JMC ELECTRONICS CO.,LTD.

TAIEX：6552

2021/12/16

* JMC's statements of its current expectations are forward looking statements subject to significant risks and uncertainties and actual results may differ materially from those contained in the forward-looking statements.
* Except as required by law, we undertake no obligation to update any forward-looking statement, whether as a result of new information, future events, or otherwise.

1.Company Introduction - Company Snapshot

- Established：October 6 ,1973
- Chairman：Canon Huang
- General Manager：Jane Lee
- Capital Stock：830 million
- Major Shareholders：CWE 42%、ChipMos 10%
- Number of employees as of Nov. 30,2021：817
- Major Product：COF(Reel to Reel Chip on Film)
- Headquarter：Kaohsiung,Taiwan

1.Company Introduction - Product Application

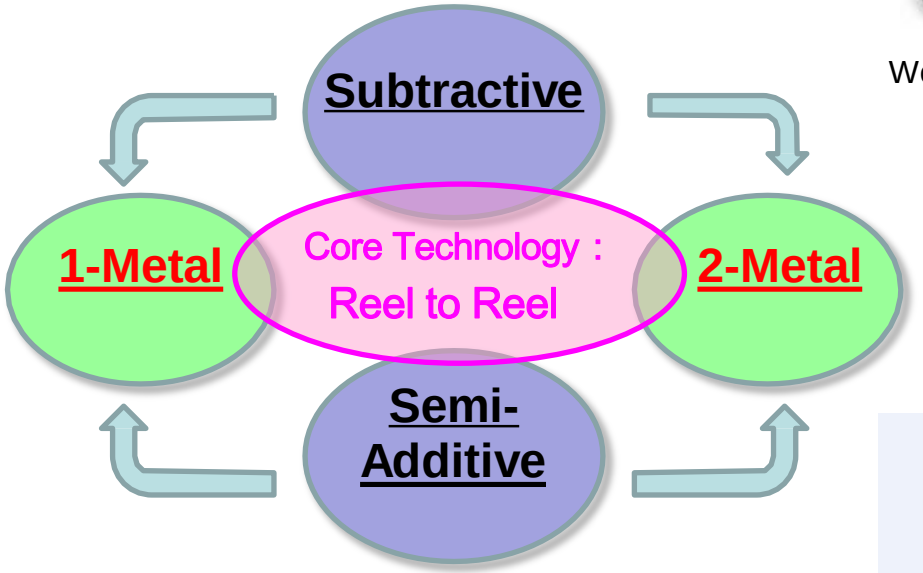
LCD Monitor

LCD TV

Notebook

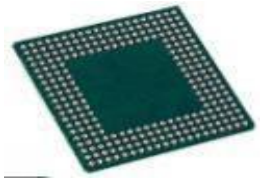
Smartphone

•High Productivity
•Low Cost

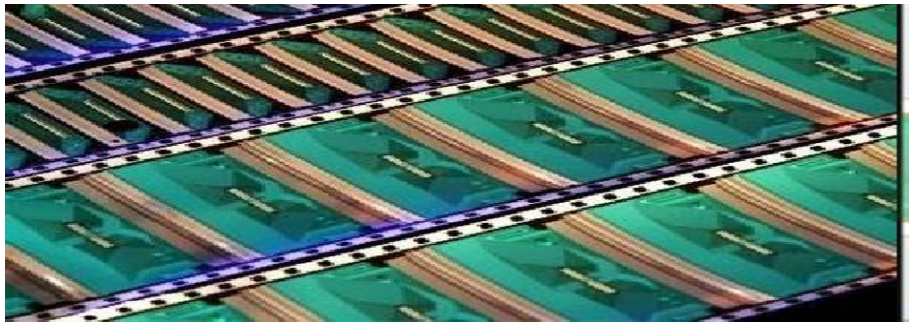


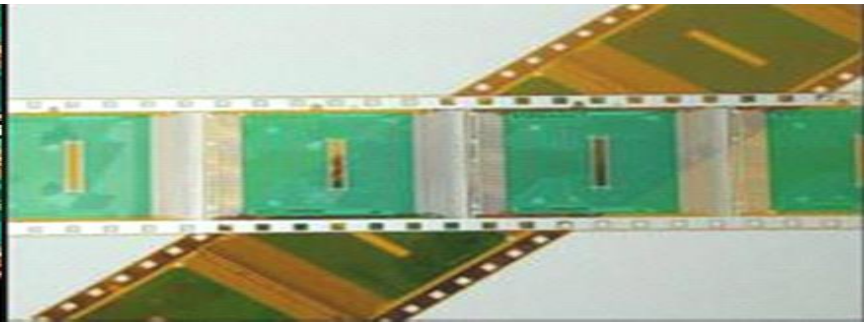
•Fine Pitch
•High Trace Accuracy

Wearable Device

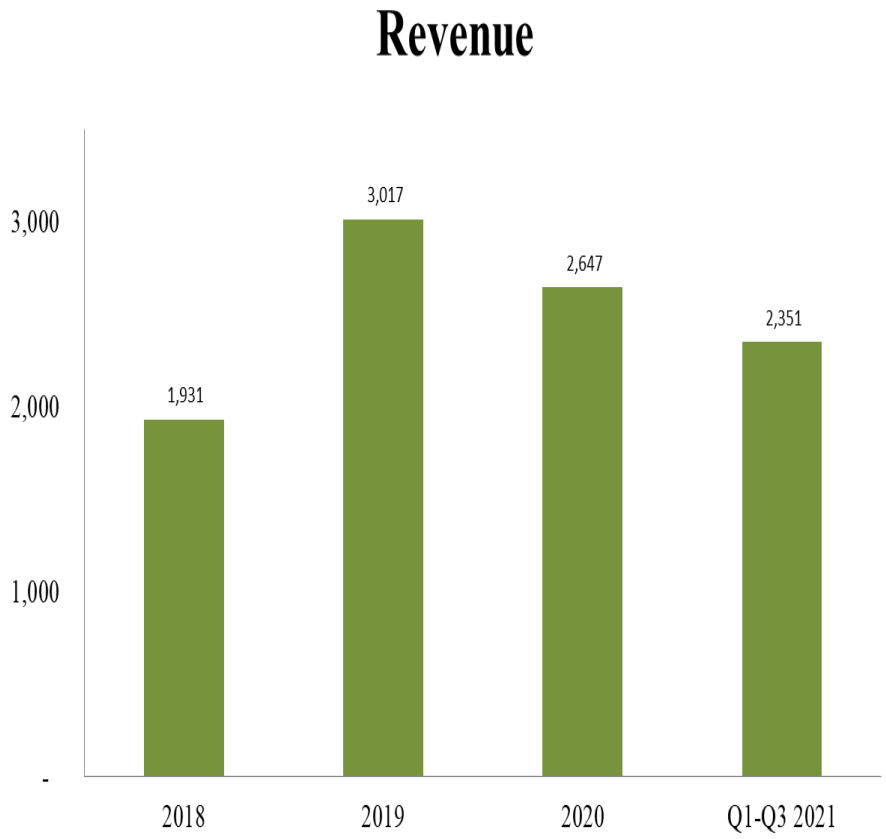


