

2016 Global Technology Outlook

Heading for the light

- We turn positive on the SCM sector; upstream tech segment should look more attractive than the downstream when the cycle turns up
- We see 3 investment themes for the 2016 tech sector: cyclical upturn, Apple supply chain, and continued 4G penetration
- We upgrade TSMC, UMC, ASE and SPIL to Buy (1), and cherry pick a total of 16 stocks under coverage as our 2016 Pan-Asia tech ideas

Negative

Neutral

Positive

Positive

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APPLE SUPPLY CHAIN
 CYCLICAL UPTURN
 4G PENETRATION

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What's new: We turn Positive on the Global Semiconductor Contract Manufacturing (SCM) sector and upgrade our ratings on the chip majors **TSMC, UMC, ASE** and **SPIL** to Buy (1), as we believe the excess inventory issue is nearing an end (see [This ain't a V-shaped recovery](#), 3 June 2015). Hence, we look for the next cyclical upturn to kick in from March 2016. But we stick with our recommended investment focus, ie, the market-share gainers, as we foresee only a modest upturn for the 2016 tech cycle in revenue terms. We highlight 3 investment themes for the sector in 2016: 1) the cyclical upturn, 2) the Apple supply chain, and 3) continued 4G penetration. Companies that can gain market share by capitalising on these themes should be the focus for investors, particularly with smartphone demand growth now tapering off.

What's the impact: Next upturn coming. Chip inventory peaked in 2Q15 and is coming down nicely, which should set the stage for normalisation in 1Q16. We look for the next cyclical recovery to kick in from March 2016, when the tech food chain is likely to start replenishing inventory ahead of the next wave of seasonal demand. We forecast global SCM revenue to grow by 6% YoY in 2016 and 13% in 2017, from 1% YoY in 2015.

Apple supply chain still shining. Compared with other tech segments, the Apple supply chain proved its business resilience amid the prolonged inventory correction of 2015. Much of that resilience came from the solid builds for the latest iPhone, and we forecast total iPhone shipments for 2015 to grow by 20%-plus YoY. We remain positive on the next iPhone models, expected in 2016, given the possibility of new form factors, upgraded specs (dual cameras), and economy models (4"), which would expand Apple's addressable market. The outlook here bodes well for the food-chain partners (see p16).

Continued 4G penetration. Although smartphone demand growth is tapering off globally, 4G penetration within the space should continue, driving incremental demand from process-tech and product-spec upgrades, and lifting the silicon content and component values per box.

What we recommend: We cherry pick 16 stocks as Daiwa's 2016 Pan-Asia tech ideas: Sony, Disco, Murata, SEC, TSMC, UMC, WinSemi, MTK, ASE, SPIL, Largan, Catcher, AAC, Pegatron, Hon Hai and Delta (see page 10 for a summary of our investment thesis). We also see some Big Data/IoT demand verticals rising to become potential outperformers (ie, fibre-optics, data storage and sensors), due to bandwidth upgrades and the broad adoption of CMOS image sensors and fingerprint technologies.

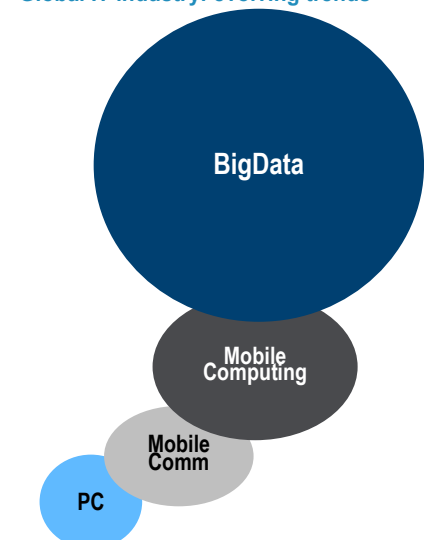
How we differ: Reflecting our view on the next upturn, we believe our 2016-17 revenue forecasts for the SCM majors are above the market's.

Daiwa's Pan-Asia tech picks for 2016

Stock	Ticker	Rating	Target price*
Sony	6758 JP	Buy	4,600
Disco	6146 JP	Buy	14,000
SEC	005930 KS	Buy	1,470,000
TSMC	2330 TT	Buy	165
UMC	2303 TT	Buy	16
WinSemi	3105 TT	Buy	62
MediaTek	2454 TT	Buy	375
ASE	2311 TT	Buy	43
SPIL	2325 TT	Buy	54
Largan	3008 TT	Buy	3,520
Catcher	2474 TT	Buy	480
AAC	2018 HK	Buy	58
Hon Hai	2317 TT	Buy	110
Pegatron	4938 TT	Buy	115
Murata	6981 JP	Outperform	24,500
Delta	2308 TT	Outperform	185









