



Nanya Technology

Bank of America Merrill Lynch 2017 Asia Pacific TMT Conference

Presentation to Investors & Analysts, March 21st - 22nd, 2017

Dr. Pei Ing Lee, President & Spokesman



Safe Harbor

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Outline

01.	Nanya Technology Overview
02.	DRAM Industry
03.	Business Strategy

Nanya Technology Overview

IDM Company

- Founded in 1995, IPO in 2000
- DRAM Process, Design, Production & Sales
- Headquarters: New Taipei, Taiwan
- Employees: >2,600
- Focus on value-added DRAM market
- Formosa Plastic Group (FPG) has 75.8% equity ownership

Technology & Capacity

- **Technology :**
 - Starts 20nm piloting in Jan.'17
 - Plan to ramp 20nm to 38K WSPM in 1H'18
- **Capacity:**
 - Current: 60,000 WSPM(12")
 - 2018: 68,000 WSPM(12") (38K 20nm + 30K 30nm)

Partnerships

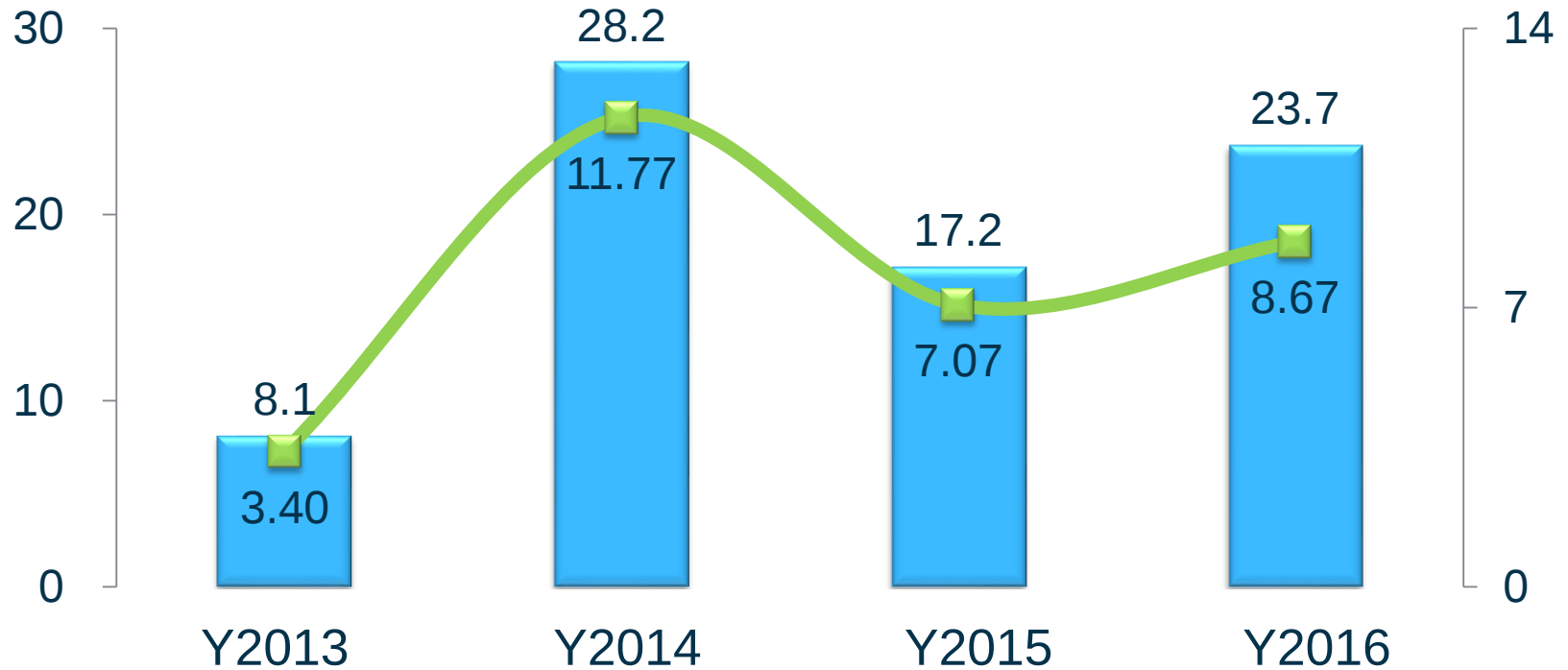
- **Technology license form MU**
Option rights to license Micron 1x and 1y nm technologies and products.
- **Shareholding in Micron**
Acquired about 5.26% of Micron's share.