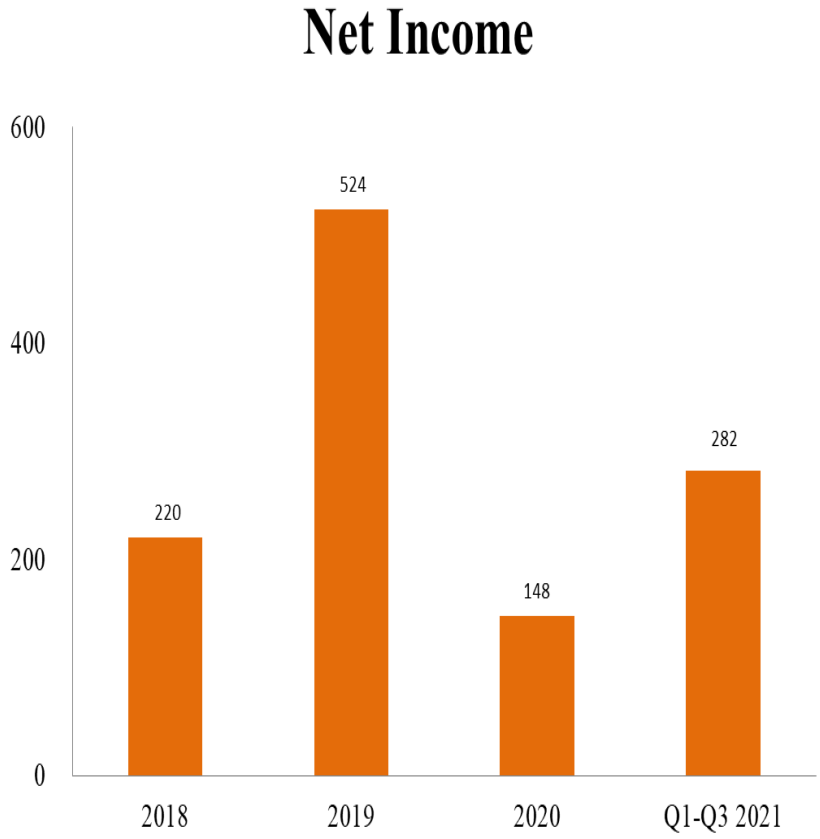
IC Package





2.Financial Results - Results Highlights

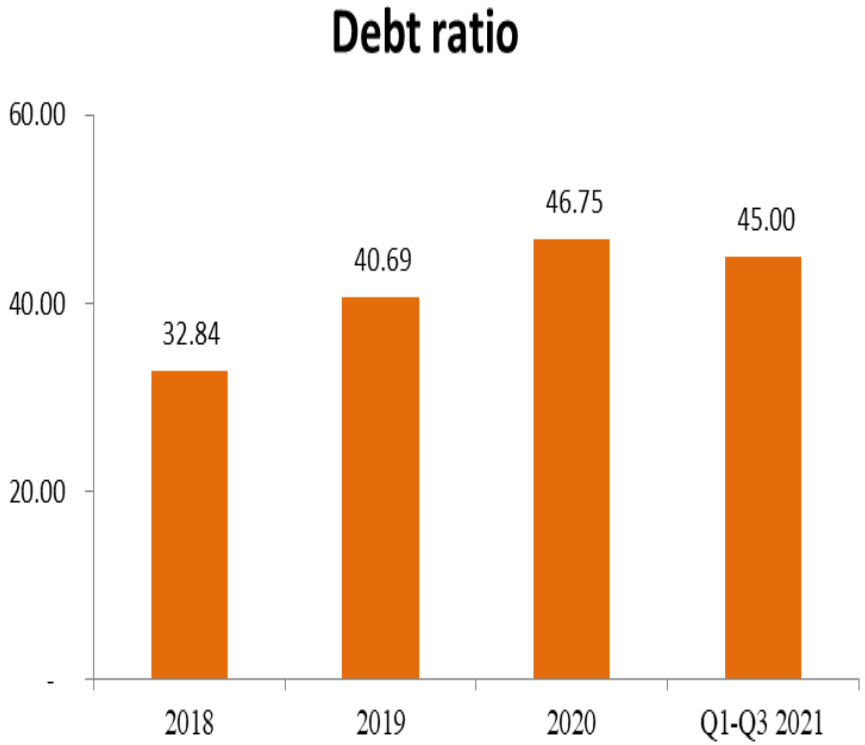


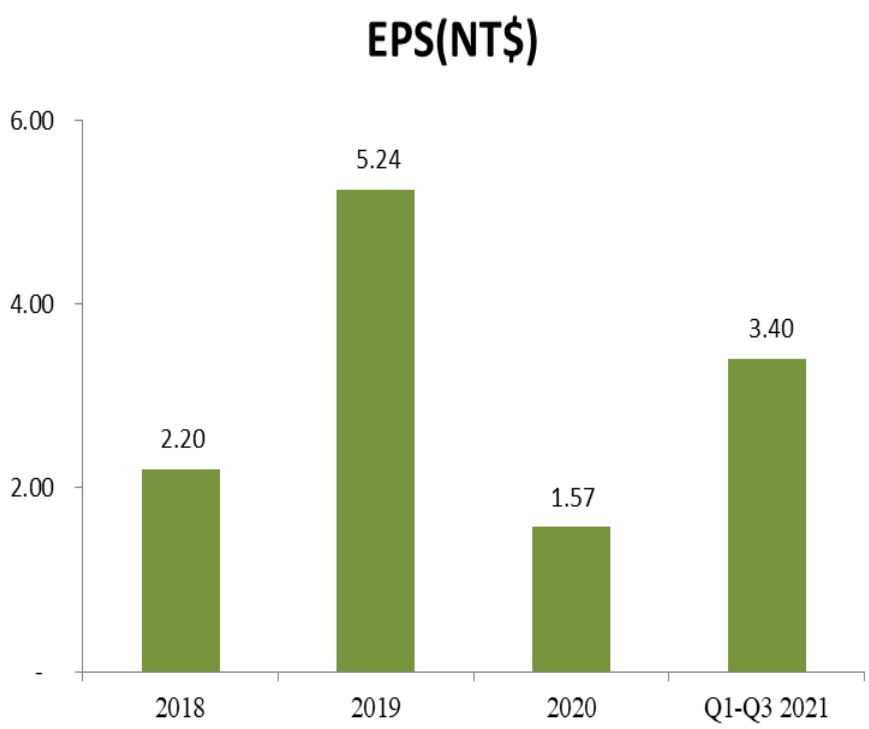


(In NT$ Million)

Year	2018	2019	2020	Q1-Q3 2021
Revenue	1,931	3,017	2,647	2,351
Net Income	220	524	148	282

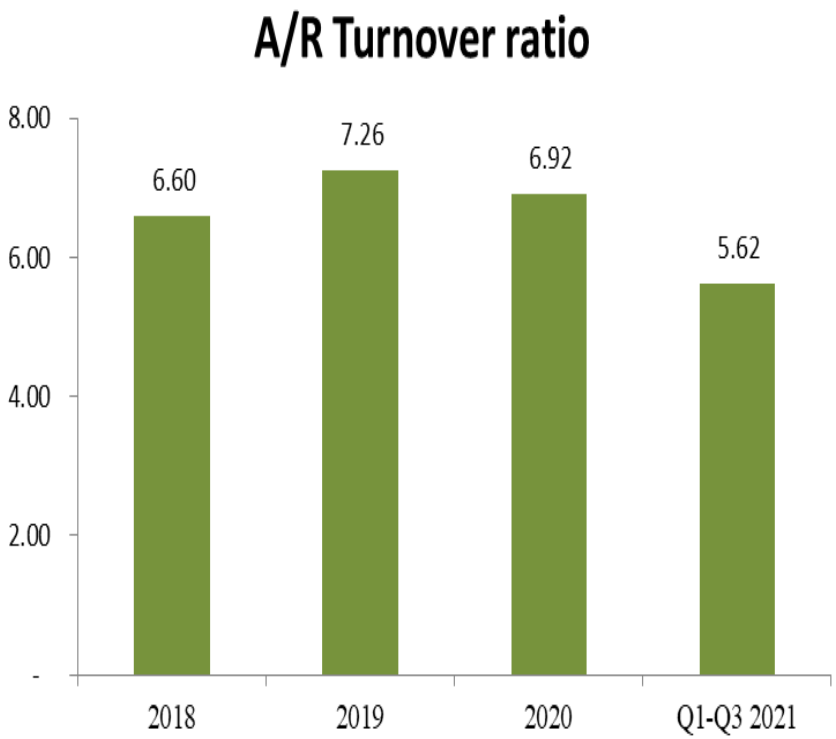
2.Financial Results - Results Highlights

