中美矽晶製品股份有限公司
Sino-American Silicon Products Inc.

Credit Agricole Securities
“ Solar Access Days”
30 November, 2015

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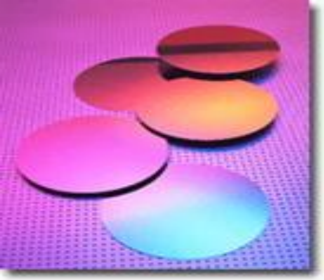
SAS Business Sector (Solar)

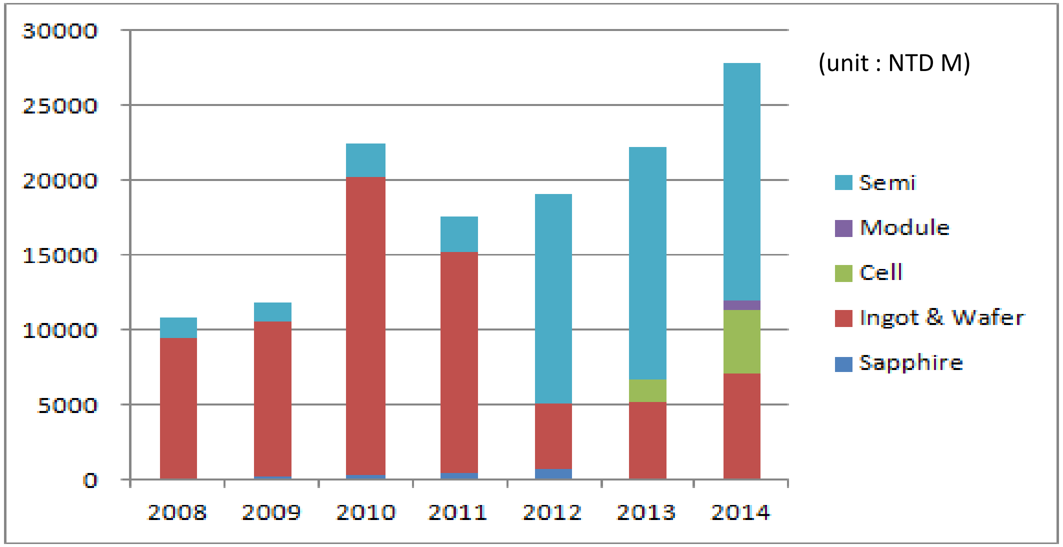
Sino-American Silicon Products Inc.

SAS Company Profile





- **Established** : 1981
- **Paid-in Capital** : NTD 5,800mn
- **Employees** : 4,489 (M/Nov '15)
- **Headquarter** : Hsinchu Science Park, Taiwan R.O.C.
- **Products** : Solar Wafer / Cell / Module / Power Plant
  Semiconductor Wafer (3"~12")
- **Revenue** : *2015 Jan~ Oct NTD 23,606 mn*



SAS Milestones

SAS

1981 Sino-American Silicon Products Inc. established

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1999 SST established in China