*WSPM: Wafer Starts Per Month



Strong Performance

Net Income(NT\$ billion) EPS (NT\$)



Net Income
(NT\$ Billion)

8.1

28.2

17.2

23.7

EPS(NT\$)

3.40

11.77

7.07

8.67

2016 P&L Results

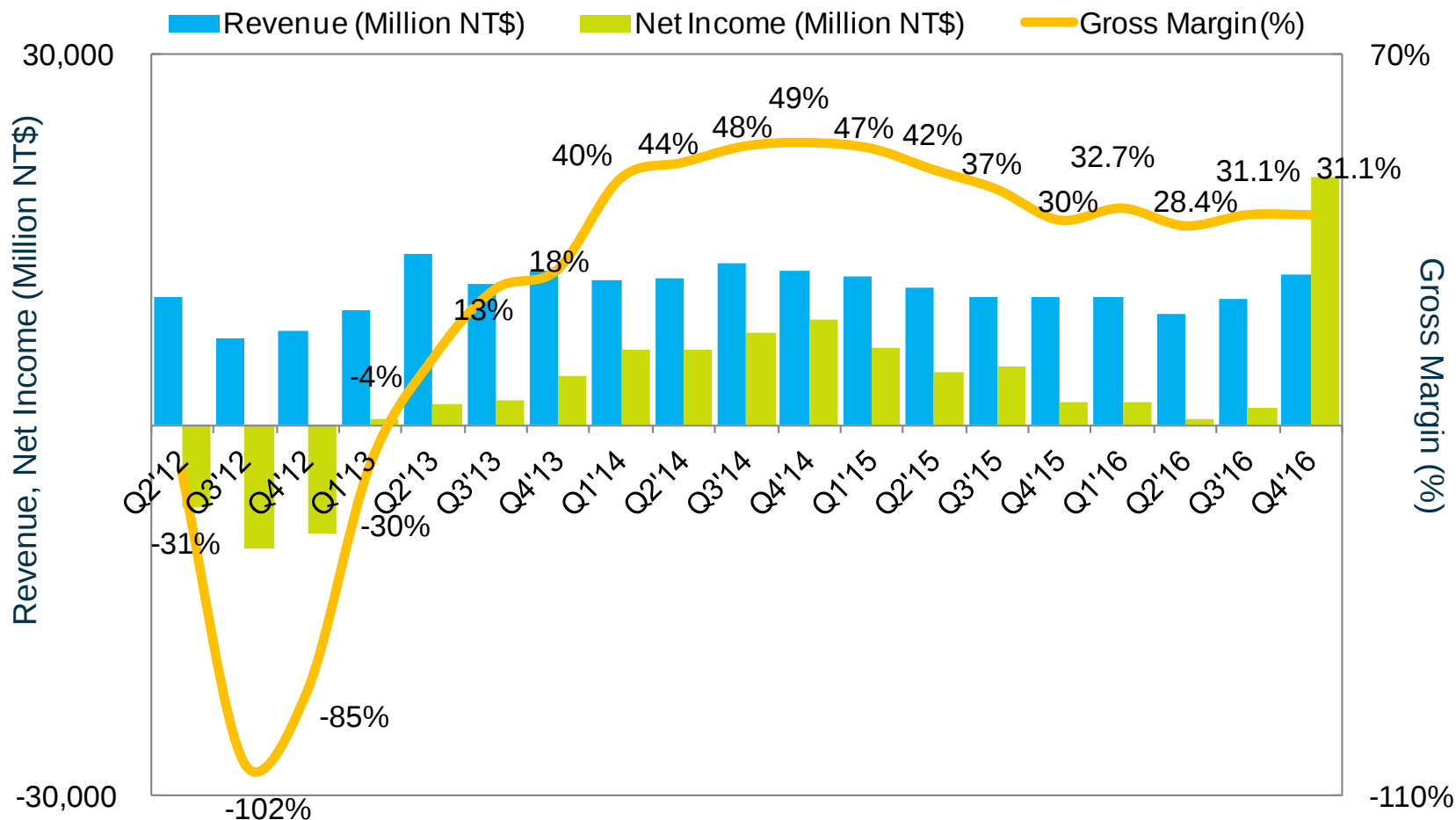
	NT\$B: Billion					
	NANYA					
	2015	Q1'16	Q2'16	Q3'16	Q4'16	2016
Revenue	43.9B	10.4B	8.9B	10.2B	12.1B	41.6B
Gross Profit <i>Gross Margin (%)</i>	17.3B <i>39.4%</i>	3.4B <i>32.7%</i>	2.5B <i>28.4%</i>	3.2B <i>31.1%</i>	3.8B <i>31.1%</i>	12.9B <i>30.9%</i>
Operating Income <i>Operating Margin (%)</i>	13.5B <i>30.7%</i>	2.6B <i>25.3%</i>	1.7B <i>18.5%</i>	1.7B <i>16.6%</i>	2.6B <i>21.2%</i>	8.6B <i>20.5%</i>
Non-operating Income	4.2B	-0.79B	-0.6B	-0.3B	18.8B	17.2B
Net Income <i>Net Margin (%)</i>	17.1B <i>39.1%</i>	1.8B <i>18%</i>	0.4B <i>4.4%</i>	1.4B <i>13.7%</i>	20.1B <i>165.9%</i>	23.7B <i>57.0%</i>
Capital	24B	27B				
EPS	7.07	0.68	0.14	0.51	7.33	8.67

Company highlights in 2016

- NT\$ 23.72B net income of 2016, EPS NT\$ 8.67.
- Shipment increased 20.3% yoy, ASP decreased 22.1% yoy.
- Recognized NT\$17.94B profit from Inotera share disposal.
- Debt ratio 37.5% at the end of the 31st of Dec, 2016.