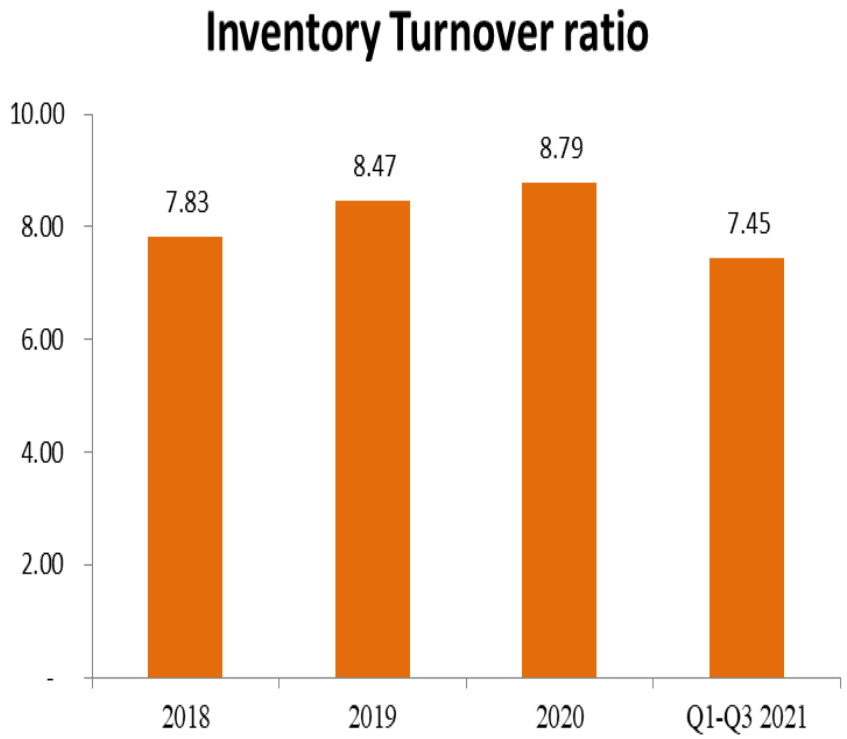




Year	2018	2019	2020	Q1-Q3 2021
Debt Ratio(%)	32.84	40.69	46.75	45.00
EPS(NT$)	2.20	5.24	1.57	3.40

2.Financial Results - Results Highlights





Year	2018	2019	2020	Q1-Q3 2021
A/R Turnover Ratio	6.60	7.26	6.92	5.62
Inventory Turnover ratio	7.83	8.47	8.79	7.45

3.Market & Business Overview – 1 Metal COF for Large Panel

✓ Currently – COVID-19 affects consumption and leads to weaker demand

* COVID-19 affects consumer willingness, and leads to weaker demand.
* In 1H21, TV market demand is stimulated by relief package , and TV shipments increase by 10% annually.
* The total cost of TV rises up because of the sharp increase in TV panel price , and in 2H21 it may be difficult to see the previous promotional break prices. It leads to the lack of peak seasons and uncertain market prospects and future. TrendForce downgrades TV shipments decreased by 0.9% annually.
* This year's transportation time was delayed by 3 to 4 weeks due to the port congestion problem, which indirectly reduced the brand's stocking volume in Europe and the United States, making the panel-related industry chain in 4Q21 dependent on variables.

✓ Future trend – New design and application ;Trend unchanged; Demand time deferred

* TV Panel – 4K to 8K ; the trend has emerged, Dual Cell.
* Monitor/NB/Tablet Panel – COG moves to COF due to full-screen/narrow edge design.
* Automotive Panel – comes to COF.

3.Market & Business Overview – 1 Metal COF for Small Panel

✓ Currently – Driver IC design of hand-held device ;Trend changed constantly.

* Due to the tighter wafer capacity supply and the increase in COP designs, the use of driver IC chips for mobile phone panels of COF has decreased.
* Wearable Device has health management functions and this trend is taking place. Therefore, the COF market in this field is increasing day by day.