2000 Enter Solar Ingot / Wafer Business

2001 SAS IPO in Taiwan (5483 TT)

2008 Acquired GlobiTech Incorporated, TX, USA

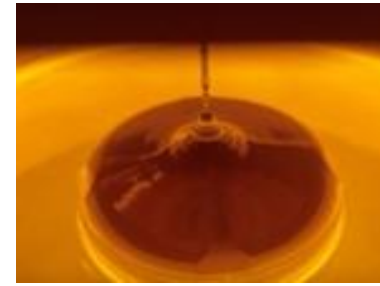
2011 Company spin off – SAS / GWC / SSC

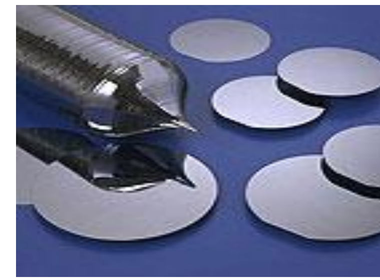
2012 Acquired Covalent Silicon, Japan

2014 Acquired ALEO module fab of Bosch group, Germany
Merged Sunrise Global Solar Energy Co., Ltd. Taiwan

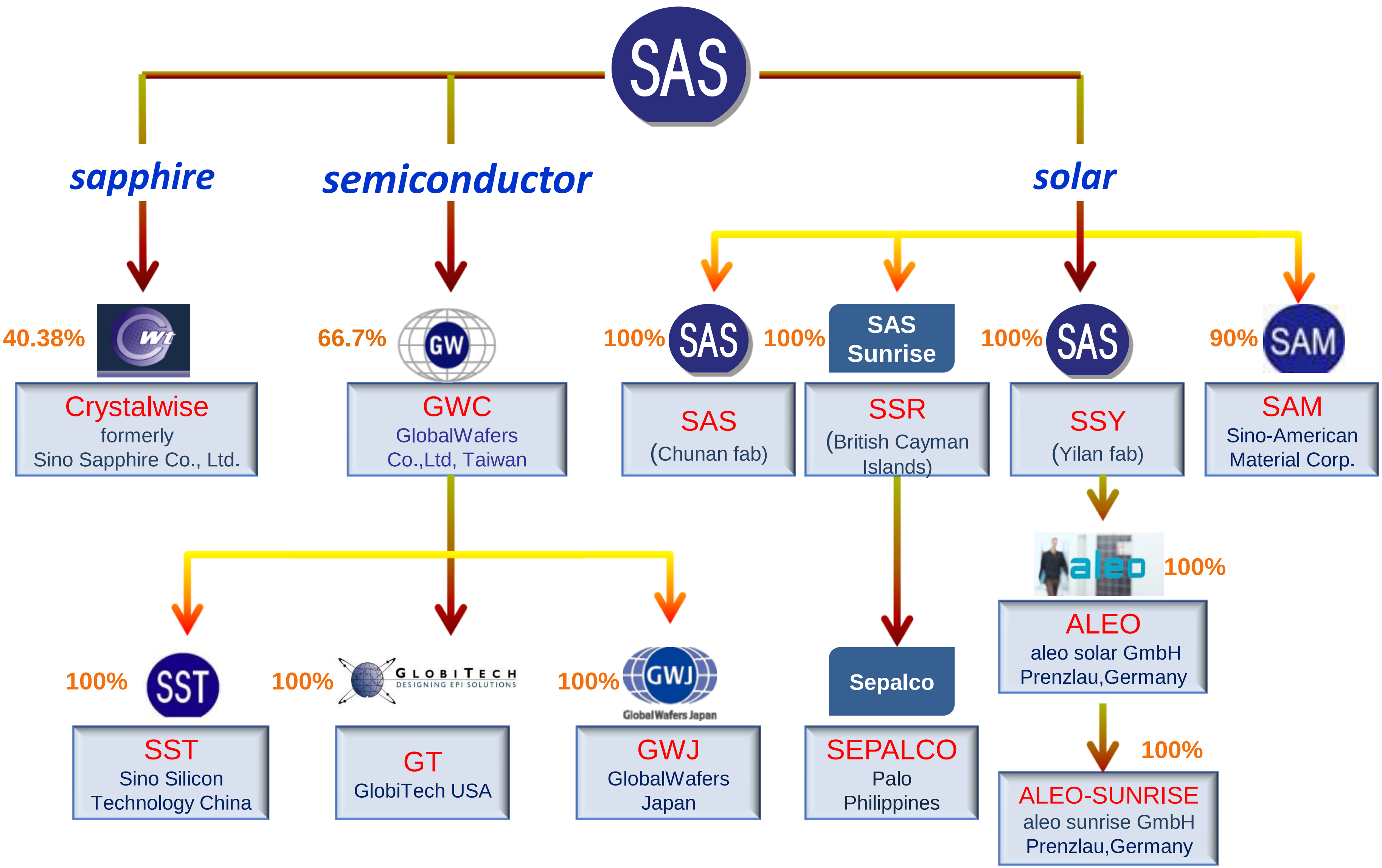
2015 SAS Sunrise Inc. (SSR) established for Solar Power Plant, Project Palo ground breaking

2015 GWC IPO in Taiwan (6488 TT)





Organization Structure



SAS Group (Solar)

Europe

ALEO (Germany)

SAS HQ Hsinchu

SAS Yilan (Fab 3)

Taiwan

Philippines

SSR (Project Palo)

SAS Chunan (Fab1 & Fab-2)

Taiwan

SAS Consolidated Financial Statements

NTD mn	2013	%	2014	%	9M-2015	%
Revenue	22,215	100	27,821	100	21,270	100
Gross Margin	2,439	11	3,498	13	3,253	15
Operation Income	629	3	1,447	5	1,782	8
PBT	128	-	1,925	7	1,659	8
PAT	295	1	1,128	4	496	2
Total Debt & Debt ratio	19,088	48	19,304	47	16,146	36
ROE (%)	1.62		6.16		4.61	
EPS	0.57		2.06		0.86	

*ROE: annualized rate

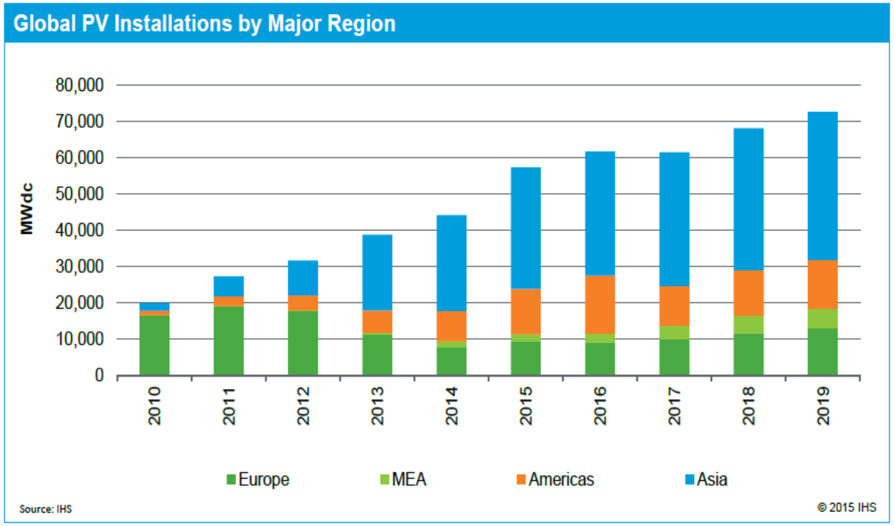
SAS – Solar Financial Statements

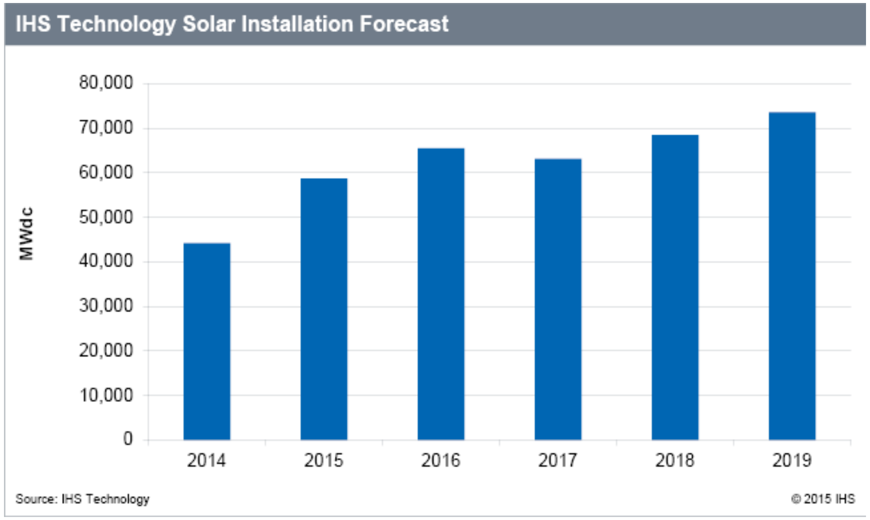
SAS

NTD mn	2013	%	2014	%	9M-2015	%
Revenue	6,662	100	11,917	100	9,479	100
Gross Margin	(1,226)	(18)	(233)	(2)	59	1
Operation Income	(1,583)	(24)	(906)	(8)	(378)	(4)
PBT	149	2	1,287	11	628	7
PAT	295	4	1,128	9	496	5
Total Debt & Debt ratio	11,467	36	11,193	35	9,185	29
ROE (%)	1.51		5.66		3.02	
EPS	0.57		2.06		0.86	

