term purposes.

9. FINANCIAL ASSETS AT AMORTIZED COST

	March 31, 2020	December 31, 2019	March 31, 2019
Current			
Time deposits with original maturities of more than 3 months (a)	$ 4,419,874	$ 5,117,128	$ 3,749,729
Pledged time deposits (b)	1,671,289	1,616,260	656,508
Principal guaranteed wealth management products (c)	782,377	792,858	631,637
	$ 6,873,540	$ 7,526,246	$ 5,037,874

a. The market rate intervals for time deposits with original maturities of more than 3 months were 0.82-3.9%, 0.82-4.57% and 2.6-4.57% per annum, as of March 31, 2020, December 31, 2019 and March 31, 2019, respectively.

b. Refer to Note 30 for information relating to investments in financial assets at amortized cost pledged as security.

c. Principal guaranteed wealth management products bought from banks by the Group may not be redeemed in advance during the term of the contracts. The expected rate of return intervals were 3.65-4%, 3.55-4% and 4-4.2% per annum, as of March 31, 2020, December 31, 2019 and March 31, 2019, respectively.

10. NOTES AND ACCOUNTS RECEIVABLE

	March 31, 2020	December 31, 2019	March 31, 2019
Accounts receivable from related parties (Note 29)	$ 149,576	$ 136,794	$ 152,172
Gross carrying amount of notes and accounts receivable	1,960,487	1,949,539	2,320,031
Less: Loss allowance	(32,046)	(26,504)	(33,903)
	1,928,441	1,923,035	2,286,128
	$ 2,078,017	$ 2,059,829	$ 2,438,300

The Group recognizes impairment loss when there is actual credit loss from individual client. In addition, the Group recognizes impairment loss based on the rate of expected credit loss by reference to past default experience of the debtor, an analysis of the debtor's current financial position, general economic conditions of the industry in which the debtors operate and past due status.

The following table details the loss allowance for notes and accounts receivable:

March 31, 2020

	Not Past Due	Past Due in 1-90 Days	Past Due over 90 Days	Total
Expected credit loss rate	0%	0%	98%	-
Gross carrying amount	$ 1,835,687	$ 92,231	$ 32,569	$ 1,960,487
Loss allowance	-	-	(32,046)	(32,046)
Amortized cost	$ 1,835,687	$ 92,231	$ 523	$ 1,928,441

December 31, 2019

	Not Past Due	Past Due in 1-90 Days	Past Due over 90 Days	Total
Expected credit loss rate	0%	0%	70%	-
Gross carrying amount	$ 1,819,723	$ 92,091	$ 37,725	$ 1,949,539
Less: Loss allowance	-	-	(26,504)	(26,504)
Amortized cost	$ 1,819,723	$ 92,091	$ 11,221	$ 1,923,035

March 31, 2019

	Not Past Due	Past Due in 1-90 Days	Past Due over 90 Days	Total
Expected credit loss rate	0%	0%	13%	-
Gross carrying amount	$ 1,898,058	$ 158,775	$ 263,198	$ 2,320,031
Loss allowance	-	-	(33,903)	(33,903)
Amortized cost	$ 1,898,058	$ 158,775	$ 229,295	$ 2,286,128

The movements of the loss allowance were as follows:

	For the Three Months Ended March 31	
	2020	2019
Balance at January 1	$ 26,504	$ 41,888
Expected credit losses recognized	5,874	-
Amounts written off	-	(8,124)
Foreign exchange translation gains and losses	(332)	139
Balance at March 31	$ 32,046	$ 33,903

Notes and accounts receivable of the Group were mainly concentrated in Customers A, B, C, D, E and F. The notes and accounts receivable from the foregoing customers, as of March 31, 2020, December 31, 2019 and March 31, 2019, respectively, were as follows:

	March 31, 2020	December 31, 2019	March 31, 2019
Customer A	$ 405,489	$ 427,363	$ 708,682
Customer B	305,304	330,287	-
Customer C	301,601	244,374	444,092
Customer D	296,052	215,435	127,653
Customer E	202,617	174,190	231,115
Customer F	195,751	150,481	212,951
	$ 1,706,814	$ 1,542,130	$ 1,724,493

11. INVENTORIES

	March 31, 2020	December 31, 2019	March 31, 2019
Finished goods	$ 303,627	$ 584,583	$ 398,480
Semi-finished goods	257,180	264,023	301,579
Work in progress	213,359	67,271	162,207
Raw materials	1,622,145	1,025,825	1,368,998
	$ 2,396,311	$ 1,941,702	$ 2,231,264

The cost of inventories recognized as cost of goods sold for the three months ended March 31, 2020 and 2019 included reversal of inventory write-downs of $5,739 thousand and inventory write-downs of $45,471 thousand, respectively. Previous write-downs were reversed as a result of the disposal of obsolete inventories.

12. NON-CURRENT ASSETS HELD FOR SALE

	March 31, 2020	December 31, 2019	March 31, 2019
Land use rights, plant and equipment held for sale	$ 128,769	$ 109,745	$ 10,396
Liabilities directly associated with equipment held for sale	$ 49,393	$ 17,642	$ 18,791

a. In November 2019, the subsidiary, Yangzhou Huaxia Integrated O/E System Co., Ltd. signed an expropriation compensation agreement with Yangzhou Economic and Technological Development Zone’s Demolition Placement Management Office, disposing of the land use rights of 182.77 mus, along with the building and its accessories, at the amount of RMB328,986 thousand. The payment is expected to be received based on the actual delivery of the property ownership certificate and land use certificate, as well as the progress of local government funding. Since the sale price is expected to exceed the carrying amount of the related net assets, the Group did not recognize impairment loss when the land use rights, plant and equipment were reclassified as non-current assets held for sale.

In addition, the Yangzhou Economic and Technological Development Zone's Demolition Placement Management Office had completed the expropriation of 19.8 mus of land use rights of the subsidiary, Yangzhou Huaxia Integrated O/E System Co., Ltd., at the amount of RMB35,640 thousand. Therefore, the Group recognized a disposal gain on the sale of land use rights of NT$153,500 thousand (RMB35,557 thousand) for the year ended December 31, 2019.

b. The subsidiary, Transcend Optronics (Yangzhou) Co., Ltd., is expected to dispose of a batch of equipment to a non-related party within the following 12 months. Transcend Optronics (Yangzhou) Co., Ltd. has received partial contract prices of RMB11,578 thousand, RMB4,105 thousand and RMB4,105 thousand (included in other current liabilities), as of March 31, 2020, December 31, 2019 and March 31, 2019, respectively. The sale price is expected to exceed the carrying amount of the related net assets. Hence, the Group did not recognize impairment loss when the aforementioned equipment was reclassified as non-current assets held for sale.

13. SUBSIDIARIES

Subsidiaries included in the consolidated financial statements are as follows:

			Proportion of Ownership (%)			
Investor	**Investee**	**Main Business**	**March 31, 2020**	**December 31, 2019**	**March 31, 2019**	**Remark**
E Ink Holdings Inc.	PVI Global Corp.	Investment	100.00	100.00	100.00	
	E Ink Corporation	Manufacture and sale of electronic ink	45.31	45.31	45.31	
	YuanHan Materials Inc. (originally named Yuen Yu Investment Co., Ltd.)	Research, development and sale of electronic parts and electronic ink	100.00	100.00	100.00	a
	New Field e-Paper Co., Ltd.	Wholesale and sale of electronic parts	100.00	100.00	100.00	
	SiPix Technology Inc.	Manufacture and sale of electronic ink	-	-	100.00	a
	Dream Universe Ltd.	Trading	100.00	100.00	100.00	
	Prime View Communications Ltd.	Trading	100.00	100.00	100.00	
	Tech Smart Logistics Ltd.	Trading	0.09	0.09	0.09	
	Hot Tracks International Ltd.	Trading	100.00	100.00	100.00	
	Linfiny Corporation	Research, development and sale of electronic ink	4.00	4.00	-	c
New Field e-Paper Co., Ltd.	E Ink Corporation	Manufacture and sale of electronic ink	12.88	12.88	12.88	
	Tech Smart Logistics Ltd.	Trading	99.91	99.91	99.91	
YuanHan Materials Inc. (originally named Yuen Yu Investment Co., Ltd.)	Lucky Joy Holdings Ltd.	Investment	-	100.00	100.00	e
	Linfiny Corporation	Research, development and sale of electronic ink	77.00	77.00	77.00	
	YuanHan Materials Inc.	Manufacture and sale of electronic parts	-	-	100.00	a
SiPix Technology Inc.	Linfiny Corporation	Research, development and sale of electronic ink	-	-	4.00	c
Linfiny Corporation	Linfiny Japan Inc.	Research and development of electronic ink	100.00	100.00	100.00	
E Ink Corporation	E Ink California, LLC	Research, development and sale of electronic ink	100.00	100.00	100.00	
	E Ink Japan Inc.	Development of electronics ink products	100.00	100.00	100.00	
	E Ink Systems, LLC	Research and development of application software	-	-	100.00	d
PVI Global Corp.	PVI International Corp.	Trading	100.00	100.00	100.00	
	Ruby Lustre Ltd.	Investment	100.00	100.00	100.00	
	Dream Pacific International Corp.	Investment	100.00	100.00	100.00	
	Transyork Technology Yangzhou Ltd.	Assembly and sale of display panels	55.61	55.61	55.61	
	Transmart Electronics (Yangzhou) Ltd.	Research, development and sale of flat panels	66.66	66.66	66.66	
Tech Smart Logistics Ltd.	E Ink Corporation	Manufacture and sale of electronic ink	41.81	41.81	41.81	
Dream Universe Ltd.	Transyang Electronics (Yangzhou) Ltd.	Assembly of LCD flat panels	-	-	100.00	b
PVI International Corp.	Transcend Optronics (Yangzhou) Co., Ltd.	Assembly and sale of display panels	100.00	100.00	100.00	
Ruby Lustre Ltd.	Rich Optronics (Yangzhou) Co., Ltd.	Assembly and sale of display panels	100.00	100.00	100.00	
Dream Pacific International Corp.	Hydis Technologies Co., Ltd.	Research, development and licensing of monitors	94.73	94.73	94.73	
	Yangzhou Huaxia Integrated O/E System Co., Ltd.	Manufacture and sale of LED products	24.19	24.19	24.19	
Transcend Optronics (Yangzhou) Co., Ltd.	Yangzhou Huaxia Integrated O/E System Co., Ltd.	Manufacture and sale of LED products	75.81	75.81	75.81	
	Transyork Technology Yangzhou Ltd.	Assembly and sale of display panels	44.39	44.39	44.39	
	Transmart Electronics (Yangzhou) Ltd.	Research, development and sale of flat panels	33.34	33.34	33.34	

a. To simplify the Group's organization management, integrate the utilization of resources, and increase operational efficiency, the board of directors of the subsidiary, Yuen Yu Investment Co., Ltd., approved on April 19, 2019 to merge its subsidiary YuanHan Materials Inc. by absorption. The reference date of the merger was on June 1, 2019, with Yuen Yu Investment Co., Ltd. as the surviving company, which was renamed as YuanHan Materials Inc. after the merger. In addition, the board of directors of YuanHan Materials Inc. approved the issuance of new shares on August 16, 2019 to merge the subsidiary, SiPix Technology Inc. The reference date of the merger is set on October 1, 2019, with YuanHan Materials Inc. as the surviving company.

b. Transyang Electronics (Yangzhou) Ltd. has completed its liquidation process in May 2019.

c. To adjust the investment structure, the Company purchased 4% ownership of Linfiny Corporation from YuanHan Material Inc.

d. E Ink Systems, LLC has completed its liquidation process in December 2019.

e. Lucky Joy Holdings Ltd. has completed its liquidation process in March 2020.

Subsidiaries included in the consolidated financial statements for the three months ended March 31, 2020 and 2019, were calculated based on the financial statements that have not been reviewed, except for E Ink Corporation, Hydis Technologies Co., Ltd., Dream Pacific International Corp., Tech Smart Logistic Ltd., PVI International Corp., PVI Global Corp., Prime View Communications Ltd., Transcend Optronics (Yangzhou) Co., Ltd., Rich Optronics (Yangzhou) Co., Ltd., Transyork Technology Yangzhou Ltd., YuanHan Materials Inc. (Originally named YuenYu Investment Co., Ltd.) and New Field e-Paper Co., Ltd. were calculated based on the financial statements that have been reviewed.