Financial Highlights

- Q1'17 gross margin likely to improve QoQ due to favorable market condition.



Cash Flows

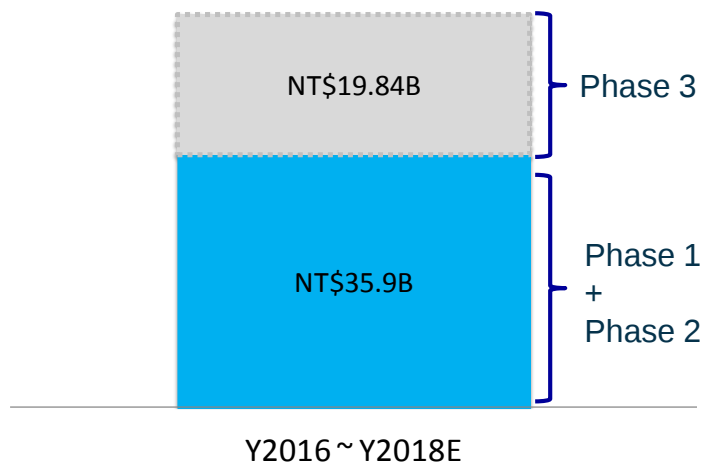
(Unit: Million NT\$)

	2016 Audited & Consolidated	2015 Audited & Consolidated
Beginning Balance	3,104	7,268
Cash from Operating Activities	15,945	18,522
Capital expenditures	-22,336	-3,842
Long-term & Short-term loans	-6,351	-14,382
Investments and others	18,740	-4,463
Ending Balance	9,102	3,104
Free Cash Flow ⁽¹⁾	-6,391	14,680

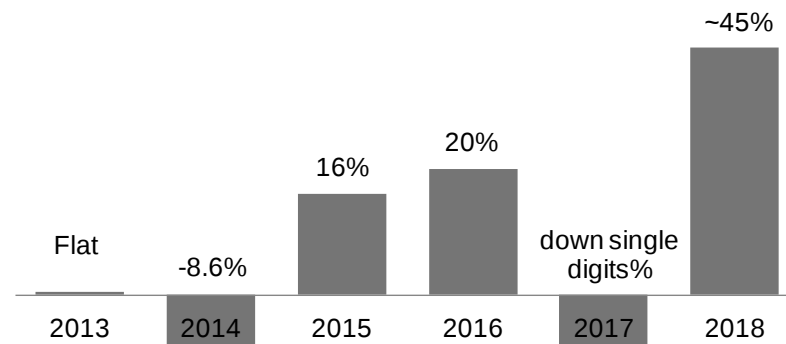
(1) Free Cash Flow = Cash from operating activities – Capital expenditures

20nm CAPEX & Bit Shipment

CAPEX



Bit Shipment (YoY)



■ Capital Expenditure (CAPEX)

- Anticipated CAPEX of NT\$55.74B for 38K WSPM 20nm migration. (2016 CAPEX NT\$ 20.6B for 20nm)
- BoD approved 3rd stage 20nm CAPEX of NT\$19.84B. (as of 2017/3/9)
- Estimated 2017 CAPEX of NT\$ 34.3B
- 2017 CAPEX mainly from: 1. Cash on hand 2. US\$5B ECB, 3. Cash from operating activities

■ Bit Shipment

- 2017 bit shipment down single digits. Bit shipment resume positive(2018 +45% yoy, 2019 +15% yoy).
- 20nm cost per bit expected to cross over by end of 2017

20nm Plan

- Plan to convert 38K WSPM to 20nm Technology. Total capacity increase to 68K WSPM.
- 20nm volume production schedule in Q3'17, 30K wafers input expected in Q4'17.
- Cost cross over expected by end of 2017.
- Initial offering DDR4 & LPDDR4X.