*ROE: annualized rate

Global Solar PV Forecast 2014~2019



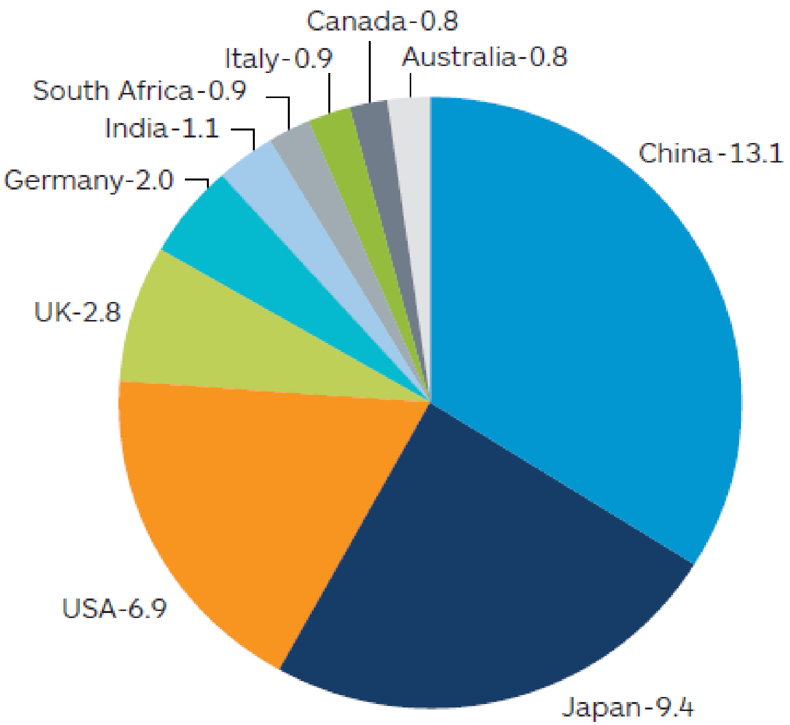


IHS Raises Global Solar PV Forecast

2015 : 59 GW (+33% yoy) & 2016 : 65 GW (+10% yoy)

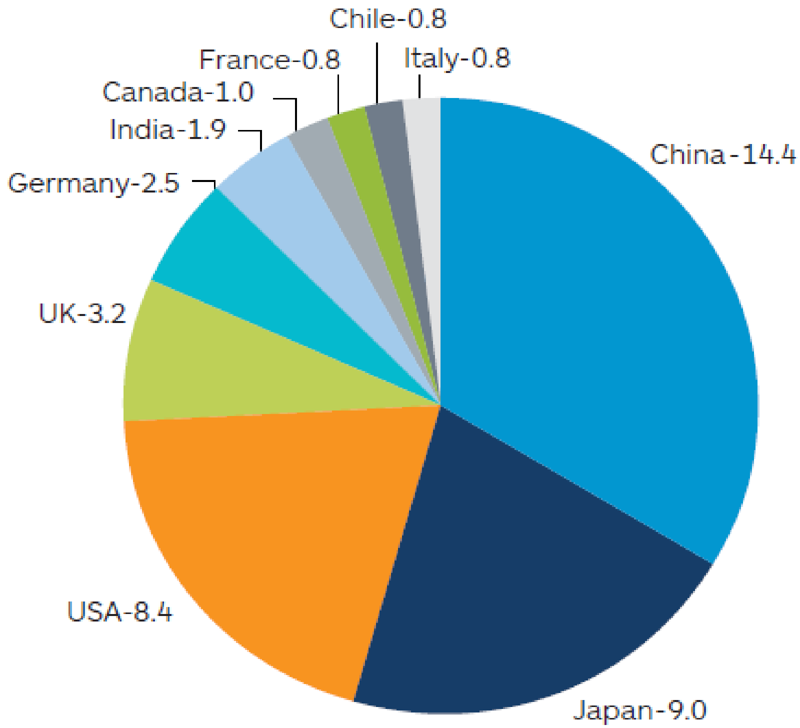
Top 10 market in 2014~2015

PV Installations - 2014 (GW)



Source: IHS

PV Installations - 2015 (GW)



Source: IHS

China raised installation forecast to 23.1 GW from 17.8 GW in 2015

SAS Solar Manufacturing Site

(unit: MW)

	Company	Products	2015	2016	Location
SAS	SAS	*Wafer*	*900*	*1,000*	*Taiwan*
	SAS	*Cell*	*850*	*850*	*Taiwan*
	Aleo-Sunrise		*0*	*200*	*Germany*
	aleo	*Module*	*340*	*340*	
	SAS-Sunrise (SSR)	*Solar Farm*	*0*	*50*	*Philippines*
	SAM	*EVA*	*40*	*90*	*Taiwan*

(as of August 2015)

SAS Sunrise Inc. (SSR)

- Company name: SAS Sunrise Inc. (SSR)
- Established : Jun 2015
- Business scope : Solar Power Plant

- Project Palo (Sepalco)
  . Location : Palo Philippines
  . Capacity : 50MW
  . Groundbreaking on 3 July 2015
  . Commercial operation in Q1/'16
  . Output 71M(KWH) per year
  . 20 years contract with Philippines government
  . To use mainly ALEO high conversion-efficiency mono module

- Next Project :

Solar cell tariff to US market

※ US Commerce department final decision (7 July 2015)

◆ **Anti-dumping duties for solar cell**
Taiwan ➔ average 19.5%

◆ **Anti-dumping & Anti-subsidy duties for solar cell**
China ➔ average 31%

◆ **Impact to Taiwan & China solar industry**

Taiwan : Regain competitiveness to US solar market (8GW in 2015)
ASP raise up with optimistic market & high utilization
Transfer order effect from China..