14. PROPERTY, PLANT AND EQUIPMENT

	Buildings	Machinery	Other Equipment	Construction in Progress and Prepayments for Equipment	Total
Cost					
Balance at January 1, 2019	$ 3,906,019	$ 7,163,257	$ 4,999,769	$ 439,597	$ 16,508,642
Additions	42,705	6,926	18,544	3,945	72,120
Disposals	-	(37,149)	(20,536)	-	(57,685)
Reclassifications	28,875	121,281	10,232	(162,089)	(1,701)
Effects of foreign currency exchange differences	39,278	37,482	50,497	2,051	129,308
Balance at March 31, 2019	$ 4,016,877	$ 7,291,797	$ 5,058,506	$ 283,504	$ 16,650,684
Accumulated depreciation and impairment					
Balance at January 1, 2019	$ 2,163,142	$ 6,304,365	$ 3,519,694	$ -	$ 11,987,201
Depreciation expenses	35,756	77,452	61,739	-	174,947
Impairment losses recognized (reversed)	-	(253)	16,779	-	16,526
Disposals	-	(36,918)	(20,536)	-	(57,454)
Effects of foreign currency exchange differences	18,655	24,911	42,604	-	86,170
Balance at March 31, 2019	$ 2,217,553	$ 6,369,557	$ 3,620,280	$ -	$ 12,207,390
Carrying amount at March 31, 2019	$ 1,799,324	$ 922,240	$ 1,438,226	$ 283,504	$ 4,443,294
Cost					
Balance at January 1, 2020	$ 3,686,606	$ 7,075,310	$ 4,741,387	$ 477,102	$ 15,980,405
Additions	-	42,689	7,256	62,488	112,433
Disposals	-	(5,598)	(193,723)	-	(199,321)
Reclassifications	-	(30,792)	-	(12,700)	(43,492)
Effects of foreign currency exchange differences	(7,806)	(6,276)	5,230	1,917	(6,935)
Balance at March 31, 2020	$ 3,678,800	$ 7,075,333	$ 4,560,150	$ 528,807	$ 15,843,090

(Continued)

	Buildings	Machinery	Other Equipment	Construction in Progress and Prepayments for Equipment	Total
Accumulated depreciation and impairment					
Balance at January 1, 2020	$ 2,142,707	$ 6,339,409	$ 3,393,972	$ -	$ 11,876,088
Depreciation expenses	32,379	71,239	57,426	-	161,044
Disposals	-	(5,598)	(193,602)	-	(199,200)
Reclassifications	-	(10,733)	-	-	(10,733)
Effects of foreign currency exchange differences	(4,649)	(6,929)	(1,337)	-	(12,915)
Balance at March 31, 2020	$ 2,170,437	$ 6,387,388	$ 3,256,459	$ -	$ 11,814,284
Carrying amount at December 31, 2019 and January 1, 2020	$ 1,543,899	$ 735,901	$ 1,347,415	$ 477,102	$ 4,104,317
Carrying amount at March 31, 2020	$ 1,508,363	$ 687,945	$ 1,303,691	$ 528,807	$ 4,028,806

(Concluded)

As of date on March 31, 2019, for part of the Group's equipment with no future use, the Group assessed its recoverable amount to be zero. It performed an assessment of the recoverable amount of property, plant and equipment and recognized an impairment loss of $16,526 thousand for the three months ended March 31, 2019. The impairment loss is mainly from the segments of Asia.

Information about capitalized interest is as follows:

	For the Three Months Ended March 31	
	2020	2019
Capitalized interest	$ 324	$ 303
Capitalization rate intervals	0.94-0.98%	1.22-1.23%

The above items of property, plant and equipment are depreciated on a straight-line basis over their estimated useful lives as follows:

Buildings	
Main buildings	20-56 years
Clean rooms and plumbing construction	25-36 years
Employee dormitories	20 years
Others	2-16 years
Machinery	1-10 years
Other equipment	1-26 years

15. LEASE ARRANGEMENTS

a. Right-of-use assets

	March 31, 2020	December 31, 2019	March 31, 2019
Carrying amounts			
Land	$ 832,118	$ 838,338	$ 856,998
Buildings	917,614	925,449	987,489
Other equipment	1,807	2,247	3,969
	$ 1,751,539	$ 1,766,034	$ 1,848,456

	For the Three Months Ended March 31	
	2020	2019
Depreciation of right-of-use assets		
Land	$ 6,220	$ 6,220
Buildings	14,714	13,265
Other equipment	440	515
	$ 21,374	$ 20,000

Except for the aforementioned recognized depreciation, the Group did not have significant sublease or impairment of right-of-use assets during the three months ended March 31, 2020 and 2019.

b. Lease liabilities

	March 31, 2020	December 31, 2019	March 31, 2019
Carrying amounts			
Current (included in other current liabilities)	$ 72,781	$ 72,608	$ 74,368
Non-current	$ 1,710,695	$ 1,721,654	$ 1,801,722

Discount rate intervals for lease liabilities are as follows:

	March 31, 2020	December 31, 2019	March 31, 2019
Land	1.56%	1.56%	1.56%
Buildings	0.8-3.84%	0.8-3.84%	0.8-3.84%
Other equipment	0.8-2.89%	0.8-3.84%	0.8-3.84%

c. Material lease-in activities and terms

The Group leased certain land in the Hsinchu Science Park from the Hsinchu Science Park Bureau of the Ministry of Science and Technology from July 1, 2014 to December 31, 2033. The rental amount is calculated on the basis of the mutual agreement. The lessor may adjust the rent at any time on the basis of changes in announced land values and related laws and regulations. At the end of the lease terms, the Group has renewal options if the Group does not violate the lease agreements during the rental period.

The Group also leased certain land and buildings as its plants and offices, with the lease term from 2 to 20 years. The lease contract for land located in Taoyuan specifies that lease payments will be adjusted every year on the basis of changes in announced land values, with the adjusted limitation of 3% and renewal options at the end of the lease terms. The lease contract for buildings in the United States contains extension options, which provide more operational flexibility for the Group. These terms are not reflected in measuring lease liabilities if the options are not reasonably certain to be exercised.

The Group does not have bargain purchase options to acquire the leasehold land and buildings at the end of the lease terms. In addition, without the lessors' consent, the Group is prohibited from subleasing or transferring all or any portion of the underlying assets, changing their use, or using illegally.

d. Other lease information

	For the Three Months Ended March 31	
	2020	2019
Expenses relating to short-term leases	$ 12,855	$ 3,777
Expenses relating to low-value asset leases	$ 155	$ -
Total cash outflow for leases	$ 39,409	$ 32,783

The Group leases other equipment which qualifies as short-term leases and low-value asset leases. The Group has elected to apply the recognition exemption and thus, did not recognize right-of-use assets and lease liabilities for these leases.

16. GOODWILL AND OTHER INTANGIBLE ASSETS

	Goodwill	Patents	Others	Total
Balance at January 1, 2019	$ 6,781,244	$ 1,619,156	$ 125,653	$ 8,526,053
Additions	-	4,214	33,920	38,134
Amortization expenses	-	(101,816)	(11,250)	(113,066)
Effects of foreign currency exchange differences	8,643	2,457	138	11,238
Balance at March 31, 2019	$ 6,789,887	$ 1,524,011	$ 148,461	$ 8,462,359
Balance at January 1, 2020	$ 6,720,745	$ 1,242,606	$ 144,490	$ 8,107,841
Additions	-	3,083	1,266	4,349
Amortization expenses	-	(101,024)	(16,659)	(117,683)
Reclassifications	-	-	42,458	42,458
Effects of foreign currency exchange differences	20,166	2,031	(67)	22,130
Balance at March 31, 2020	$ 6,740,911	$ 1,146,696	$ 171,488	$ 8,059,095

The Group recognized goodwill in acquiring the patented technologies of electronic ink and electronic paper, which are mainly used in researching, developing, and manufacturing monitors and electronic shelf labels. The carrying amount of goodwill was allocated to the cash-generating units of these two products, and the recoverable amount of each cash-generating unit was determined based on a value in use calculation. The recoverable amount was determined by management based on financial budgets covering a 5-year period and discount rates of 12.67-13.12% and 11.97-12.42% per annum for the years ended December 31, 2019 and 2018, respectively. The cash flows beyond that 5-year period have been extrapolated using a steady annual growth rate. Other key assumptions included budgeted revenue and budgeted gross profit. Such assumptions were based on the past performance of the cash-generating unit and management's expectations of market development.

Other intangible assets are amortized on a straight-line basis over their estimated useful lives as follows:

Patents	6-17 years
Others	3-5 years

17. BORROWINGS

a. Short-term borrowings

	March 31, 2020	December 31, 2019	March 31, 2019
Unsecured borrowings	$ 3,708,673	$ 3,214,696	$ 2,147,020
Secured borrowings (Note 30)	982,343	1,343,136	-
	$ 4,691,016	$ 4,557,832	$ 2,147,020
Foreign currency included			
US$ (in thousands)	$ 32,501	$ 44,802	$ 11,000
JPY (in thousands)	$ 6,000	$ 40,000	$ -
Interest rate intervals	0.87-2.37%	0.95-2.59%	1-3%

b. Short-term bills payable

	March 31, 2020	December 31, 2019	March 31, 2019
Commercial paper	$ 556,000	$ 580,000	$ 660,000
Less: Discounts on bills payable	63	113	253
	$ 555,937	$ 579,887	$ 659,747
Interest rate intervals	0.61-0.79%	0.61-0.79%	0.61-1.04%

c. Long-term borrowings (included in other non-current liabilities)

	March 31, 2020	December 31, 2019	March 31, 2019
Long-term payables	$ -	$ -	$ 45,771

Long-term payables on March 31, 2019 were interest-free infrastructure funds that Yangzhou Huaxia Integrated O/E System Co., Ltd. lent from Yangzhou Economic and Technological Development Zone Administration Committee. It has been repaid in November 2019.

18. OTHER PAYABLES

	March 31, 2020	December 31, 2019	March 31, 2019
Payables for salaries or bonuses	$ 616,410	$ 787,812	$ 612,451
Payables for construction and equipment	42,577	123,125	68,711
Payables for professional service fees	58,458	49,921	47,821
Payables for utilities	36,502	40,367	29,509
Others	269,881	262,530	312,885
	$ 1,023,828	$ 1,263,755	$ 1,071,377

19. RETIREMENT BENEFIT PLANS

a. Defined contribution plans

The Company and its subsidiary, YuanHan Materials Inc., adopted a pension plan under the Labor Pension Act (the “LPA”), which is a state-managed defined contribution plan. Under the LPA, each entity makes monthly contributions to employees’ individual pension accounts at 6% of monthly salaries and wages.

The employees of the Group’s subsidiaries in China are members of a state-managed retirement benefit plan operated by the government of China.

b. Defined benefit plans

The defined benefit plan adopted by the Company in accordance with the Labor Standards Law is operated by the government of the ROC. Pension benefits are calculated on the basis of the length of service and average monthly salaries of the 6 months before retirement. The Company contributes amounts equal to 2% of total monthly salaries and wages to a pension fund administered by the pension fund monitoring committee. Pension contributions are deposited in the Bank of Taiwan in the committee’s name. Before the end of each year, the Company assesses the balance in the pension fund. If the amount of the balance in the pension fund is inadequate to pay retirement benefits for employees who conform to retirement requirements in the next year, the Company is required to fund the difference in one appropriation that should be made before the end of March of the next year. The pension fund is managed by the Bureau of Labor Funds, Ministry of Labor (“the Bureau”); the Company has no right to influence the investment policy and strategy.

The defined benefit plan adopted by Hydis Technologies Co., Ltd. in accordance with the law is operated by the government of South Korea.

Employee benefit expenses in respect of the Group’s defined benefit retirement plans were $1,718 thousand and $2,555 thousand for the three months ended March 31, 2020 and 2019, respectively, which were calculated using the actuarially determined pension cost rate as of December 31, 2019 and 2018, respectively.