Investment of Micron Private Placement

The Investment as of 2016/12/02		Accounting Treatment as of 2016/2/28	
Volume	• 57,780,138 shares	Account	• Available-for-sales financial assets
Purchase price & EX rate	• US\$ 17.29 per share (=NT\$544.42752) US\$ 1: NT\$ 31.488	Market Price	• US\$ 23.44 per share (=NT\$718.436) US\$ 1: NT\$ 30.65
Investment amount	• NT\$ 31,457,097,237	Market Value	• NT\$41,511,331,233
Shareholding	• about 5.26% of Micron's interest	Measurement	• Mark to market on monthly basis
Lock-up period	• Six months (till 2017/6/2)	Unrealized gain	• NT\$10,054,233,987

Dividend for Y2016

Subject

Cash dividend of NT\$ 1.5 per common share

BoD Approval

- BoD approved cash dividend of NT\$ 1.5 per common share on 2017/3/9 .
- Will be proposed to the AGM for approval scheduled on 2017/5/26

Cash yields

- 3.2% (3/20 closing price NT\$ 47.20)

Payout ratio

- 17.3% (NT\$ 1.5 / EPS NT\$ 8.67)
- 70.8% (exclude disposal gain of Inotera, NT\$ 1.5 / EPS NT\$ 2.12)

Remark

- Exclude disposal gain of Inotera, EPS was NT\$ 2.12 (EPS NT\$ 8.67 – NT\$ 6.55)
- Net cash in NT\$ 16B (Disposal of IMI shares(NT\$ 47.5B), Acquisition of Micron's private placement (NT\$ 31.5B)).
- Expect NT\$ 34.3 billion CAPEX in 2017 for 20nm ramping.