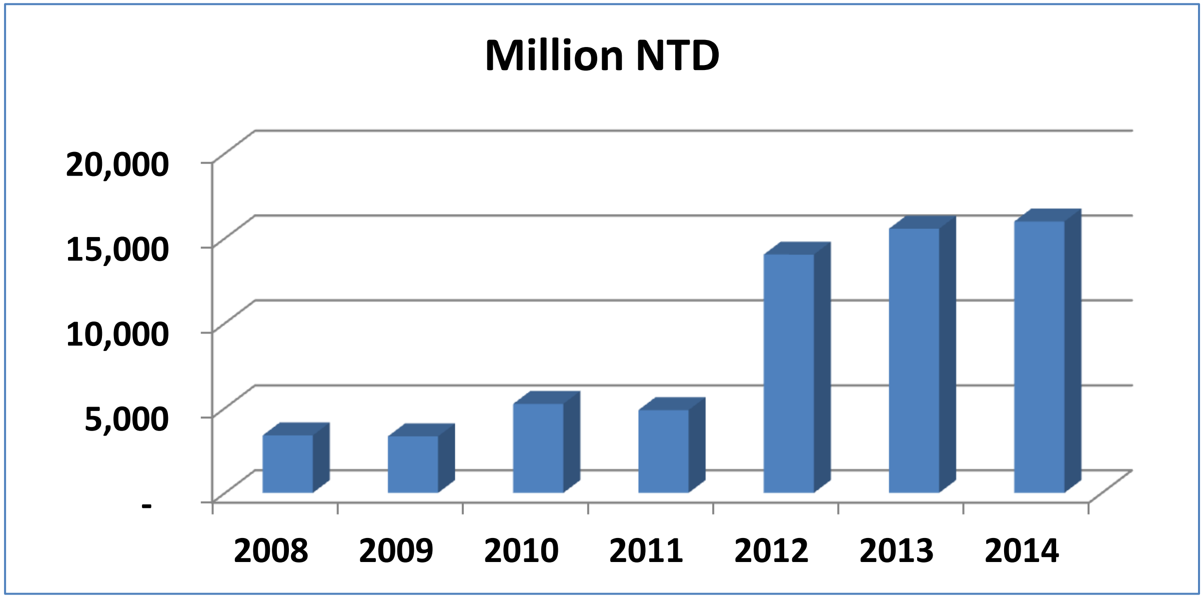
China : loss competitiveness to US solar market
Accelerate expansion of solar cell production outside China
Increasing supply volume of Taiwan cell product
Focus on module i/o cell production in China

SAS Business Sector (SEMI)

GlobalWafers Co., Ltd.

GWC Company Profile

- **Established** : 2011 (spin off from SAS)
- **Paid-in Capital** : NTD $3,693mn
- **Employees** : 2,490 (M/Nov '15)
- **Headquarter** : Hsinchu Science Park, Taiwan, R.O.C
- **Products** : 3"~12" Semiconductor Wafer
- **Revenue** : *2015 Jan~ Oct NTD 12,966 mn*



GWC Milestones

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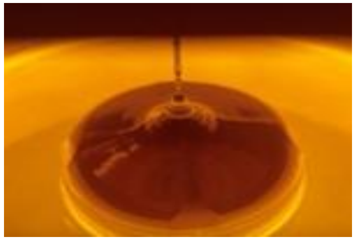
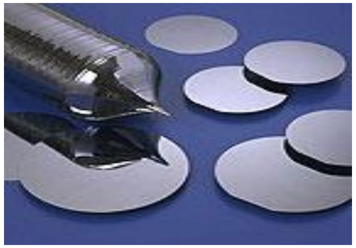




GWC Milestones

2011/10
- GlobalWafer Co. , Ltd. Established (spin off from SAS)
- Initial Paid in Capital **NTD 1,800mn**

2012/04
- Acquired Covalent Silicon
- Paid in Capital **NTD 3,175mn**

2013/08
- ISO14001 certified

2013/12
- Taiwan Intellectual Property management System (TIPS) certified

2014/07
- TS16949 : 2009 certified

2014/09
- Issued of shares

2014/10
- Listed in Emerging Stock market (6488TT)

2015/01
- Paid in Capital **NTD 3,493mn**

2015/09
- Paid in Capital **NTD 3,693mn**

GWC Group (Semi)

GWJ

GWJ Oguni GWJ Niigata

GWJ Tokuyama GWJ Sekikawa

Japan

GWC HQ Hsinchu

Taiwan

SST Kunshan

China

Globitech TX

USA

GWC Consolidated Financial Statements

unit: NTD M	2013	%	2014	%	9M-2015	%
Revenue	15,570	100	15,922	100	11,792	100
GM	3,663	23	3,728	23	3,192	27
OI	2,194	14	2,336	14	2,148	18
PBT	2,204	14	2,679	16	2,245	19
PAT	1,948	12	2,095	13	1,582	13
Total Debt & Debt ratio	7,939	37	8,184	38	7,009	30
ROE(%)	14.95		15.91		14.22	
EPS	6.14		6.60		4.56	