✓ Future trend – New design and application ;Trend unchanged

* High-end Smartphone with Flexable OLED: COP ↑ / 1-Metal COF ↓ .
* Mid-range Smartphone with Rigid OLED/LTPS: FHD TDDI/FTDDI uses 1-Metal COF / partial COG.
* Low-end Smartphone with a-Si/LTPS: HD uses COG / FHD TDDI uses 1-Metal COF.
* Wearable Device: The design turns to 1-Metal COF instead of COG due to the narrow border panel. The market is still growing up.

3.Market & Business Overview – 2 Metal IC Substrate

Currently – Mini LED ：direct display and backlight market go hand in hand；application is well -developed.

* The small-pitch LED continues to develop well. With the continuous penetration of small-pitch displays in the display field and the decline in costs, P1.7-P2.0 and P1.2-1.6 will gradually become the mainstream in the future. In addition, with the increase in consumer demand for HD, Mini LED displays are expected to gradually enter the market with P1.1 and the below.
* At this stage, the chip size of Mini LED is 50-200 microns, which can be used as a backlight; it can also be used as a direct display.

✓ Future trend – New design and application

* 2-Metal technology：JMC will become one of the Mini LED IC Substrate suppliers.

3.Market & Business Overview – Technology & Product Development

✓ **A full service of flexible IC substrate provider**

Process Technology	Competitive advantages	Technology/ Application	Targeted Market/ **Development**
1-Metal Subtractive (Etching)	◎Fast production and high efficiency. ◎Independent technical ability and stable production yield.	*Copper thickness #~8um *Pitch >=20um Pitch *Pin count =<1440 Channel/48mm	@ LCD TV @ OLED TV **@ Dual Cell LCD**
1-Metal Semi-Additive (Plating)	◎High precision size controlled COF products, and can improve the assembly of the panel module rate; help customers to lower total cost. ◎High production yield and good quality stability; absolute competitive advantage in production costs.	*Copper thickness #~12um *Pitch >=18/16/14um Pitch *Pin count =<1900 Channel/48mm =<3000 Channel/70mm	@ High-end smartphone @ wearable device **@ FoD** **@ FTDDI**
2-Metal	◎New process technology development capabilities. ◎Equipment design capability. ◎Good cost control.	*Thin Film IC Substrate *LED IC Substrate *Pin count =<2500 Channel/48mm =<4000 Channel/70mm	**@ NAND Flash** **@ Mini LED** **@ Micro LED**

4.Industry Outlook - Driver IC Supply Chain

✓ **IC Design House provides total solution.**

IC Design House	Foundry	Assembly/Testing	Panel
Novatek、Himax、Raydium、Fitipower、Ilitek、Solomon、Chipone、Synaptics、Samsung LSI、MagnaChip、Dongbu、Silicon...	TSMC、UMC、VIS、Powerchip、SMIC、Samsung LSI、MagnaChip、Dongbu…	Chipbond、ChipMos、Union、Lusem、Steco、Nepes、Sharp Takaya…	AUO、Innolux、BOE、Luxnet、Tianma、K&D、SHARP、Samsung、LGD…
	COF LGIT、Stemco、Chipbond、JMC、Flexceed…		

IC Design House provieds total solution

✓ **Five COF suppliers have mass production capacity currently , and JMC is just one of the two vendors in Taiwan.**

Process Technology			1-Metal Subtractive(Etching)	1-Metal Semi-Additive(Plating)	2-Metal
Application	Channel/48mm		=<1400 /48mm	1400~1900 /48mm	1900~2500 /48mm
	Channel/70mm		=<2000 /70mm	2000~3000 /70mm	3000~4000 /70mm
Capacity	Korea	S社	90~100KK	?KK(2-Metal→1-Metal)	7-10KK
		L社	120~130KK	?KK(2-Metal→1-Metal)	5-7KK
	Japan	F社	20KK	X	2KK
	Taiwan	C社	70~90KK	X	X
		JMC	40KK	40KK	5KK(Installing)
	China	ESWIN Aplus	? ?	? ?	? ?

Q&A