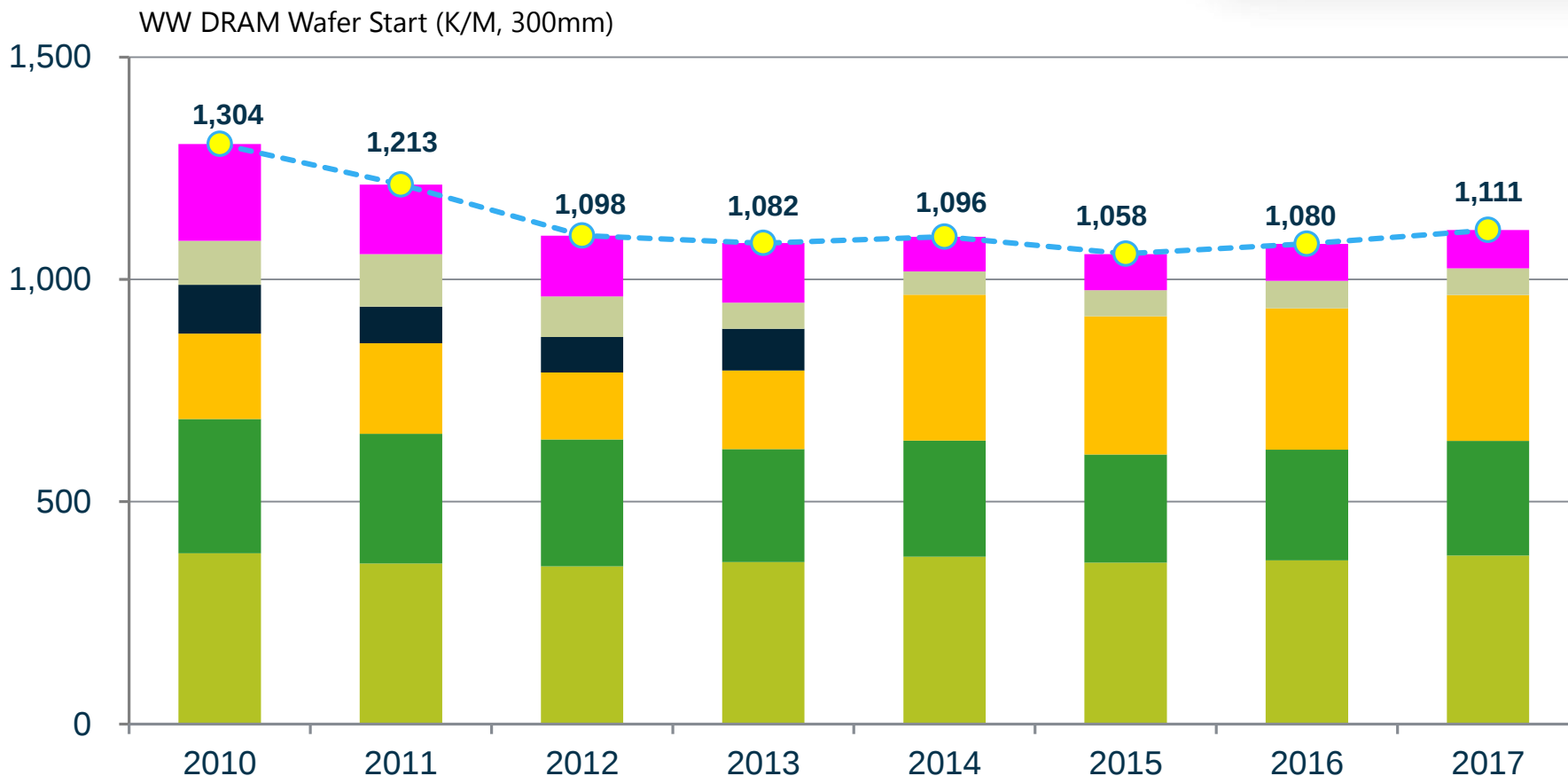
Outline

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02. **DRAM Industry**

03. Business Strategy

Rational DRAM Supply Growth



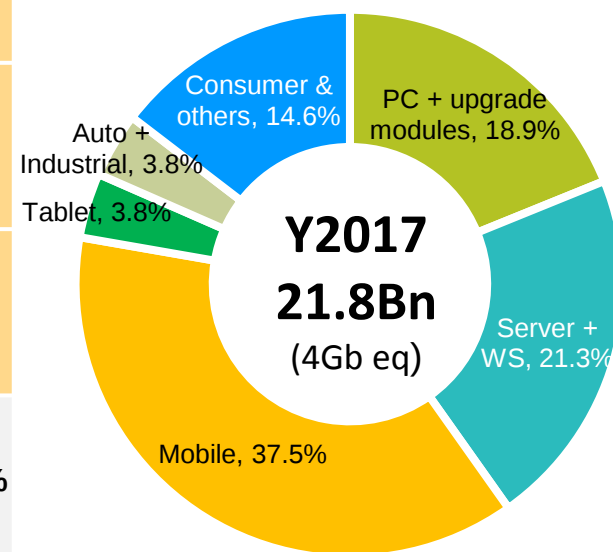
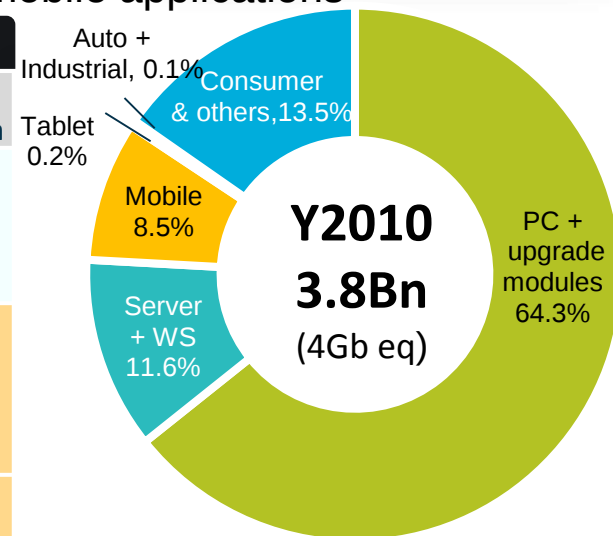
- Limited supply growth contributed mainly by process conversion
- About 20% supply growth in 2017 expected

Source: DRAMeXchange, NTC MKT

Diversification of Demand

- 22% yoy bit demand increase in 2017 projected
- Ongoing growth momentum from cloud computing and mobile applications

		Y2016		Y2017		YoY		
Unit : QTY(Mu) C/B(GB)		QTY,	C/B	QTY	C/B	QTY(Y/Y)	C/B(Y/Y)	Bit Growth
Cloud	Server	17	110	17.6	133	3.5%	20.9%	25.2%
P2P	PC	270	5.1	263	5.6	-2.6%	9.8%	7.0%
	Tablet	180	2.1	164	2.6	-8.9%	23.8%	12.8%
	Smart Phone	1,480	2.1	1,482	2.7	0.1%	28.6%	28.7%
	LCD TV	223	1.8	219	2.0	-1.8%	11.1%	9.1%
M2M	Car	91.3	0.6	93.8	2.1	2.7%	250.0%	259.6%