*ROE: annualized rate

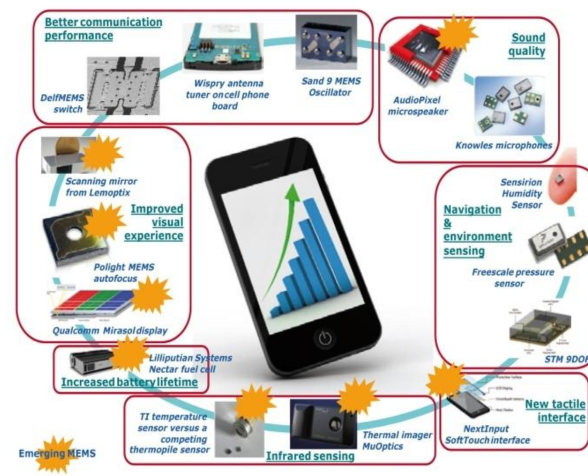
GWC Product vs. Application

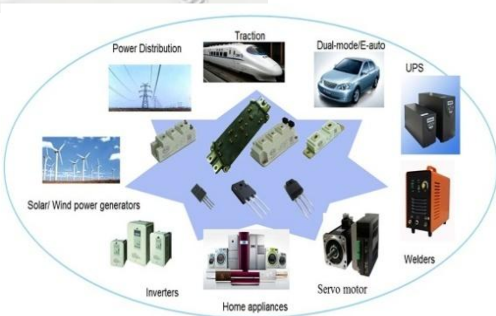
Products	Diameter	Main Applications
Annealed wafer	8”、12”	Memory, LCD driver & Logic IC
EPI wafer	4”、5”、6”、8”	Discrete, Logic IC, Analog & Memory
Polished wafer	4”、5”、6”、8”、12”	4”~6” for Epi substrates & Analog 8”~12” mainly in logic IC
Diffused wafer	3”、4”、5”、6”	Discrete
Non-polished wafer	3”、4”、5”、6”	Discrete

GWC wafers are used in..

Automotive devices
Power/Discrete device
Memory Applications
LCD Driver IC/CIS/Logic
Consumer Electronic
Industrial Applications

Smart phone is driving new MEMS developments



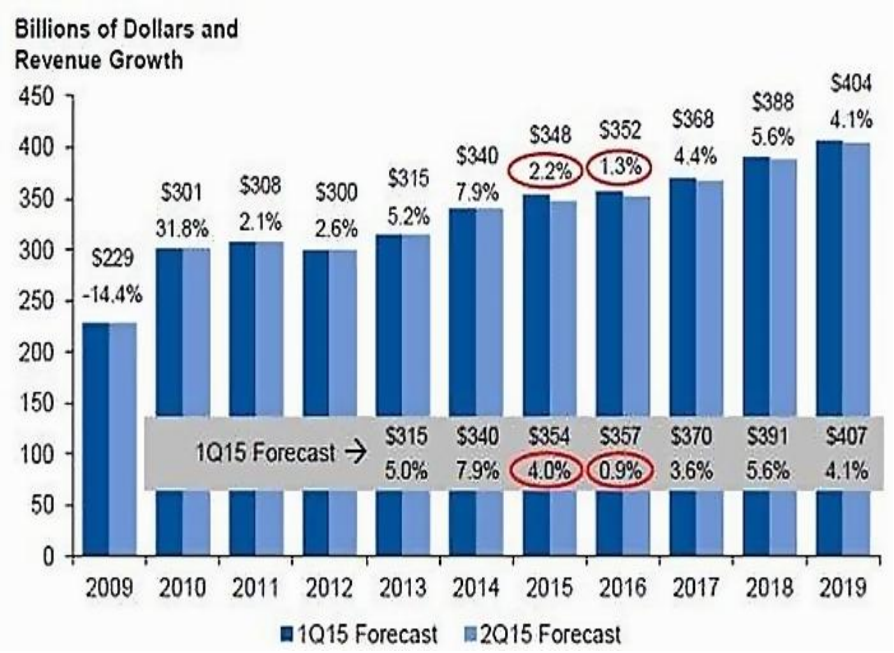


New Products Roadmap

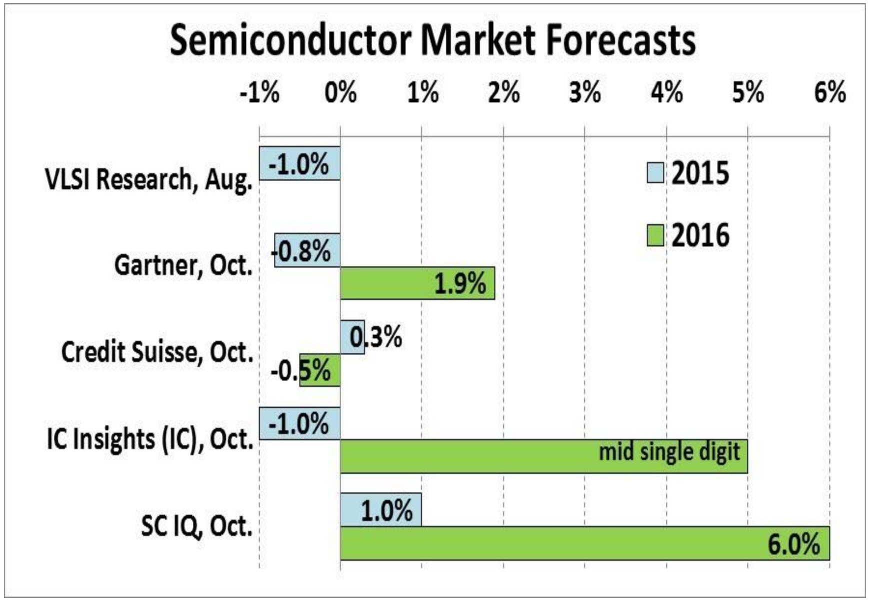
Items	Application
8” ultra heavy dopant ingots growth	Low power consumption device
GaN on Silicon	Power device/ RF
Nano-structure wafers	Ultra thin wafers/ Strengthen substrate
Ultra high resolution CIS wafers	Image sensor、Sensor
Next generation automotive power device SiC wafers	Automotive power, High temp. power, Microwave & RF devices, UV LED, Photodiodes, Blue laser diodes