20. EQUITY

a. Ordinary shares

	March 31, 2020	December 31, 2019	March 31, 2019
Number of shares authorized (in thousands)	2,000,000	2,000,000	2,000,000
Amount of shares authorized	$ 20,000,000	$ 20,000,000	$ 20,000,000
Number of shares issued and fully paid (in thousands)	1,140,468	1,140,468	1,140,468
Amount of shares issued	$ 11,404,677	$ 11,404,677	$ 11,404,677

b. Capital surplus

	March 31, 2020	December 31, 2019	March 31, 2019
May be used to offset a deficit, distributed as cash dividends or transferred to share capital (1)			
Issuance of shares	$ 9,494,322	$ 9,494,322	$ 9,494,322
Conversion of bonds	525,200	525,200	525,200
Treasury share transactions	151,920	151,920	95,922
May only be used to offset a deficit			
Expired employee share options	50,346	50,346	49,840
Changes in percentage of ownership interests in associates (2)	105	105	105
Unclaimed dividends extinguished by prescription	40	40	14
May not be used for any purpose			
Employee share options	85,060	85,060	115,544
	$ 10,306,993	$ 10,306,993	$ 10,280,947

1) Such capital surplus may be used to offset a deficit; in addition, when the Company has no deficit, such capital surplus may be distributed as cash dividends or transferred to share capital (limited to a certain percentage of the Company's capital surplus and once a year).

2) Such capital surplus arises from the effect of changes in ownership interest in associates resulting from equity transactions other than actual disposals or acquisitions, or from changes in capital surplus of associates accounted for using the equity method.

c. Retained earnings and dividends policy

Under the dividends policy as set forth in the Company's amended Articles of Incorporation, where the Company made a profit in a fiscal year, the profit shall be first utilized for paying taxes, offsetting losses of previous years, setting aside a legal reserve of 10% of the remaining profit, setting aside or reversing a special reserve in accordance with the laws and regulations, and then any remaining profit together with at least 50% of any undistributed retained earnings shall be used by the Company's board of directors as the basis for proposing a distribution plan, which should be resolved in the shareholders' meeting for the distribution of dividends and bonuses to shareholders. For the policies on the distribution of employees' compensation and remuneration of directors after the amendment, refer to Note 22.

The Company's Articles of Incorporation also stipulate a dividends policy that allows previous accumulated undistributed earnings to be distributed. The distribution of dividends to shareholders is allowed to be in cash or by the issuance of shares. In principle, cash dividends should be at least 10% of the total dividends distributed.

The shareholders of the Company held their regular meeting on June 18, 2019 and in that meeting, resolved the amendments to the Company's Articles of Incorporation. The amendments explicitly stipulate that the board of directors are authorized to adopt a special resolution to distribute dividends and bonuses in cash and a report of such distribution should been submitted in the shareholder's meeting.

An appropriation of earnings to a legal reserve shall be made until the legal reserve equals the Company's paid-in capital. The legal reserve may be used to offset deficits. If the Company has no deficits and the legal reserve has exceeded 25% of the Company's paid-in capital, the excess may be transferred to capital or distributed in cash.

Items referred to under Rule No. 1010012865 issued by the FSC and in the directive titled "Questions and Answers for Special Reserves Appropriated Following Adoption of IFRSs" should be appropriated to or reversed from a special reserve by the Company.

The appropriations of earnings for 2019 and 2018 that were proposed by the board of directors on March 18, 2020 and approved in the shareholders' meetings on June 18, 2019, respectively, were as follows:

	Appropriation of Earnings For the Year Ended December 31		Dividends Per Share (NT$) For the Year Ended December 31	
	2019	**2018**	**2019**	**2018**
Legal reserve	$ 308,077	$ 261,367		
Reversal of special reserve	154,916	-		
Special reserve	-	184,797		
Cash dividends	2,268,725	2,373,438	$ 2.00	$ 2.10

The appropriation of earnings for 2019 is subject to resolution in the shareholders' meeting to be held on June 18, 2020.

d. Special reserve

	For the Three Months Ended March 31	
	2020	**2019**
Balance at the beginning and the end of the period	$ 255,475	$ 70,678

If a special reserve of $70,678 thousand appropriated on the first-time adoption of IFRSs relates to the exchange differences on translating the financial statements of foreign operations, the special reserve will be reversed proportionately on the Company's disposal of the foreign operations; on the Company's loss of significant influence; however, the entire special reserve will be reversed. An additional special reserve should be appropriated for the amount equal to the difference between the net debit balance of the reserves and the special reserve appropriated on the first-time adoption of IFRSs. Any special reserve appropriated may be reversed to the extent that the net debit balance reverses and may thereafter be distributed.

e. Other equity items

1) Exchange differences on translating the financial statements of foreign operations

	For the Three Months Ended March 31	
	2020	**2019**
Balance at January 1	$ (937,787)	$ (181,328)
Exchange differences on translating the financial statements of foreign operations	(299,698)	76,714
Share of associates and join ventures accounted for using the equity method	(2,770)	1,894
Disposal of subsidiaries	567	-
Balance at March 31	$ (1,239,688)	$ (102,720)

2) Unrealized gain (loss) on financial assets at FVTOCI

	For the Three Months Ended March 31	
	2020	**2019**
Balance at January 1	$ 907,906	$ (74,147)
Unrealized gain (loss) on equity instruments	(1,068,543)	550,270
Cumulative unrealized loss of equity instruments transferred to retained earnings due to disposal	-	(5,187)
Balance at March 31	$ (160,637)	$ 470,936

f. Non-controlling interests

	For the Three Months Ended March 31	
	2020	**2019**
Balance at January 1	$ 452,645	$ 385,799
Share of profit for the period	25,608	21,562
Unrealized loss on financial assets at FVTOCI	(649)	-
Exchange differences on translating the financial statements of foreign operations	(17,488)	(2,875)
Balance at March 31	$ 460,116	$ 404,486

g. Treasury shares

	For the Three Months Ended March 31	
	2020	2019
Number of shares in thousands at the beginning and the end of the period	6,105	10,259

The board of directors of the Company resolved to repurchase 20,000 thousand shares of treasury shares on June 13, 2016, which was completed in August 2016, for the purpose of transferring to employees. Under the Securities and Exchange Act, the Company shall neither pledge treasury shares nor exercise shareholders' rights on these shares, such as the rights to dividends and to vote.

21. REVENUE

a. Revenue from contracts with customers

	For the Three Months Ended March 31	
Type of Revenue/Category by Product	2020	2019
Revenue from sale of goods		
Monitors	$ 1,807,644	$ 2,342,489
Electronic shelf labels	1,111,380	608,302
Others	3,103	3,981
	$ 2,922,127	$ 2,954,772
Royalty income	$ 371,234	$ 448,735

b. Contract balances

	March 31, 2020	December 31, 2019	March 31, 2019	January 1, 2019
Notes and accounts receivable (Note 10)	$ 2,078,017	$ 2,059,829	$ 2,438,300	$ 2,243,412
Contract assets - current				
Royalty	$ 85,490	$ 60,088	$ 98,298	$ 187,829
Contract liabilities - current				
Royalty	$ 994,828	$ 1,215,378	$ 1,367,516	$ 1,423,203
Sale of goods	182,816	83,230	389,433	149,799
	$ 1,177,644	$ 1,298,608	$ 1,756,949	$ 1,573,002
Contract liabilities - non-current				
Royalty	$ 824,400	$ 1,024,259	$ 1,570,381	$ 1,761,719

The changes in the balances of contract assets and contract liabilities primarily result from the timing difference between the satisfaction of performance obligation and the customer's payment. Revenue recognized for the period from the beginning balance of the contract liabilities is as follows:

	For the Three Months Ended March 31	
Type of Revenue	**2020**	**2019**
Royalty income	$ 346,451	$ 419,207
Revenue from sale of goods	46,726	95,124
	$ 393,177	$ 514,331

22. NET INCOME

Net income includes the following items:

a. Depreciation and amortization

	For the Three Months Ended March 31	
	2020	**2019**
Property, plant and equipment	$ 161,044	$ 174,947
Other intangible assets	117,683	113,066
Right-of-use assets	21,374	20,000
	$ 300,101	$ 308,013
An analysis of depreciation by function		
Operating costs	$ 77,503	$ 84,179
Operating expenses	104,915	110,768
	$ 182,418	$ 194,947
An analysis of amortization by function		
Operating costs	$ 1,198	$ 660
Operating expenses	116,485	112,406
	$ 117,683	$ 113,066

b. Employee benefits expense

	For the Three Months Ended March 31	
	2020	**2019**
Post-employment benefits (Note 19)		
Defined contribution plans	$ 18,361	$ 19,999
Defined benefit plans	1,718	2,555
	20,079	22,554

(Continued)

	For the Three Months Ended March 31	
	2020	2019
Share-based payments		
Equity-settled	$ -	$ 37,654
Other employee benefits	888,180	921,290
Total employee benefits expense	$ 908,259	$ 981,498
An analysis of employee benefits expense by function		
Operating costs	$ 190,677	$ 246,199
Operating expenses	717,582	735,299
	$ 908,259	$ 981,498

(Concluded)

c. Employees' compensation and remuneration of directors

According to the Articles of Incorporation of the Company, the Company accrued employees' compensation at the rates of no less than 1% and no higher than 10% as well as remuneration of directors at the rates of no higher than 1%, respectively, of net income before income tax, employees' compensation and remuneration of directors, net of accumulated deficit, if any. The estimated employees' compensation and remuneration of directors for the three months ended March 31, 2020 and 2019, were as follows:

	For the Three Months Ended March 31	
	2020	2019
Employees' compensation	$ 8,220	$ 5,750
Remuneration of directors	$ 4,650	$ 4,400

If there is a change in the amounts after the annual consolidated financial statements are authorized for issue, the differences are recorded as a change in the accounting estimate in the following year.

The employees' compensation and remuneration of directors for the years ended December 31, 2019 and 2018, which were approved by the Company's board of directors on March 18, 2020 and March 20, 2019, respectively, were as follows:

	For the Year Ended December 31	
	2019	2018
Employees' compensation	$ 31,900	$ 27,100
Remuneration of directors	$ 15,579	$ 12,238

There is no difference between the actual amounts of employees' compensation and remuneration of directors paid and the amounts recognized in the consolidated financial statements for the years ended December 31, 2019 and 2018.

Information on the employees' compensation and remuneration of directors resolved by the Company's board of directors in 2020 and 2019 is available at the Market Observation Post System website of the Taiwan Stock Exchange.

23. INCOME TAXES

a. Major components of income tax expense recognized in profit or loss:

	For the Three Months Ended March 31	
	2020	2019
Current tax		
In respect of the current period	$ 137,375	$ 73,552
Adjustments for the prior years	4,452	-
	141,827	73,552
Deferred tax		
In respect of the current period	(66,082)	71,738
Income tax expense recognized in profit or loss	$ 75,745	$ 145,290

In July 2019, the President of the ROC announced the amendments to the Statute for Industrial Innovation, which stipulate that the amounts of unappropriated earnings in 2018 and thereafter that are reinvested in the construction or purchase of certain assets or technologies are allowed as deduction when computing the income tax on unappropriated earnings.

b. Income tax assessments

Income tax assessments of the Group were as follows:

Company	Latest Assessment Year
The Company	2017
YuanHan Materials Inc. (originally named Yuen Yu Investment Co., Ltd.)	2018
New Field e-Paper Co., Ltd.	2018
Linfiny Corporation	2018

24. EARNINGS PER SHARE

Unit: NT$ Per Share

	For the Three Months Ended March 31	
	2020	2019
Basic earnings per share	$ 0.69	$ 0.39
Diluted earnings per share	$ 0.69	$ 0.39

The earnings and weighted average number of ordinary shares outstanding used in the computation of earnings per share were as follows:

Net Income for the Period

	For the Three Months Ended March 31	
	2020	2019
Net income for the period attributable to owners of the Company	$ 787,260	$ 438,048

Number of Shares

Unit: Shares in Thousands

	For the Three Months Ended March 31	
	2020	**2019**
Weighted average number of ordinary shares used in the computation of basic earnings per share	1,134,363	1,130,209
Effect of potentially dilutive ordinary shares		
Employees' compensation	1,560	871
Share-based payment arrangements	2,078	4,344
Weighted average number of ordinary shares used in the computation of diluted earnings per share	1,138,001	1,135,424

If the Group offered to settle compensation paid to employees in cash or shares, the Group assumed the entire amount of the compensation will be settled in shares and the resulting potential shares were included in the weighted average number of shares outstanding used in the computation of diluted earnings per share, as the effect is dilutive. Such dilutive effect of the potential shares was included in the computation of diluted earnings per share until the number of shares to be distributed to employees is resolved in the following year.