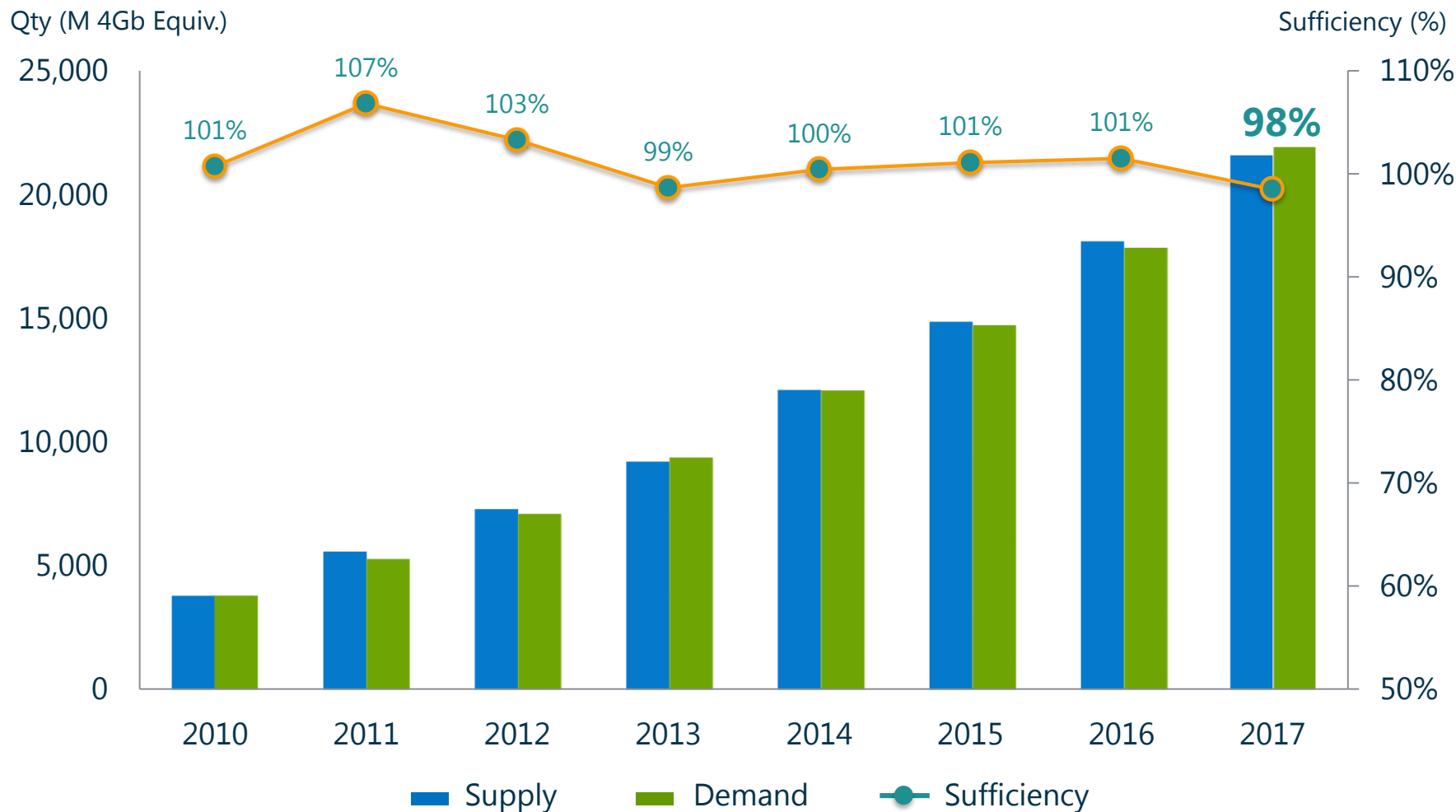


DRAM Essential to New Data Era



Sufficiency

■ Favorable market conditions continues in 1H 2017