Specializing in next generation wafer development

Semiconductor Revenue Forecast



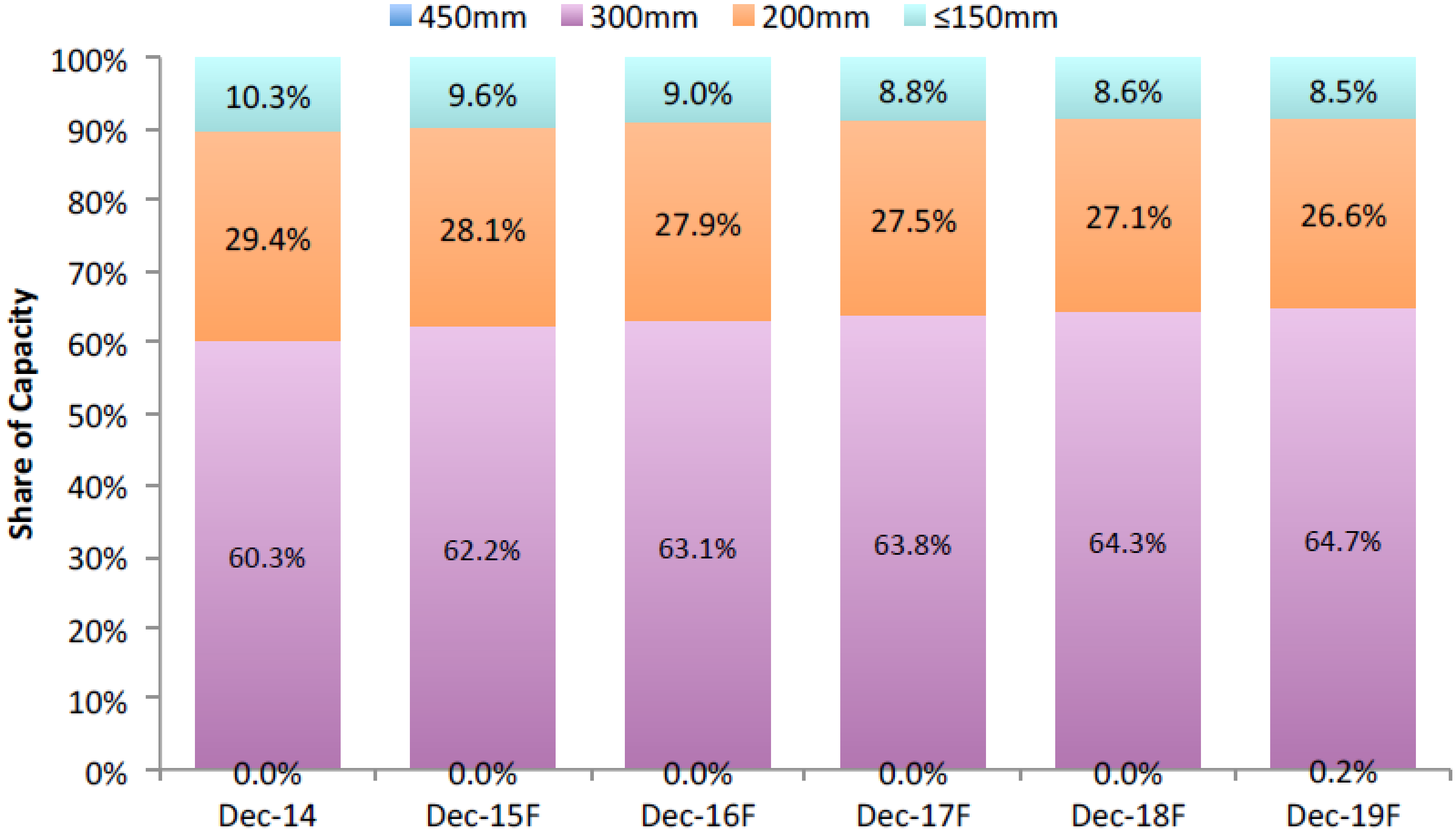
Source : Gartner, 2015-07



Source : SC IQ, 2015-11

Revised forecast growth downward to ±1% in 2015

Forecast for Wafer Size Shares

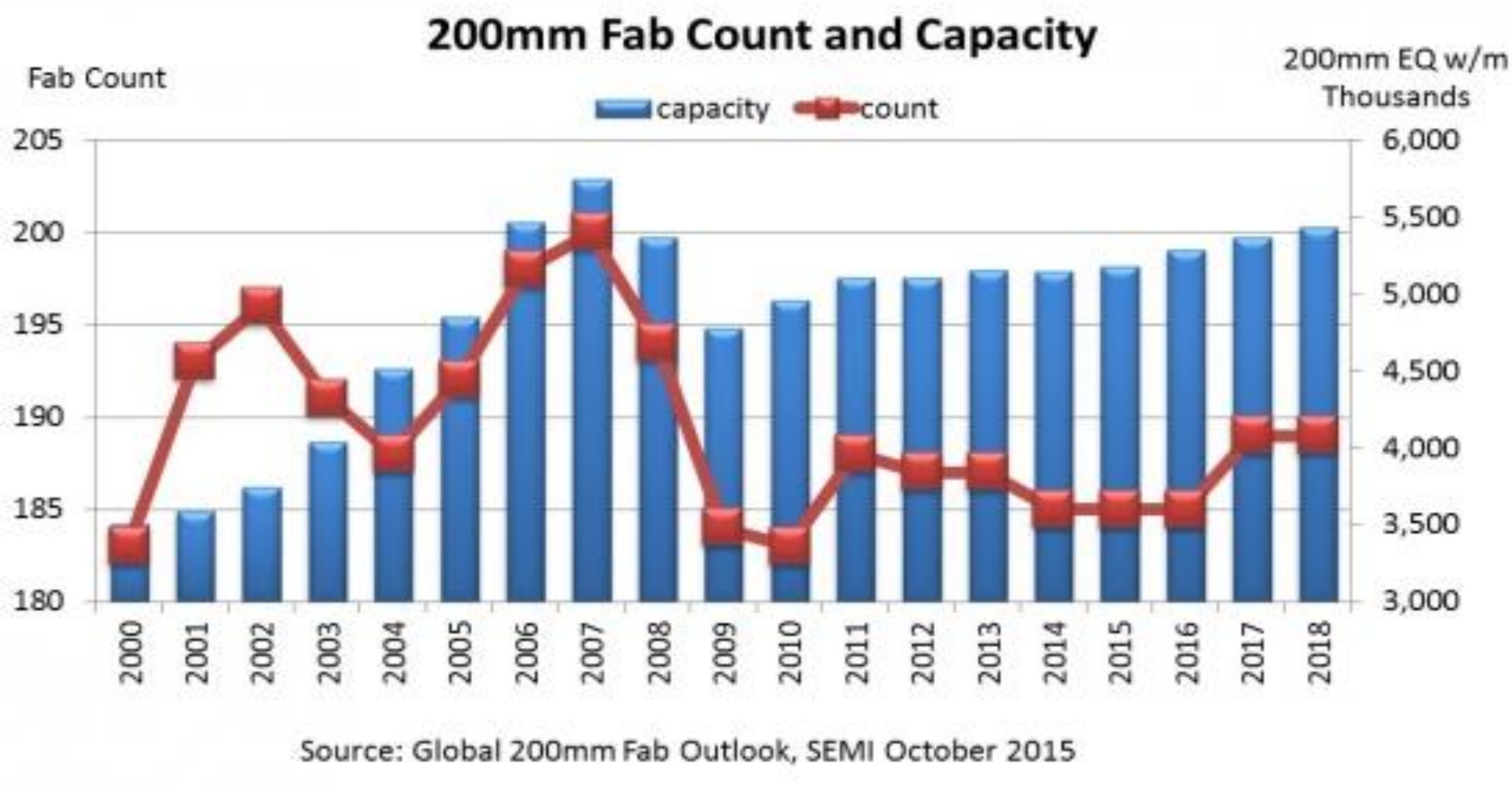


Source : IC Insights, 2015-09

Monthly Installed Capacity (200mm-Equiv. Wafers)