25. SHARE-BASED PAYMENT ARRANGEMENTS

The board of directors resolved on May 8, 2019, August 14, 2018, May 8, 2018 and March 22, 2017 to transfer treasury shares of 25 thousand shares, 5,885 thousand shares, 8,097 thousand shares and 7,289 thousand shares, respectively, to qualified employees of the Company and its subsidiaries. In compliance with the Company's Regulations Governing Share Repurchase and Transfer to Employees, the transfer price for each arrangements is the average of the actual acquisition price of the treasury shares.

Information about treasury shares transferred to employees is as follows:

For the three months ended March 31, 2020

Unit: Shares in Thousands

Grant Date	Transferable Shares	Shares Transferred for the Period	Accumulated Shares Transferred	Expired Shares	Shares at the End of the Period
May 8, 2019	25	-	25	-	-
August 14, 2018	5,885	-	40	525	5,320
May 8, 2018	8,097	-	7,913	184	-
March 22, 2017	7,289	-	5,917	1,372	-

For the three months ended March 31, 2019

Grant Date	Transferable Shares	Shares Transferred for the Period	Accumulated Shares Transferred	Expired Shares	Shares at the End of the Period
August 14, 2018	5,885	-	-	16	5,869
May 8, 2018	8,097	-	4,024	28	4,045
March 22, 2017	7,289	-	5,717	1,372	200

Treasury shares transferred to employees in 2018 and 2017 were priced using a Black-Scholes pricing model, while treasury shares transferred to employees in 2019 was measured using the difference between the grant date share price of $36.6 and the exercise price of $18.02, which fair value of the stock options was calculated as $18.58. Compensation costs recognized were $37,654 thousand for the three months ended March 31, 2019. The inputs to the models are as follows:

	August 2018	May 2018	March 2017
Grant date share price (NT$)	$36.85	$31.55	$25.20
Exercise price (NT$)	$18.02	$18.02	$18.02
Expected volatility	53.23%	48.31-49.82%	30.53-40.29%
Expected life	0-1 year	0-1 year	0-2 years
Expected dividend yield	2.46%	2.46%	2.34%
Risk-free interest rate	0.91%	0.6-1.04%	0.63-1.08%
Weighted-average fair value of options granted (NT$)	$18.80	$13.55	$7.48

26. NON-CASH TRANSACTIONS

For the three months ended March 31, 2020 and 2019, the Group entered into the following non-cash investing activities:

	For the Three Months Ended March 31	
	2020	2019
Acquisition of property, plant and equipment		
Increase in property, plant and equipment	$ 112,433	$ 72,120
Decrease in payables for construction and equipment (included in other payables)	80,190	59,284
Net cash paid	$ 192,623	$ 131,404

27. CAPITAL MANAGEMENT

The Group manages its capital to ensure that entities in the Group will be able to continue as going concerns while maximizing the return to shareholders through the optimization of the debt and equity balance. The Group’s overall strategy remains unchanged in the future.

The Group’s risk management committee reviews the capital structure on an annual basis. As part of this review, the committee considers the cost of capital and the risks associated with each class of capital. Based on the committee’s recommendations, the Group expects to balance its capital structure through the payment of dividends, the issue of new shares and private ordinary shares or, the payment of old debt.

28. FINANCIAL INSTRUMENTS

a. Fair value of financial instruments measured at fair value on a recurring basis

1) Fair value hierarchy

March 31, 2020

	Level 1	Level 2	Level 3	Total
Financial assets at FVTPL				
Non-derivative financial assets				
Mutual funds	$ 2,507,700	$ -	$ -	$ 2,507,700
Perpetual bonds	-	513,935	-	513,935
Hybrid financial assets				
Overseas unlisted shares	-	-	28,652	28,652
	$ 2,507,700	$ 513,935	$ 28,652	$ 3,050,287
Financial assets at FVTOCI				
Investments in equity instruments	$ 4,273,880	$ -	$ 530,238	$ 4,804,118
Domestic and overseas listed shares	-	-	57,727	57,727
Domestic and overseas unlisted shares				
	$ 4,273,880	$ -	$ 587,965	$ 4,861,845
Financial liabilities at FVTPL				
Derivative financial liabilities				
Foreign exchange forward contracts	$ -	$ 19,724	$ -	$ 19,724

December 31, 2019

	Level 1	Level 2	Level 3	Total
Financial assets at FVTPL				
Non-derivative financial assets				
Mutual funds	$ 2,455,299	$ -	$ -	$ 2,455,299
Hybrid financial assets	-	-	60,285	60,285
Overseas unlisted shares				
	$ 2,455,299	$ -	$ 60,285	$ 2,515,584

(Continued)

	Level 1	Level 2	Level 3	Total
Financial assets at FVTOCI				
Investments in equity instruments				
Domestic and overseas listed shares	$ 3,639,927	$ -	$ 782,743	$ 4,422,670
Domestic and overseas unlisted shares	-	-	51,847	51,847
	$ 3,639,927	$ -	$ 834,590	$ 4,474,517

(Concluded)

March 31, 2019

	Level 1	Level 2	Level 3	Total
Financial assets at FVTPL				
Non-derivative financial assets				
Mutual funds	$ 1,874,225	$ -	$ -	$ 1,874,225
Financial assets at FVTOCI				
Investments in equity instruments				
Domestic and overseas listed shares	$ 3,288,691	$ -	$ 632,907	$ 3,921,598
Domestic and overseas unlisted shares	-	-	54,607	54,607
	$ 3,288,691	$ -	$ 687,514	$ 3,976,205

There were no transfers between Levels 1 and 2 for the three months ended March 31, 2020 and 2019, respectively.

2) Reconciliation of Level 3 fair value measurements of financial instruments

	For the Three Months Ended March 31	
	2020	2019
Balance at January 1	$ 894,875	$ 508,004
Recognized in profit or loss	(31,633)	-
Recognized in other comprehensive income (loss)		
Unrealized gain (loss) on equity instruments	(246,265)	178,593
Exchange differences on translating the financial statements of foreign operations	(360)	917
	(246,625)	179,510
Balance at March 31	$ 616,617	$ 687,514

3) Valuation techniques and inputs applied for Level 2 fair value measurement

Derivatives - foreign exchange forward contracts were evaluated by the discounted cash flow method. Future cash flows are estimated based on observable forward exchange rates and contracted exchange rates at the end of the reporting period, discounted at a rate that reflects the credit risk of each counterparty.

Non-derivatives - the fair value of perpetual bonds is determined by quoted market prices provided by the third party.

4) Valuation techniques and inputs applied for Level 3 fair value measurement

a) Domestic and overseas unlisted shares were evaluated by the market approach, referring to the market share prices and situations of companies with similar conditions. Unobservable input used by the Group was discount for lack of marketability, which was 20-30%, 20-30% and 20% as of March 31, 2020, December 31, 2019 and March 31, 2019, respectively. If the discount for lack of marketability increased by 1% while all other variables were held constant, the fair value would have decreased $690 thousand, $1,084 thousand and $214 thousand, respectively.

b) Overseas listed private shares were evaluated by the market approach, referring to the closing prices at the end of the reporting periods with consideration of discount for lack of marketability. Unobservable input used by the Group was discount for lack of marketability, which was 15.18%, 15.18% and 16.6% as of March 31, 2020, December 31, 2019 and March 31, 2019, respectively. If the discount for lack of marketability increased by 1% while all other variables were held constant, the fair value would have decreased $6,251 thousand, $9,228 thousand and $7,589 thousand, respectively.

b. Categories of financial instruments

	March 31, 2020	**December 31, 2019**	**March 31, 2019**
Financial assets			
FVTPL	$ 3,050,287	$ 2,515,584	$ 1,874,225
Amortized cost (Note 1)	14,783,405	16,849,434	15,731,676
Equity instruments at FVTOCI	4,861,845	4,474,517	3,976,205
Financial liabilities			
FVTPL	19,724	-	-
Amortized cost (Note 2)	7,629,974	7,557,513	5,331,447

Note 1: The balances include financial assets measured at amortized cost, which comprise cash and cash equivalents, notes and accounts receivable and other receivables.

Note 2: The balances include financial liabilities measured at amortized cost, which comprise short-term borrowings, short-term bills payable, notes and accounts payable, other payables and long-term borrowings (included in other non-current liabilities).

c. Financial risk management objectives and policies

The Group's major financial instruments include equity and debt investments, notes and accounts receivable, notes and accounts payable, borrowings and lease liabilities. The Group's Corporate Treasury function provides services to the business, monitors and manages the financial risks relating to the operations of the Group through internal risk reports that analyze exposures by degree and magnitude of risks. These risks include market risk, credit risk and liquidity risk.

1) Market risk

The Group's activities exposed it primarily to foreign currency risk, interest rate risk and other price risk.

There have been no changes to the Group's exposure to market risks or the manner in which these risks are managed and measured.

a) Foreign currency risk

Several subsidiaries of the Company had foreign-currency-denominated sales and purchases, which exposed the Group to foreign currency risk. Exchange rate exposures were managed within approved policy by utilizing foreign exchange forward contracts.

The carrying amounts of the Group's foreign-currency-denominated monetary assets and monetary liabilities (including those eliminated on consolidation) at the end of the reporting periods are set out in Note 32.

Sensitivity analysis

The Group was mainly exposed to the U.S. dollar (USD).

The following table details the Group's sensitivity to a 1% increase and decrease in the New Taiwan dollar (NTD), renminbi (RMB) and South Korean Won (KRW) against USD. The sensitivity analysis included only outstanding foreign-currency-denominated monetary items and adjusts their translation at the end of the reporting periods for a 1% change in foreign currency rates. For a 1% strengthening of NTD, RMB and KRW against USD, pre-tax income would increase (decrease) as follows:

	NTD to USD		**RMB to USD**		**KRW to USD**	
	For the Three Months Ended March 31		**For the Three Months Ended March 31**		**For the Three Months Ended March 31**	
	2020	**2019**	**2020**	**2019**	**2020**	**2019**
Profit or loss	$ (4,245)	$ (17,611)	$ (11,088)	$ (8,196)	$ (53,162)	$ (75,760)

b) Interest rate risk

The carrying amount of the Group's financial assets, financial liabilities and lease liabilities with exposure to interest rates at the end of the reporting periods were as follows:

	March 31, 2020	December 31, 2019	March 31, 2019
Fair value interest rate risk			
Financial assets	$ 10,986,645	$ 13,002,514	$ 11,525,031
Financial liabilities	$ 5,246,953	$ 5,137,719	$ 2,852,538
Lease liabilities	$ 1,783,476	$ 1,794,262	$ 1,876,090
Cash flow interest rate risk			
Financial assets	$ 1,529,093	$ 1,570,259	$ 1,534,555

Sensitivity analysis

The sensitivity analysis below was determined based on the Group's exposure to interest rates for non-derivative instruments at the end of the reporting periods. For floating rate liabilities, the analysis was prepared assuming the amount of each liability outstanding at the end of the reporting periods was outstanding for the whole period. A 50 basis point increase or decrease was used when reporting interest rate risk internally to key management personnel and represented management's assessment of the reasonably possible change in interest rates. The effective interest rates of floating rate financial assets and financial liabilities will change when the market rates change, which will result in fluctuations in future cash flows.

If interest rates had been 50 basis points higher, the Group's pre-tax cash inflows for the three months ended March 31, 2020 and 2019, would increase $1,911 thousand and $1,918 thousand, respectively, which was attributable to the Group's floating rate on its financial assets, and if interest rates had been 50 basis points lower, there would be an equal and opposite impact on pre-tax cash flows.

c) Other price risk

The Group was exposed to instrument price risk and equity price risk through its investments in mutual funds, equity securities and debt instruments. Equity investments are held for strategic rather than for trading purposes, and the Group does not actively trade these investments

Sensitivity analysis

The sensitivity analysis below was determined based on the exposure to price risks of mutual funds and equity securities at the end of the reporting periods.