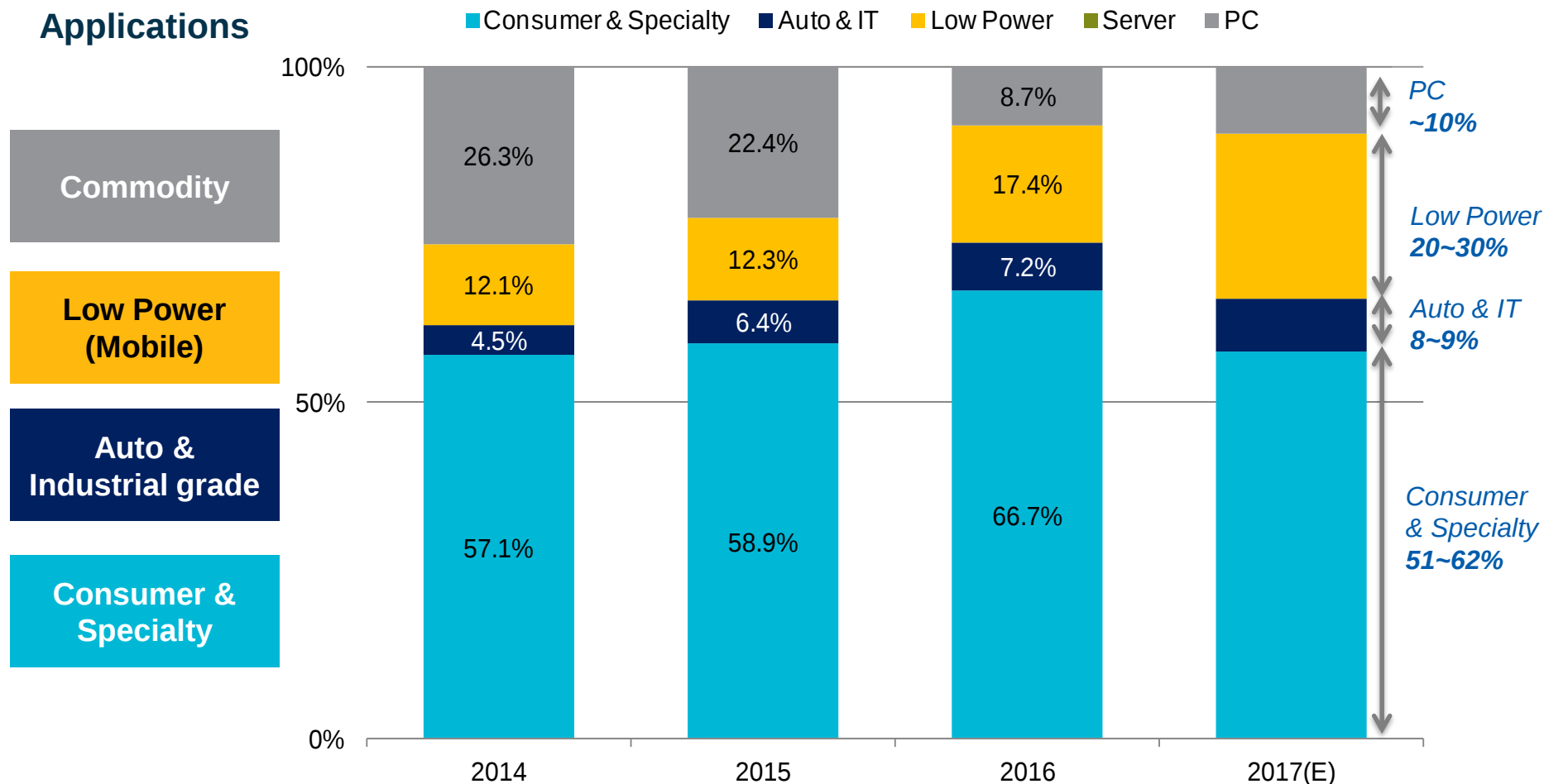


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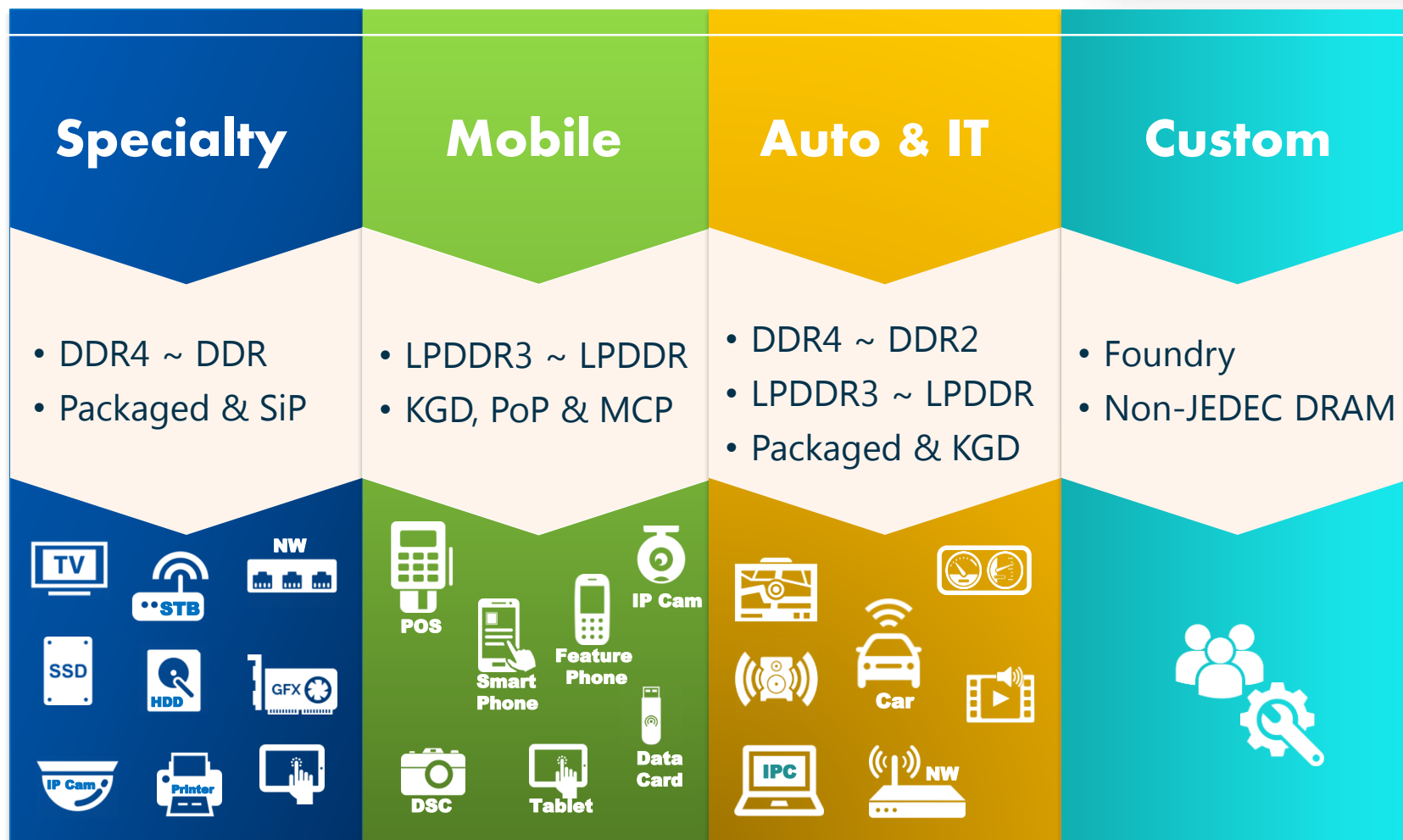
2017 Revenue Breakdown Guidance