200mm & 300mm = Main Stream

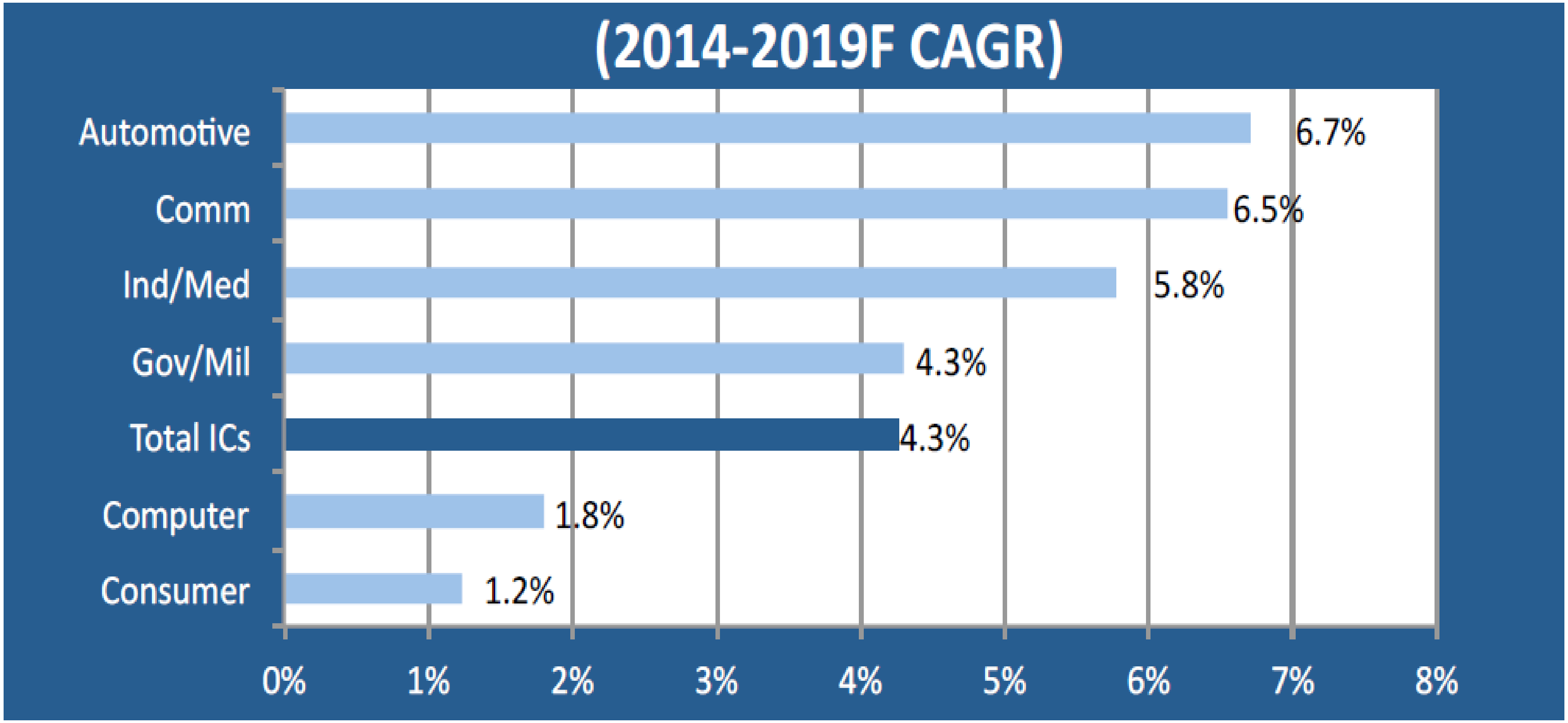
200mm Fab count & capacity



2015~2018

- ***Strong 200mm demand for IoT, sensors, MEMS, analog, power device***
- ***200mm input to increase 400kspm***
- ***Eight new 200mm facility/lines to begin operation***
- ***China & Southeast Asia to lead 200mm expansion***