If prices of mutual funds, equity securities and debt instruments had been 5% higher/lower, the income before income tax for the three months ended March 31, 2020 and 2019 would have increased/decreased by $152,514 thousand and $93,711 thousand, respectively, as a result of the changes in fair value of financial assets at FVTPL, and the other comprehensive income or loss before income tax for the three months ended March 31, 2020 and 2019 would have increased/decreased by $243,092 thousand and $198,810 thousand, respectively, as a result of the changes in fair value of financial assets at FVTOCI.

Changes in the Group's sensitivity to investments in equity securities are mainly resulting from the increased investment in equity securities.

2) Credit risk

Credit risk refers to the risk that a counterparty will default on its contractual obligations resulting in financial loss to the Group. As at the end of the reporting periods, the Group's maximum exposure to credit risk, which would cause a financial loss to the Group due to failure of counterparties to discharge an obligation and financial guarantees provided by the Group, could arise from:

a) The carrying amount of the respective recognized financial assets as stated in the consolidated balance sheets; and

b) The amount of contingent liabilities in relation to financial guarantees issued by the Group.

The Group adopted a policy of only dealing with creditworthy counterparties, evaluated potential customers through an internal credit rating system and set the credit limit of customers to grasp the credit status of the counterparties and effectively control the credit exposure.

3) Liquidity risk

The Group manages liquidity risk by monitoring and maintaining a level of cash and cash equivalents deemed adequate to finance the Group's operations and mitigate the effects of fluctuations in cash flows. In addition, management monitors the utilization of bank borrowings and ensures compliance with loan covenants.

The Group relies on bank borrowings as a significant source of liquidity. As of March 31, 2020, December 31, 2019 and March 31, 2019, the Group's unutilized short-term bank borrowing facilities were $3,834,428 thousand, $3,019,934 thousand and $2,365,940 thousand, respectively.

The following table details the Group's remaining contractual maturity for its non-derivative financial liabilities with agreed repayment periods. The table has been drawn up based on the undiscounted cash flows of financial liabilities from the earliest date on which the Group can be required to pay, including principal and estimated interest. Therefore, bank borrowings with a repayment on demand clause were included in the earliest time band regardless of the probability of the banks choosing to exercise their rights.

March 31, 2020

	On Demand or Less than 1 Month	1-3 Months	3 Months to 1 Year	1-5 Years	5+ Years
Non-derivative financial liabilities					
Lease liabilities	$ 9,667	$ 19,333	$ 83,940	$ 364,906	$ 1,784,821
Fixed interest rate liabilities	3,599,677	1,256,207	403,280	-	-
	$ 3,609,344	$ 1,275,540	$ 487,220	$ 364,906	$ 1,784,821

Additional information about the maturity analysis for lease liabilities was as follows:

	Less than 1 Year	1-5 Years	5-10 Years	10-15 Years	15-20 Years	20+ Years
Lease liabilities	$ 112,940	$ 364,906	$ 406,746	$ 390,447	$ 390,447	$ 597,181

December 31, 2019

	On Demand or Less than 1 Month	1-3 Months	3 Months to 1 Year	1-5 Years	5+ Years
Non-derivative financial liabilities					
Lease liabilities	$ 9,651	$ 19,303	$ 85,428	$ 368,373	$ 1,800,200
Fixed interest rate liabilities	3,941,755	1,206,956	-	-	-
	$ 3,951,406	$ 1,226,259	$ 85,428	$ 368,373	$ 1,800,200

Additional information about the maturity analysis for lease liabilities was as follows:

	Less than 1 Year	1-5 Years	5-10 Years	10-15 Years	15-20 Years	20+ Years
Lease liabilities	$ 114,382	$ 368,373	$ 407,519	$ 388,659	$ 388,659	$ 615,363

March 31, 2019

	On Demand or Less than 1 Month	1-3 Months	3 Months to 1 Year	1-5 Years	5+ Years
Non-derivative financial liabilities					
Lease liabilities	$ 9,674	$ 19,348	$ 87,068	$ 407,372	$ 1,964,645
Fixed interest rate liabilities	2,809,273	-	-	-	-
Non-interest bearing liabilities	-	-	-	-	45,771
	$ 2,818,947	$ 19,348	$ 87,068	$ 407,372	$ 2,010,416

Additional information about the maturity analysis for lease liabilities was as follows:

	Less than 1 Year	1-5 Years	5-10 Years	10-15 Years	15-20 Years	20+ Years
Lease liabilities	$ 116,090	$ 407,372	$ 442,605	$ 414,507	$ 414,507	$ 693,025

29. TRANSACTIONS WITH RELATED PARTIES

Balances and transactions between the Company and its subsidiaries, which are related parties of the Company, have been eliminated on consolidation and are not disclosed in this note. Details of transactions between the Group and other related parties are disclosed below.

a. Related party name and category

Related Party Name	Related Party Category
NTX Electronics Yangzhou Co., Ltd.	Associate
Yuen Foong Yu Biotech Co., Ltd.	Associate
PL Germany GmbH	Associate
YFY Inc.	Investor with significant influence over the Group

(Continued)

Related Party Name	Related Party Category
Eihoyo Shoji Co., Ltd.	Subsidiary of investor with significant influence over the Group
Yuen Foong Paper Co., Ltd. (Nanjing)	Subsidiary of investor with significant influence over the Group
Yuen Foong Yu Paper Mfg. Co., Ltd. (Yangzhou)	Subsidiary of investor with significant influence over the Group
Arizon RFID Technology Co., Ltd. (Originally named Arizon RFID Technology (Yangzhou) Co., Ltd.)	Subsidiary of investor with significant influence over the Group
YFY Packaging Inc.	Subsidiary of investor with significant influence over the Group
Yuen Foong Yu Consumer Products Co., Ltd.	Subsidiary of investor with significant influence over the Group
YFY Holding Management Co., Ltd.	Subsidiary of investor with significant influence over the Group
Yuen Foong Yu Consumer Products (Yangzhou) Co., Ltd.	Subsidiary of investor with significant influence over the Group
Yuen Foong Yu Blue Economy Natural Resources (Yangzhou) Co., Ltd.	Subsidiary of investor with significant influence over the Group
YFY Capital Co., Ltd.	Subsidiary of investor with significant influence over the Group
China Color Printing Co., Ltd.	Subsidiary of investor with significant influence over the Group
Chung Hwa Pulp Corporation	Subsidiary of investor with significant influence over the Group
LiVEBRiCKS Inc.	Subsidiary of investor with significant influence over the Group
Syntax Communication (H.K.) Limited	Subsidiary of investor with significant influence over the Group
YFY Jupiter US, Inc.	Subsidiary of investor with significant influence over the Group
Jupiter Prestige Group North America Inc.	Subsidiary of investor with significant influence over the Group
Johnson Lee	Key management personnel
Yuen Foong Yu Biotech (Kunshan) Co., Ltd.	Substantive related party
Yuen Foong Paper Co., Ltd.	Substantive related party
SinoPac Securities Corp.	Substantive related party
Hsin Yi Enterprise Co., Ltd.	Substantive related party
TGKW Management Limited	Substantive related party
Hsin Fan Precision Electronics (Yangzhou) Co., Ltd.	Substantive related party
Foongtone Technology Co., Ltd.	Substantive related party
Shen's Art Print Co., Ltd.	Substantive related party

(Concluded)

b. Sales of goods

Related Party Category	For the Three Months Ended March 31 2020	2019
Associate	$ 4,737	$ -

The sales price and collection terms are based on the agreements with the related parties.

c. Purchases of goods

Related Party Category	For the Three Months Ended March 31	
	2020	2019
Associate	$ 128,074	$ 80,013
Others	1,470	1,698
	$ 129,544	$ 81,711

The purchase price and payment terms are based on the agreements with the related parties.

d. Manufacturing costs

Related Party Category	For the Three Months Ended March 31	
	2020	2019
Substantive related party	$ 8,868	$ 13,643
Others	140	470
	$ 9,008	$ 14,113

e. Operating expenses

Related Party Category	For the Three Months Ended March 31	
	2020	2019
Substantive related party	$ 5,103	$ 5,920
Subsidiary of investor with significant influence over the Group	1,526	1,551
Associate	41	1,652
	$ 6,670	$ 9,123

f. Non-operating income - other income

Related Party Category	For the Three Months Ended March 31	
	2020	2019
Associate	$ 1,737	$ 1,667
Subsidiary of investor with significant influence over the Group	589	1,736
Substantive related party	-	63
	$ 2,326	$ 3,466

g. Receivables from related parties (included in notes and accounts receivable)

Related Party Category	March 31, 2020	December 31, 2019	March 31, 2019
Associate	$ 141,640	$ 128,863	$ 137,523
Subsidiary of investor with significant influence over the Group	7,936	7,931	14,627
Substantive related party	-	-	22
	$ 149,576	$ 136,794	$ 152,172

The outstanding receivables from related parties were unsecured. For the three months ended March 31, 2020 and 2019, no impairment loss was recognized for receivables from related parties.

h. Payables to related parties (included in notes and accounts payable)

Related Party Category	March 31, 2020	December 31, 2019	March 31, 2019
Associate	$ 39,826	$ 27,219	$ 888
Substantive related party	5,637	4,682	7,306
Investor and its subsidiaries with significant influence over the Group	3,266	3,871	4,820
	$ 48,729	$ 35,772	$ 13,014

The outstanding payables to related parties were unsecured.

i. Prepayments and refundable deposits (included in other non-current assets)

Related Party Category/Name	March 31, 2020	December 31, 2019	March 31, 2019
Substantive related party			
Yuen Foong Yu Biotech (Kunshan) Co., Ltd.	$ 48,120	$ 48,474	$ 51,629
Others	5	-	-
Subsidiary of investor with significant influence over the Group	14	22	490
Associate	-	-	11,491
	$ 48,139	$ 48,496	$ 63,610

j. Construction in progress and prepayments for equipment (included in property, plant and equipment)

Related Party Category	March 31, 2020	December 31, 2019	March 31, 2019
Associate	$ 3,591	$ -	$ -

k. Lease arrangements

The Group leased offices from a subsidiary of investor with significant influence over the Group, with the lease term for 4 years. The related amounts were as follows:

Line Item	March 31 2020	March 31 2019
Lease liabilities		
Current (included in other current liabilities)	$ 4,044	$ 4,857
Non-current	-	4,489
	$ 4,044	$ 9,346

Line Item	For the Three Months Ended March 31 2020	For the Three Months Ended March 31 2019
Interest expenses	$ 11	$ 22

The lease contract between the Group and the related party was determined by reference to the market conditions and payment terms that were similar to those with the third parties.

l. Guarantee deposits received (included in other non-current liabilities)

Related Party Category	March 31, 2020	December 31, 2019	March 31, 2019
Key management personnel	$ 1,050	$ 1,050	$ 1,050
Others	64	65	69
	$ 1,114	$ 1,115	$ 1,119

m. Compensation of key management personnel

	For the Three Months Ended March 31 2020	For the Three Months Ended March 31 2019
Short-term employee benefits	$ 23,773	$ 31,131
Post-employment benefits	303	428
Share-based payments	-	9,699
	$ 24,076	$ 41,258

The remuneration of directors and key executives was determined by the remuneration committee based on the performance of individuals and market trends.

30. ASSETS PLEDGED AS COLLATERAL

As of March 31, 2020, December 31, 2019 and March 31, 2019, the following demand deposits and time deposits (included in financial assets at amortized cost and other non-current assets) were provided as collateral for short-term borrowings, line of credit for derivative instrument trading, tariffs guarantee for imported inventories, lease deposits for plants and land, and deposits for provisional attachment:

	March 31, 2020	December 31, 2019	March 31, 2019
Current	$ 1,671,289	$ 1,616,260	$ 656,508
Non-current	141,406	146,847	154,329
	$ 1,812,695	$ 1,763,107	$ 810,837

31. SIGNIFICANT CONTINGENT LIABILITIES AND UNRECOGNIZED COMMITMENTS

Guaranteed notes issued for long-term and short-term borrowings and lines of credit for derivative instrument trading were $6,620,000 thousand, $6,220,000 thousand and $5,390,500 thousand as of March 31, 2020, December 31, 2019 and March 31, 2019, respectively.

Letters of bank guarantees issued for tariff guarantee for imported inventories were $315,683 thousand, $257,848 thousand and $91,542 thousand as of March 31, 2020, December 31, 2019 and March 31, 2019, respectively.