Applications



* Revenue portion by Application

Comprehensive DRAM Portfolio



SiP = System in Package

KGD = Known Good Die

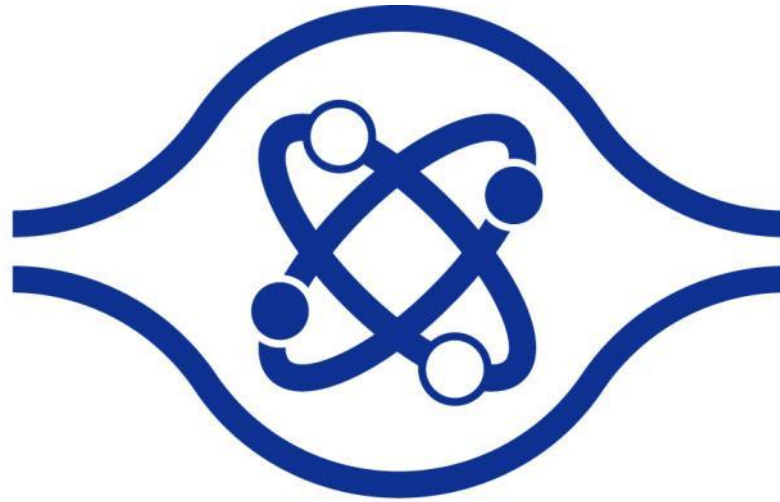
PoP = Package on Package

MCP = Multiple-Chip Package

Nanya Business Outlook

- Limited DRAM supply growth 2017, healthy market condition expected.
- Q1'17 ASP guidance up 10-15% QoQ.
- 20nm volume production scheduled Q3'17, target 30K WSPM Q4'17.
- Target 38K WSPM of 20nm in 1H 2018 to better meet customers' needs and improve cost structure.
- DDR4 & LPDDR4 new product engagement.
- Nanya offers a comprehensive portfolio of DRAM solutions and continues to focus on specialty DRAM business.

*WSPM: Wafer Starts Per Month



NANYA

Thanks & Questions

2016 Income Statement

Amount: Million NT\$	Y2016		Y2015		YoY
	Audited & Consolidated		Audited & Consolidated		
Net Sales	41,633	100.0%	43,876	100.0%	-5.1%
Cost of Goods Sold	28,781	69.1%	26,568	60.6%	
Gross Margin	12,851	30.9%	17,308	39.4%	-25.8%
SG&A Expenses	1,821	4.4%	1,867	4.3%	
R&D Expenses	2,478	6.0%	1,954	4.5%	
Operating Income	8,552	20.5%	13,487	30.7%	-36.6%
Non-operating Income (Exp.)	17,173	41.3%	4,190	9.5%	
Income before Tax	25,726	61.8%	17,677	40.3%	45.5%
Income Tax Benefit (Expense)	-1,997	-4.8%	-506	-1.2%	
Net Income	23,729	57.0%	17,171	39.1%	
Net income attributable to non-controlling interests	7	0.0%	30	0.1%	
Net Income attributable to NTC	23,721	57.0%	17,141	39.1%	38.4%
EPS(NT\$)	8.67		7.07		

ECB Offering

Subject	Issue US\$ 500 million Zero Coupon Convertible Bond due 2022
Issue Size & Coupon	- Issue Amount: US\$ 500 million - Coupon Rate: 0%
Listing	Singapore Exchange Securities Trading Limited
Issue Date	Jan. 24 2017
Maturity Date	Jan. 24, 2022
Initial Conversion Price	NT\$ 52.47 per share
Yield to Put/ Maturity	1.75%
Put Option Date	On January 24, 2020 (At the end of 3rd year)
Call Option Period	At any time after January 24, 2020 (36 months from Issue Date)
Conversion	- Converted Securities: The newly-issued common shares of Nanya Technology - Conversion Period: At any time starting from the day immediately following the 40th day after the Issue Date to the 10th day prior to the Maturity Date. (2017/3/6~2022/1/14)
Dilution Effect	If the bonds are fully converted, the dilution effect to original shareholders is about 9.9%. (excluding book value adjustment)