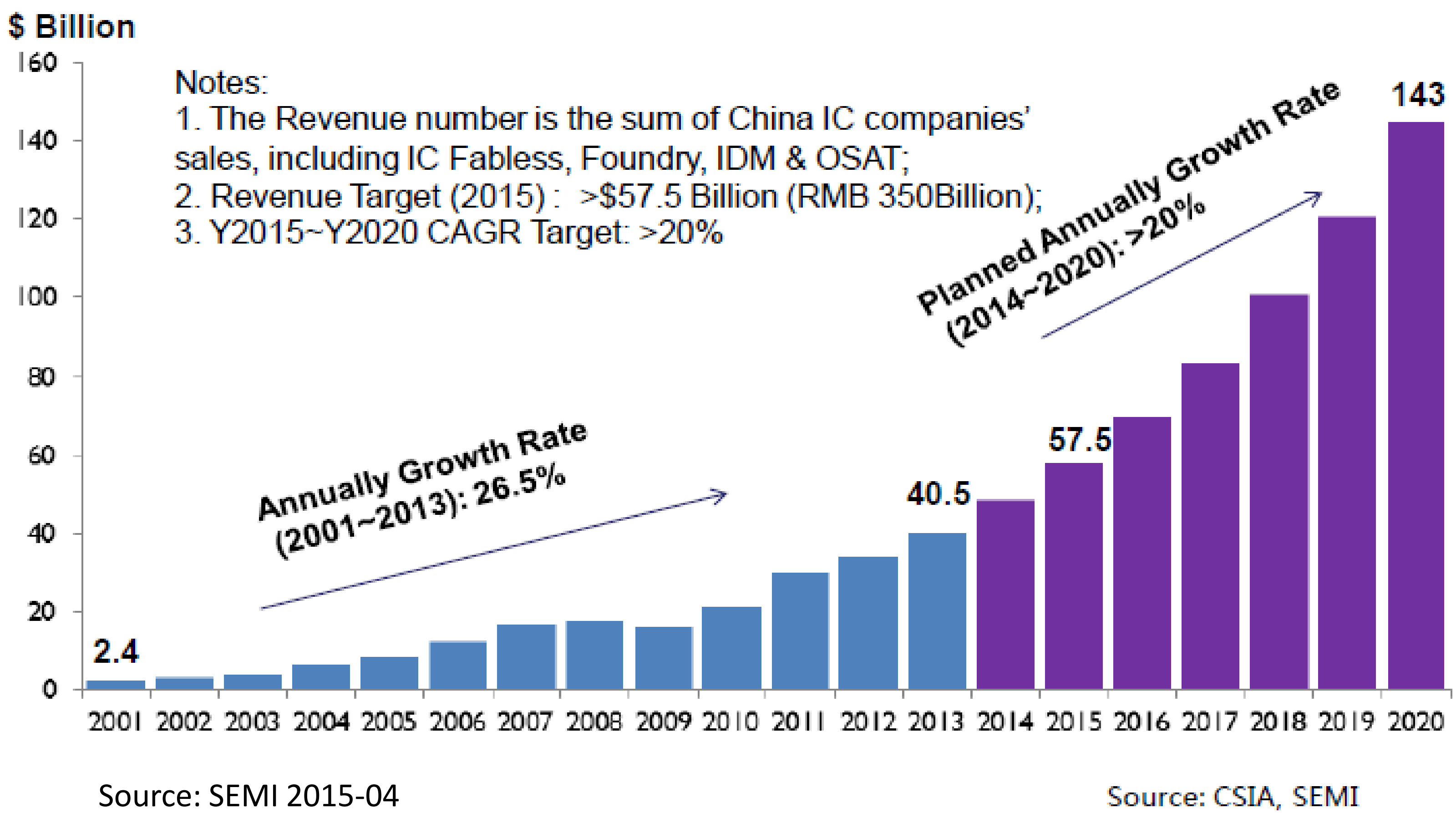
IC Market Growth Rate by Applications



Source: IC Insights, 2015-11

Total ICs CAGR shows 4.3% up till 2019
Automotive, Communication, Industrial & Medical indicate strong growth prominently

Revenue Target of 2014 Guideline (China IC industry new policy)



Source: SEMI 2015-04

Challenges and Opportunities Coexist

Expanding 300mm Capacity in China

Company	Location	Tech-node (nm)	Capacity (K/month)	Products	Status
Huali	Shanghai	55	25	Foundry	Will add capacity to 35K/M
SK Hynix	Wuxi	29	130	DRAM	Production & Upgrade
Intel	Dalian	65	15	Chipset	Production
Samsung	Xi'an	20	40	NAND Flash	Total plan for Xi'an 1st phase: 100K/month
SMIC	Beijing	40	36	Foundry	Production
SMIC	Beijing	40-20 (Planned)	-	Foundry	Construction. 5K—6K/M in end of 2014
SMIC	Shanghai	40	14	Foundry	Production and expand to 14K/M in 2014
WXIC	Wuhan	45	9	NOR Flash, Foundry	Production

Source: SEMI China, Oct. 2014

more to come:

UMC (Xiamen 50kpm), Nexchip (Hefei, 40kpm), TSMC..

Tier -1 Client base

ASIA

US/ Europe

tsmc

VISHAY

Panasonic

FAIRCHILD SEMICONDUCTOR

ON Semiconductor

X-FAB MIXED-SIGNAL FOUNDRY EXPERTS

SHARP SIMPLY THE BEST Solar

NXP

TEXAS INSTRUMENTS

MXIC

UMC

DIODES INCORPORATED

SPANSION

TOSHIBA

FUJITSU

ST

Powerchip

ROHM SEMICONDUCTOR

MITSUBISHI ELECTRIC

BOSCH Invented for life

Micron

MICROCHIP

世界先進 VIS

RENESAS

Fuji Electric

ABB

TOWER SEMICONDUCTOR LTD.

MAXIM

SHINDENGEN

SanKen

HG 华虹宏力

HITACHI Inspire the Next

Infineon

GLOBAL FOUNDRIES

FAGOR

Dividend Policy

SAS

Year	EPS	Dividend
2010	10.5	NTD 5.5
2011	1.02	NTD 0.85
2012	(4.9)	-
2013	0.57	NTD 1.0
2014	2.06	NTD 1.8
2015 Q3	0.86	

GWC

Year	EPS	Dividend
2011	-	spin off
2012	3.44	NTD 2.8
2013	6.14	NTD 5.5
2014	6.60	NTD 5.7
2015 Q3	4.56	

Q&A