The board of directors of the subsidiary, Transcend Optronics (Yangzhou) Co., Ltd., approved in March 2020 for an investment plan for the next three to five years. The content of the investment plan includes the construction of R&D buildings, capacity expansion and fundamental operating expenses, with expected investment amount from US $50,000 thousand to US $55,000 thousand. The source of funds is from the parent company’s capital increase via cash and the subsidiary’s proprietary funds.

32. SIGNIFICANT ASSETS AND LIABILITIES DENOMINATED IN FOREIGN CURRENCIES

The following information was aggregated by the foreign currencies other than functional currencies of the group entities and the exchange rates between foreign currencies and respective functional currencies were disclosed. The significant assets and liabilities denominated in foreign currencies were as follows:

March 31, 2020

	Foreign Currency	Exchange Rate	Carrying Amount
Foreign currency assets			
Monetary items			
USD	$ 175,889	1,209 (USD:KRW)	$ 5,316,245
USD	160,820	30.225 (USD:NTD)	4,860,785
USD	163,024	7.085 (USD:RMB)	4,927,400
Non-monetary items			
Mutual funds			
USD	82,967	1,209 (USD:KRW)	2,507,700

(Continued)

	Foreign Currency	Exchange Rate	Carrying Amount
Foreign currency liabilities			
Monetary items			
USD	$ 147,776	30.225 (USD:NTD)	$ 4,436,305
USD	126,338	7.085 (USD:RMB)	3,818,566

(Concluded)

December 31, 2019

	Foreign Currency	Exchange Rate	Carrying Amount
Foreign currency assets			
Monetary items			
USD	$ 203,216	1,145.587 (USD:KRW)	$ 6,092,416
USD	199,524	29.98 (USD:NTD)	5,981,730
USD	170,686	6.976 (USD:RMB)	5,117,166
Non-monetary items			
Mutual funds			
USD	81,897	1,145.587 (USD:KRW)	2,455,299
Foreign currency liabilities			
Monetary items			
USD	132,673	29.98 (USD:NTD)	3,977,537
USD	135,836	6.976 (USD:RMB)	4,072,363

March 31, 2019

	Foreign Currency	Exchange Rate	Carrying Amount
Foreign currency assets			
Monetary items			
USD	$ 245,813	1,126.874 (USD:KRW)	$ 7,575,957
USD	195,759	30.82 (USD:NTD)	6,033,292
USD	123,951	6.734 (USD:RMB)	3,820,170
USD	32,961	7.85 (USD:HKD)	1,015,858
Non-monetary items			
Mutual funds			
USD	60,811	1,126.874 (USD:KRW)	1,874,225
Foreign currency liabilities			
Monetary items			
USD	138,616	30.82 (USD:NTD)	4,272,145
USD	97,359	6.734 (USD:RMB)	3,000,604

The Group’s net realized and unrealized gain on foreign currency exchange were $358,022 thousand and $124,044 thousand for the three months ended March 31, 2020 and 2019, respectively. It is impractical to disclose net gain or loss on foreign currency exchange by each significant foreign currency due to the variety of the foreign currency transactions and the functional currency of each entity in the Group.

33. SEPARATELY DISCLOSED ITEMS

a. Information about significant transactions and investees:

1) Financing provided to others (Table 1)

2) Endorsements/guarantees provided (Table 2)

3) Marketable securities held (excluding investments in subsidiaries, associates and joint ventures) (Table 3)

4) Marketable securities acquired and disposed of at costs or prices of at least NT$300 million or 20% of the paid-in capital (Table 4)

5) Acquisition of individual real estate at costs of at least NT $300 million or 20% of the paid-in capital (None)

6) Disposal of individual real estate at prices of at least NT$300 million or 20% of the paid-in capital (Table 5)

7) Total purchases from or sales to related parties amounting to at least NT$100 million or 20% of the paid-in capital (Table 6)

8) Receivables from related parties amounting to at least NT$100 million or 20% of the paid-in capital (Table 7)

9) Trading in derivative instruments (Note 7)

10) Intercompany relationships and significant intercompany transactions (Table 10)

11) Information on investees (Table 8)

b. Information on investments in mainland China (Table 9)

1) Information on any investee company in mainland China, showing the name, principal business activities, paid-in capital, method of investment, inward and outward remittance of funds, ownership percentage, investment income or loss, carrying amount of the investment at the end of the period, repatriations of investment income, and limit on the amount of investment in the mainland China area.

2) Any of the following significant transactions with investee companies in mainland China, either directly or indirectly through a third party, and their prices, payment terms, and unrealized gains or losses:

a) The amount and percentage of purchases and the balance and percentage of the related payables at the end of the period.

b) The amount and percentage of sales and the balance and percentage of the related receivables at the end of the period.

c) The amount of property transactions and the amount of the resultant gains or losses.

d) The balance of negotiable instrument endorsements or guarantees or pledges of collateral at the end of the period and the purposes.

e) The highest balance, ending balance, interest rate interval, and total interest for the current period with respect to financing of funds.

f) Other transactions that have a material effect on profit or loss for the period or on the financial position, such as the rendering or receipt of services.

c. Information of major shareholders: List all shareholders with ownership of 5% or greater showing the name of the shareholder, the number of shares owned, and percentage of ownership of each shareholder (Table 11)

34. SEGMENT INFORMATION

Information reported to the chief operating decision maker for the purpose of resource allocation and assessment of segment performance focuses on the breakdown by region. The Group's reportable segments were classified into the ROC, Asia and Americas according to their geographic locations.

The profit or loss from the Group's operating segments is primarily measured by the segment profit or loss, which is used for the basis for assessment of performance. In addition, there are no significant differences between the accounting standards applied by the segments and the summary of significant accounting policies as disclosed in Note 4.

The following was an analysis of the Group's revenue and results from operation by reportable segments:

	Segment Revenue	**Segment Profit (Loss)**
For the three months ended March 31, 2020		
ROC	$ 3,214,013	$ 476,853
Asia	1,914,098	3,189
America	766,139	(322,765)
Adjustment and eliminations	(2,972,123)	-
	$ 2,922,127	157,277
Administration cost and remunerations to directors		(89,040)
Interest income		77,821
Royalty income		371,234
Interest expenses		(26,708)
Net gain on foreign currency exchange		358,022
Net gain on fair value changes of financial assets and liabilities at FVTPL		23,660
Other non-operating income and expenses, net		16,347
Income before income tax		$ 888,613

(Continued)

	Segment Revenue	Segment Profit (Loss)
For the three months ended March 31, 2019		
ROC	$ 3,191,424	$ 79,634
Asia	2,157,684	117,491
America	975,034	(199,295)
Adjustment and eliminations	(3,369,370)	-
	$ 2,954,772	(2,170)
Administration cost and remunerations to directors		(105,329)
Interest income		81,934
Royalty income		448,735
Interest expenses		(18,559)
Net gain on foreign currency exchange		124,044
Net gain on fair value changes of financial assets and liabilities at FVTPL		60,260
Other non-operating income and expenses, net		15,985
Income before income tax		$ 604,900

(Concluded)

Segment profit represents the income before income tax earned by each segment without allocation of administration costs and remuneration of directors, interest income, royalty income, interest expenses, net gain on foreign currency exchange, net gain on fair value changes of financial assets and liabilities at FVTPL, other non-operating income and expenses, and income tax expense, etc.

E INK HOLDINGS INC. AND SUBSIDIARIES

FINANCING PROVIDED TO OTHERS
FOR THE THREE MONTHS ENDED MARCH 31, 2020
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

No.	Financing Company	Counterparty	Financial Statement Account	Related Party	Maximum Balance (Note 1)	Ending Balance (Note 1)	Amount Actually Drawn (Note 1)	Interest Rate Intervals (%)	Nature of Financing	Business Transaction Amount	Reasons for Short-term Financing	Allowance for Impairment Loss	Collateral		Financing Limit for Each Borrowing Company (Note 2)	Aggregate Financing Limit (Note 2)
													Item	Value		
1	Transcend Optronics (Yangzhou) Co., Ltd.	Yangzhou Huaxia Integrated O/E System Co., Ltd.	Other receivables	Yes	$ 903,921 (RMB 206,222 thousand)	$ 879,742 (RMB 206,222 thousand)	$ 879,742 (RMB 206,222 thousand)	3.915	Short-term financing	$ -	Working capital	$ -	-	$ -	$ 3,449,228 (RMB 808,541 thousand)	$ 3,449,228 (RMB 808,541 thousand)
2	Hydis Technologies Co., Ltd.	YuanHan Materials Inc.	Other receivables	Yes	453,750 (US$ 15,000 thousand)	453,375 (US$ 15,000 thousand)	453,375 (US$ 15,000 thousand)	2	Short-term financing	-	Working capital	-	-	-	3,441,386 (KRW137,655,432 thousand)	3,441,386 (KRW137,655,432 thousand)
3	YuanHan Materials Inc.	New Field e-Paper Co., Ltd.	Other receivables	Yes	300,000	300,000	300,000	1.2	Short-term financing	-	Working capital	-	-	-	347,544	1,390,176

Note 1: The amounts are translated at the exchange rate of US$1=NT$30.225, RMB1=NT$4.26599, and KRW1=NT$0.025 on March 31, 2020, except the maximum balance that is translated at the highest exchange rate at the end of each month for the period.

Note 2: Transcend Optronics (Yangzhou) Co., Ltd. provides financing to the foreign subsidiaries whose voting shares are 100% owned, directly or indirectly, by the Company, and the aggregate and individual financing limits to these subsidiaries shall not exceed 100% of the financing company’s net equity per its latest financial statements. The aggregate and individual financing limits of Hydis Technologies Co., Ltd. shall not exceed 40% of the financing company’s net equity per its latest financial statements. The aggregate and individual financing limits of YuanHan Materials Inc. shall not exceed 40% and 10%, respectively, of the financing company’s net equity per its latest financial statements.

Note 3: The above intercompany transactions have been eliminated upon consolidation.

TABLE 2

E INK HOLDINGS INC. AND SUBSIDIARIES

ENDORSEMENTS/GUARANTEES PROVIDED
FOR THE THREE MONTHS ENDED MARCH 31, 2020
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

No.	Endorsement/Guarantee Provider	Endorsed/Guaranteed Party		Limit on Endorsement/ Guarantee Amount Provided to Each Endorsed/ Guaranteed Party (Note 1)	Maximum Balance (Note 2)	Ending Balance (Note 2)	Amount Actually Drawn (Note 2)	Amount of Endorsement/ Guarantee Collateralized by Properties	Ratio of Accumulated Endorsement/ Guarantee to Net Equity per Latest Financial Statements (%)	Maximum Endorsement/ Guarantee Amount Allowable (Note 3)	Endorsement/ Guarantee Provided by Parent Company	Endorsement/ Guarantee Provided by Subsidiary	Endorsement/ Guarantee to Subsidiary in Mainland China
		Name	Relationship										
0	E Ink Holdings Inc.	E Ink Corporation	Subsidiary	$ 7,104,239	$ 423,500 (US$ 14,000 thousand)	$ 302,250 (US$ 10,000 thousand)	$ -	$ -	1.06	$ 28,416,955	Yes	No	No
		YuanHan Materials Inc.	Subsidiary	7,104,239	850,000	850,000	750,000	-	2.99	28,416,955	Yes	No	No
		Linfiny Corporation	Subsidiary	7,104,239	410,000	410,000	139,673	-	1.44	28,416,955	Yes	No	No
1	Hydis Technologies Co., Ltd.	E Ink Holdings Inc.	Parent company	2,150,866 (KRW 86,034,645 thousand)	453,750 (US$ 15,000 thousand)	453,375 (US$ 15,000 thousand)	400,000	-	5.27	8,603,465 (KRW 344,138,580 thousand)	No	Yes	No

Note 1: The amount shall not exceed 25% of the net equity of the Company and the subsidiary, Hydis Technologies Co., Ltd.

Note 2: The amounts are translated at the exchange rate of US$1=$30.225, and KRW1=$0.025 on March 31, 2020, except the maximum balance is translated at the highest exchange rate of the end of each month for the period year.

Note 3: The amount shall not exceed the net equity of the Company and the subsidiary, Hydis Technologies Co., Ltd.

E INK HOLDINGS INC. AND SUBSIDIARIES

MARKETABLE SECURITIES HELD
MARCH 31, 2020
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Holding Company Name	Type and Name of Marketable Securities	Relationship with the Holding Company	Financial Statement Account	March 31, 2020				Note
				Shares/Units (In Thousands)	Carrying Amount	Percentage of Ownership (%)	Fair Value	
E Ink Holdings Inc.	Ordinary shares							
	SinoPac Financial Holding Company Limited	Substantive related party	Financial assets at FVTOCI	112,702	$ 1,245,351	1.00	$ 1,245,351	
	YFY Inc.	Investor with significant influence over the Company	Financial assets at FVTOCI	7,814	90,252	0.47	90,252	
	Ultra Chip, Inc.	-	Financial assets at FVTOCI	2,638	50,115	4.13	50,115	
	IGNIS INNOVATION INC.	-	Financial assets at FVTPL - non-current	388	-	0.19	-	
	New Medical Imaging Co., Ltd.	-	Financial assets at FVTPL - non-current	109	-	2.37	-	
	Convertible preference shares							
	MICAREO INC.	-	Financial assets at FVTPL - non-current	6,000	28,652	14.69	28,652	
New Field e-Paper Co., Ltd.	Ordinary shares							
	SinoPac Financial Holding Company Limited	Substantive related party	Financial assets at FVTOCI	22,028	243,409	0.20	243,409	
YuanHan Materials Inc.	Ordinary shares							
	SinoPac Financial Holding Company Limited	Substantive related party	Financial assets at FVTOCI	214,864	2,374,251	1.90	2,374,251	
	YFY Inc.	Investor with significant influence over the parent company	Financial assets at FVTOCI	16	185	-	185	
	Netronix Inc.	One of its director	Financial assets at FVTOCI	5,309	158,480	6.40	158,480	
	SES-imagotag	-	Financial assets at FVTOCI	867	530,238	5.50	530,238	
	Fitipower Integrated Technology Inc.	-	Financial assets at FVTOCI	2,689	63,989	1.62	63,989	
	Formolight Technologies, Inc.	-	Financial assets at FVTOCI	2,228	17,436	10.93	17,436	
	Echem Solutions Corp.	-	Financial assets at FVTOCI	743	13,296	1.15	13,296	
	eCrowd Media Inc.	-	Financial assets at FVTOCI	1,010	4,530	6.62	4,530	
Transcend Optronics (Yangzhou) Co., Ltd.	Ordinary shares							
	Dalian DKE LCD Co., Ltd.	-	Financial assets at FVTOCI	837	RMB 5,266 thousand	3.52	RMB 5,266 thousand	
Hydis Technologies Co., Ltd.	Ordinary shares							
	Ssangyong Cement Industry Co., Ltd.	-	Financial assets at FVTOCI	423	KRW 1,907,293 thousand	0.08	KRW 1,907,293 thousand	
	Mutual funds							
	Term Liquidity Fund	-	Financial assets at FVTPL - current	771	KRW 99,961,123 thousand	-	KRW 99,961,123 thousand	
	Perpetual bonds							
	JP Morgan Chase & Co.	-	Financial assets at FVTPL - non-current	19,500	KRW 20,486,314 thousand	-	KRW 20,486,314 thousand	

Note: Refer to Tables 8 and 9 for information on investments in subsidiaries and associates.

TABLE 4

E INK HOLDINGS INC. AND SUBSIDIARIES

MARKETABLE SECURITIES ACQUIRED AND DISPOSED AT COSTS OR PRICES OF AT LEAST NT$300 MILLION OR 20% OF THE PAID-IN CAPITAL
FOR THE THREE MONTHS ENDED MARCH 31, 2020
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Company Name	Type and Name of Marketable Securities	Financial Statement Account	Counterparty	Relationship	Beginning Balance		Acquisition		Disposal				Other Adjustments	Ending Balance	
					Units (In Thousands)	Amount	Units (In Thousands)	Amount	Units (In Thousands)	Prices	Carrying Amount	Gain on Disposal		Units (In Thousands)	Amount
Hydis Technologies Co., Ltd.	Perpetual bonds JP Morgan Chase & Co.	Financial assets at FVTPL - non-current	-	-	-	$ -	19,500	KRW 23,441,391 thousand	-	$ -	$ -	$ -	KRW (2,955,077) thousand (Note 1)	19,500	KRW 20,486,314 thousand
YuanHan Materials Inc.	Ordinary shares SinoPac Financial Holding Company Limited	Financial assets at FVTOCI	-	-	146,432	1,903,620	68,432	885,000	-	-	-	-	(414,369) (Note 2)	214,864	2,374,251

Note 1: Included in net gain on financial assets and liabilities at FVTPL.

Note 2: Included in unrealized gain (loss) on financial assets at FVTOCI.

E INK HOLDINGS INC. AND SUBSIDIARIES

DISPOSAL OF INDIVIDUAL REAL ESTATE AT PRICES OF AT LEAST NT$300 MILLION OR 20% OF THE PAID-IN CAPITAL
FOR THE THREE MONTHS ENDED MARCH 31, 2020
(In Thousands of RMB)

Seller	Property	Event Date	Original Acquisition Date	Carrying Amount	Transaction Amount	Collection	Gain (Loss) on Disposal	Counterparty	Relationship	Purpose of Disposal	Price Reference	Other Terms
Yangzhou Huaxia Integrated O/E System Co., Ltd.	Land use rights, building and its accessories	November 27, 2019	February 2007 Acquisition of land use right	RMB 23,150 thousand	RMB 328,986 thousand	Based on the actual delivery of the property ownership certificate and land use certificate, as well as the progress of local government funding.	(Note)	Yangzhou Economic and Technological Development Zone's Demolition Placement Management Office	-	Cooperating with the government's regional expropriation plan of Yangzhou Economic and Technological Development Zone.	Reference to the appraisal result by Zhongzheng real estate appraisal cost Group Co., Ltd. and Jiangsu Zhong Run Assets Appraisal Co., Ltd., and the local government compensation regulations of land reserve and house demolition.	-

Note: The actual gain of disposal will be determined by the process of receipt of payment, delivery of the property ownership certificate and land use certificate, and will be adjusted by related tax expenses and recognized according to the regulations of IFRS.

TABLE 6

E INK HOLDINGS INC. AND SUBSIDIARIES

TOTAL PURCHASES FROM OR SALES TO RELATED PARTIES AMOUNTING TO AT LEAST NT$100 MILLION OR 20% OF THE PAID-IN CAPITAL
FOR THE THREE MONTHS ENDED MARCH 31, 2020
(In Thousands of New Taiwan Dollars)

Company Name	Related Party	Relationship	Transaction Details				Abnormal Transaction		Notes/Accounts Receivable (Payable)		Note
			Purchase/Sale	Amount	% of Total	Payment Terms	Unit Price	Payment Terms	Ending Balance	% of Total (Note 1)	
E Ink Holdings Inc.	Prime View Communications Ltd.	Subsidiary	Sale	$ (163,274)	(6)	By agreements	$ -	-	$ 405,351	16	
	PVI International Corp.	Subsidiary	Sale	(201,216)	(7)	By agreements	-	-	301,601	12	
	E Ink Corporation	Subsidiary	Purchase	632,032	33	By agreements	-	-	(89,618)	(3)	
	YuanHan Materials Inc.	Subsidiary	Sale	(198,999)	(7)	By agreements	-	-	163,596	6	
	Transcend Optronics (Yangzhou) Co., Ltd.	Subsidiary	Purchase	483,373	25	By agreements	-	-	(1,820,603)	(68)	
YuanHan Materials Inc.	E Ink Holdings Inc.	Parent company	Purchase	198,999	73	By agreements	-	-	(163,596)	(99)	
Prime View Communications Ltd.	E Ink Holdings Inc.	Parent company	Purchase	163,274	100	By agreements	-	-	(405,351)	(100)	
PVI International Corp.	E Ink Holdings Inc.	Parent company	Purchase	201,216	100	By agreements	-	-	(301,601)	(100)	
Transcend Optronics (Yangzhou) Co., Ltd.	E Ink Holdings Inc.	Parent company	Sale	(483,373)	(99)	By agreements	-	-	1,820,603	100	
E Ink Corporation	E Ink Holdings Inc.	Parent company	Sale	(632,032)	(100)	By agreements	-	-	89,618	75	
	E Ink California, LLC	Subsidiary	Purchase	130,992	44	By agreements	-	-	(364,322)	(99)	
E Ink California, LLC	E Ink Corporation	Parent company	Sale	(130,992)	(100)	By agreements	-	-	364,322	100	

Note 1: The calculation is based on each company's receivables from (payables to) related parties.

Note 2: The above intercompany transactions have been eliminated upon consolidation.

TABLE 7

E INK HOLDINGS INC. AND SUBSIDIARIES

RECEIVABLES FROM RELATED PARTIES AMOUNTING TO AT LEAST NT$100 MILLION OR 20% OF THE PAID-IN CAPITAL
MARCH 31, 2020
(In Thousands of New Taiwan Dollars)

Company Name	Related Party	Relationship	Ending Balance	Turnover Rate (Times)	Overdue		Amount Received in Subsequent Period	Allowance for Impairment Loss
					Amount	Actions Taken		
E Ink Holdings Inc.	Prime View Communications Ltd.	Subsidiary	$ 405,351	1.48	$ -	-	$ 153,566	$ -
	PVI International Corp.	Subsidiary	301,601	2.75	-	-	99,370	-
	YuanHan Materials Inc.	Subsidiary	163,596	3.39	2,350	Collected	54,888	-
	Transcend Optronics (Yangzhou) Co., Ltd.	Subsidiary	1,572,729	(Note 1)	343,651	Collected	605,544	-
	NXT Electronics Yangzhou Co., Ltd.	Associate	106,299	(Note 1)	-	-	18,742	-
YuanHan Materials Inc.	Transcend Optronics (Yangzhou) Co., Ltd.	Same ultimate parent company	118,918	(Note 1)	-	-	118,918	-
Tech Smart Logistics Ltd.	E Ink Holdings Inc.	Parent company	634,488	(Note 1)	634,489	In the process of collection	-	-
Dream Pacific International Corp.	Tech Smart Logistics Ltd.	Same ultimate parent company	158,611	(Note 1)	158,611	In the process of collection	-	-
PVI Global Corp.	Dream Pacific International Corp.	Subsidiary	205,530	(Note 2)	205,530	In the process of collection	-	-
Transcend Optronics (Yangzhou) Co., Ltd.	E Ink Holdings Inc.	Parent company	1,820,603	(Note 1)	239,743	Collected	695,690	-
E Ink California, LLC	E Ink Corporation	Parent company	364,322	1.52	81,209	In the process of collection	-	-

Note 1: Other receivables from materials delivered to subcontractors.

Note 2: Cash dividends receivables.

Note 3: The above intercompany transactions have been eliminated upon consolidation, except transactions with NXT Electronics Yangzhou Co., Ltd.

E INK HOLDINGS INC. AND SUBSIDIARIES

INFORMATION ON INVESTEES
FOR THE THREE MONTHS ENDED MARCH 31, 2020
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Investor Company	Investee Company	Location	Main Businesses and Products	Original Investment Amount		Balance as of March 31, 2020			Net Income (Loss) of Investee	Share of Profit (Loss) of Investee	Note
				March 31, 2020	December 31, 2019	Shares (In Thousands)	Percentage of Ownership (%)	Carrying Amount			
E Ink Holdings Inc.	PVI Global Corp.	British Virgin Islands	Investment	$ 3,360,434	$ 3,090,254	108,413	100.00	$ 13,518,094	$ 697,261	$ 697,261	(Note)
	New Field e-Paper Co., Ltd.	Taoyuan, Taiwan	Wholesale and sale of electronics parts	6,394,455	6,394,455	671,032	100.00	5,288,888	(182,245)	(182,245)	(Note)
	E Ink Corporation	Boston, USA	Manufacture and sale of electronic ink	4,911,303	4,911,303	1	45.31	4,043,456	(250,039)	(150,860)	(Note)
	YuanHan Materials Inc.	Taipei, Taiwan	Research, development and sale of electronic parts and electronic ink	6,420,230	6,420,230	183,819	100.00	3,468,697	150,117	151,367	(Note)
	Dream Universe Ltd.	Mauritius	Trading	128,710	128,710	4,050	100.00	378,020	2,473	2,473	(Note)
	Prime View Communications Ltd.	Hong Kong	Trading	18,988	18,988	3,570	100.00	19,190	(8,780)	(8,780)	(Note)
	Entte K Co., Ltd.	Taichung, Taiwan	Manufacture and sale of consumer audio-visual systems	34,547	34,547	2,203	47.07	-	-	-	Under liquidation
	Tech Smart Logistics Ltd.	British Virgin Islands	Trading	49,267	49,267	1,550	0.09	3,768	(138,848)	(125)	(Note)
	Hot Tracks International Ltd.	British Virgin Islands	Trading	1,735	1,735	50	100.00	47	-	-	(Note)
	Linfiny Corporation	Taoyuan, Taiwan	Research, development and sale of electronic ink	16,800	16,800	1,680	4.00	1,082	(45,183)	(1,807)	(Note)
New Field e-Paper Co., Ltd.	Tech Smart Logistics Ltd.	British Virgin Islands	Trading	4,865,850	4,865,850	1,748,252	99.91	4,182,405	(138,848)	(138,723)	(Note)
	E Ink Corporation	Boston, USA	Manufacture and sale of electronic ink	1,618,500	1,618,500	-	12.88	1,149,409	(250,039)	(42,884)	(Note)
YuanHan Materials Inc.	Linfiny Corporation	Taoyuan, Taiwan	Research, development and sale of electronic ink	323,400	323,400	32,340	77.00	20,832	(45,183)	(34,791)	(Note)
	Yuen Foong Yu Biotech Co., Ltd.	Taipei, Taiwan	Cultivation, processing and sale of agriculture and restaurant management	36,000	36,000	3,600	36.00	-	(35,453)	-	
	Kyoritsu Optronics Co., Ltd.,	Taipei, Taiwan	Technology development, transfer and licensing of flat panels	18,860	18,860	1,050	25.65	-	-	-	
Linfiny Corporation	Linfiny Japan Inc.	Tokyo, Japan	Research and development of electronic ink	11,088	11,088	4	100.00	24,150	755	755	(Note)
E Ink Corporation	E Ink California, LLC	California, USA	Research, development and sale of electronic ink	US$ 29,100 thousand	US$ 29,100 thousand	27,400	100.00	US$ 30,630 thousand	US$ 830 thousand	US$ 319 thousand	(Note)
	E Ink Japan Inc.	Tokyo, Japan	Development of electronic ink products	US$ 86 thousand	US$ 86 thousand	-	100.00	US$ 473 thousand	US$ 28 thousand	US$ 28 thousand	(Note)
Tech Smart Logistics Ltd.	E Ink Corporation	Boston, USA	Manufacture and sale of electronic ink	US$ 152,875 thousand	US$ 152,875 thousand	1	41.81	US$ 122,723 thousand	US$ (8,302) thousand	US$ (4,611) thousand	(Note)
PVI Global Corp.	PVI International Corp.	British Virgin Islands	Trading	US$ 160,300 thousand	US$ 151,300 thousand	160,300	100.00	US$ 114,342 thousand	US$ 1,304 thousand	US$ 1,304 thousand	(Note)
	Dream Pacific International Corp.	British Virgin Islands	Investment	US$ 1,000 thousand	US$ 1,000 thousand	26,000	100.00	US$ 258,760 thousand	US$ 20,640 thousand	US$ 20,640 thousand	(Note)
	Ruby Lustre Ltd.	British Virgin Islands	Investment	US$ 30,000 thousand	US$ 30,000 thousand	30,000	100.00	US$ 25,874 thousand	US$ 323 thousand	US$ 323 thousand	(Note)
	North Diamond International Co., Ltd.	British Virgin Islands	Investment	US$ 1,750 thousand	US$ 1,750 thousand	1,750	35.00	-	-	-	
	Rock Pearl International Corp.	British Virgin Islands	Investment	US$ 1,540 thousand	US$ 1,540 thousand	1,540	35.00	-	-	-	
Dream Pacific International Corp.	Hydis Technologies Co., Ltd.	South Korea	Research, development and licensing of monitors	US$ 27,612 thousand	US$ 27,612 thousand	3,783	94.73	US$ 267,506 thousand	US$ 21,566 thousand	US$ 20,709 thousand	(Note)
Hydis Technologies Co., Ltd.	Plastic Logic HK Limited	Hong Kong	Research, development and manufacture of electronic paper display panels	KRW 2,942,500 thousand	KRW 2,942,500 thousand	2,500	44.05	KRW 1,895,937 thousand	KRW (574,435) thousand	KRW (253,039) thousand	

Note: All intercompany transactions have been eliminated upon consolidation.

TABLE 9

E INK HOLDINGS INC. AND SUBSIDIARIES

INFORMATION ON INVESTMENTS IN MAINLAND CHINA
FOR THE THREE MONTHS ENDED MARCH 31, 2020
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Investee Company	Main Business and Product	Paid-in Capital (Note 1)	Method of Investment	Accumulated Outward Remittance for Investment from Taiwan as of January 1, 2020 (Note 1)	Remittance of Funds		Accumulated Outward Remittance for Investment from Taiwan as of March 31, 2020 (Note 1)	Net Income (Loss) of Investee (Note 2)	Direct or Indirect Percentage of Ownership (%)	Share of Profit (Loss) of Investee (Notes 2 and 3)	Carrying Amount as of March 31, 2020 (Note 1)	Accumulated Repatriation of Investment Income as of March 31, 2020
					Outward	Inward						
Transcend Optronics (Yangzhou) Co., Ltd.	Assembly and sale of display panels	$ 4,845,068 (US$ 160,300 thousand)	The Company indirectly owns the investee through an investment company registered in a third region	$ 3,289,840 (US$ 108,845 thousand)	$ 272,025 (US$ 9,000 thousand)	$ -	$ 3,561,865 (US$ 117,845 thousand)	$ 63,373 (US$ 2,105 thousand)	100.00	$ 39,108 (US$ 1,299 thousand)	$ 3,449,186 (US$ 114,117 thousand)	$ -
Rich Optronics (Yangzhou) Co., Ltd.	Assembly and sale of display panels	906,750 (US$ 30,000 thousand)	The Company indirectly owns the investee through an investment company registered in a third region	906,750 (US$ 30,000 thousand)	-	-	906,750 (US$ 30,000 thousand)	9,724 (US$ 323 thousand)	100.00	9,724 (US$ 323 thousand)	782,042 (US$ 25,874 thousand)	-
Transyork Technology Yangzhou Ltd.	Assembly and sale of display panels	2,174,114 (US$ 71,931 thousand)	The Company indirectly owns the investee through an investment company registered in a third region	-	-	-	-	26,102 (US$ 867 thousand)	100.00	26,102 (US$ 867 thousand)	1,903,359 (US$ 62,973 thousand)	-
Transmart Electronics (Yangzhou) Ltd.	Research, development and sale of flat panels	299,711 (US$ 9,916 thousand)	The Company indirectly owns the investee through an investment company registered in a third region	199,787 (US$ 6,610 thousand)	-	-	199,787 (US$ 6,610 thousand)	13,247 (US$ 440 thousand)	100.00	18,907 (US$ 628 thousand)	76,379 (US$ 2,527 thousand)	-
Yangzhou Huaxia Integrated O/E System Co., Ltd.	Manufacture and sale of LED products	562,185 (US$ 18,600 thousand)	The Company indirectly owns the investee through an investment company registered in a third region	90,675 (US$ 3,000 thousand)	-	-	90,675 (US$ 3,000 thousand)	(8,821) (US$ (293) thousand)	100.00	(8,821) (US$ (293) thousand)	(755,232) (US$ (24,987) thousand)	-
Dihao Electronics (Yangzhou) Co., Ltd. (Under liquidation)	Assembly of LCD backlight board display modules	151,125 (US$ 5,000 thousand)	The Company indirectly owns the investee through an investment company registered in a third region	52,894 (US$ 1,750 thousand)	-	-	52,894 (US$ 1,750 thousand)	-	35.00	-	-	-
NTX Electronics Yangzhou Co., Ltd.	Manufacture and sale of flat panels	170,640 (RMB 40,000 thousand)	The Company indirectly owns the investee through an investment company registered in a third region	-	-	-	-	(2,806) (RMB (650) thousand)	49.00	(1,363) (RMB (319) thousand)	89,612 (RMB 21,006 thousand)	-

(Continued)

Accumulated Outward Remittance for Investment in Mainland China as of March 31, 2020 (Note 1)	Investment Amount Authorized by Investment Commission, MOEA (Note 1)	Upper Limit on the Amount of Investment Stipulated by Investment Commission, MOEA
$ 4,811,971 (US$ 159,205 thousand)	$ 8,433,107 (US$ 279,011 thousand)	$ 19,135,437

Note 1: The amounts are translated at the exchange rate of US$1＝NT$30.225 and RMB1＝NT$4.26599 on March 31, 2020.

Note 2: The amounts are translated at the average exchange rate of US$1＝NT$30.106 and RMB1＝NT$4.31702 for the three months ended March 31, 2020.

Note 3: The carrying amount and related investment income or loss were calculated based on unreviewed financial statements of the corresponding period, except Transcend Optronics (Yangzhou) Co., Ltd., Rich Optronics (Yangzhou) Co., Ltd. and Transyork Technology Yangzhou Ltd.

Note 4: Refer to Tables 1, 6 and 7 for information on the prices, payment terms and unrealized profit or loss of significant transactions with investee companies in mainland China.

Note 5: The above intercompany transactions have been eliminated upon consolidation, except transactions with NTX Electronics Yangzhou Co., Ltd. and Dihao Electronics (Yangzhou) Co., Ltd.

(Concluded)

E INK HOLDINGS INC. AND SUBSIDIARIES

INTERCOMPANY RELATIONSHIPS AND SIGNIFICANT INTERCOMPANY TRANSACTIONS
FOR THE THREE MONTHS ENDED MARCH 31, 2020
(In Thousands of New Taiwan Dollars)

No	Company Name	Related Party	Relationship	Transaction Details			
				Financial Statement Account	Amount	Payment Terms	% of Total Sales or Assets
0	E Ink Holdings Inc.	Tech Smart Logistics Ltd.	Subsidiary	Accounts payable to related parties	$ 634,488	By agreements	1.6
		E Ink Corporation	Subsidiary	Cost of goods sold	632,032	By agreements	21.6
		Transcend Optronics (Yangzhou) Co., Ltd.	Subsidiary	Accounts receivable from related parties	1,572,729	By agreements	3.8
		Transcend Optronics (Yangzhou) Co., Ltd.	Subsidiary	Accounts payable to related parties	1,820,603	By agreements	4.5
1	Transcend Optronics (Yangzhou) Co., Ltd.	Yangzhou Huaxia Integrated O/E System Co., Ltd.	Subsidiary	Other receivables from related parties	966,323	By agreements	2.4

Note 1: The above intercompany transactions have been eliminated upon consolidation.

Note 2: Transactions amounts of $500 million or more are disclosed in this table.

TABLE 11

E INK HOLDINGS INC. AND SUBSIDIARIES

INFORMATION ON MAJOR SHAREHOLDERS
MARCH 31, 2020

Name of Major Shareholder	Shares	
	Number of Shares	Percentage of Ownership (%)
YFY Inc.	133,472,904	11.70
S.C. Ho	80,434,300	7.05
Cathay Life Insurance Co., Ltd.	58,067,737	5.09

Note 1: Information listed in the above table is based on the calculation provided by the Taiwan Depository & Clearing Corporation for shareholders holding 5% (or higher) of ordinary shares and preference shares who have completed the process of registration and book-entry delivery issued in the dematerialized form (including treasury shares) on the last business day of the current quarter. There may be a discrepancy between the number of shares recorded on the Company's consolidated financial statements and its dematerialized securities due to the difference in basis of preparation and calculation.

Note 2: According the above information, the delivery of shares to the trust by shareholders is disclosed by the individual trustee who opened the trust account. In accordance with the Securities Exchange Act, shareholders who acquire more than 10% of shareholding have to disclose their insider ownerships, including their own shares held, delivery to the trust and shares that have the right to make decisions on trust property, etc. Information on insider ownership declaration is available at the Market Observation Post System website of the Taiwan Stock Exchange.