Source: Daiwa forecasts
 Note: *local currency

Global IT industry: evolving trends



Source: Daiwa

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 Alps Electric (6770 JP)
 Hirose Electric (6806 JP)
 Elecom (6750 JP)
 Panasonic (6752 JP)
 Sharp (6753 JP)
 Fujitsu General (6755 JP)
 Sony (6758 JP)
 Pioneer (6773 JP)
 Alpine Electronics (6816 JP)
 Fujifilm Holdings (4901 JP)
 Konica Minolta (4902 JP)
 Disco (6146 JP)
 Brother Industries (6448 JP)
 Seiko Epson (6724 JP)
 Hitachi Kokusai Electric (6756 JP)
 Advantest (6857 JP)
 Ushio (6925 JP)

 TDK (6762 JP)
 Iriso Electronics (6908 JP)
 Kyocera (6971 JP)
 Taiyo Yuden (6976 JP)
 Murata Manufacturing (6981 JP)
 Nitto Denko (6988 JP)
 Rohm (6963 JP)
 Japan Aviation Electronics Industry (6807 JP)
 Funai Electric (6839 JP)
 Casio Computer (6952 JP)
 Olympus (7733 JP)
 Citizen Holdings (7762 JP)
 Nikon (7731 JP)
 Screen Holdings (7735 JP)
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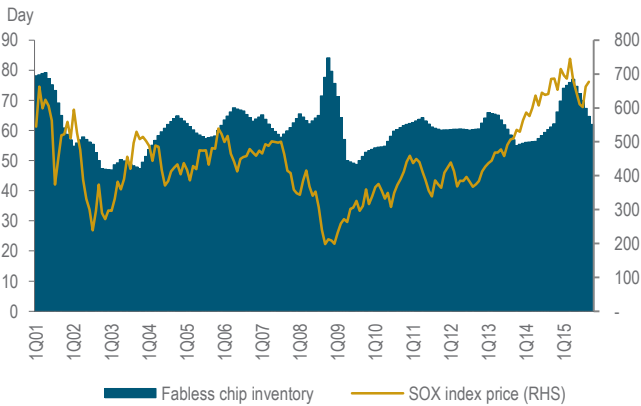
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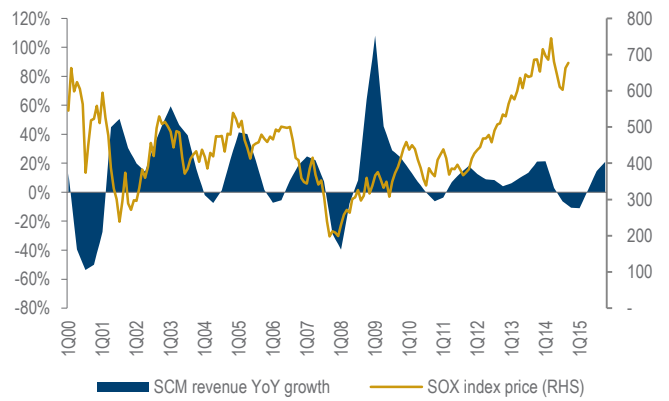
Global SCM Sector: key indicators

Correlation between chip inventory and SOX*



Source: Companies, Bloomberg, Daiwa estimates
Note: *a total of 18 fabless chipmakers in the world under Daiwa's monitor

Correlation between SCM revenue cycle and SOX*



Source: Companies, Bloomberg, Daiwa estimates
Note: SCM includes dedicated foundries and OSAT makers, ex-IDMs

SCM PBR valuations*



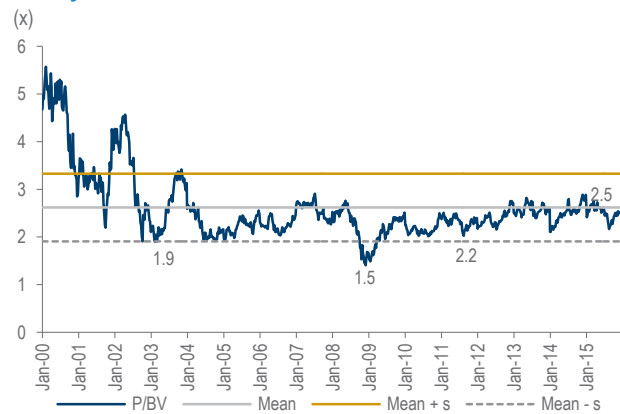
Source: Companies, TEJ, Bloomberg, Daiwa forecasts
Note: *Daiwa-covered only; foundries: TSMC, UMC, SMIC; OSAT: ASE, SPIL; **mean and standard deviation calculation period: 2000 to present

SCM PBR valuations ex-TSMC



Source: Companies, TEJ, Bloomberg, Daiwa forecasts
Note: *Daiwa-covered only; foundries: TSMC, UMC, SMIC; OSAT: ASE, SPIL; **mean and standard deviation calculation period: 2000 to present

Foundry PBR valuation*



Source: Companies, TEJ, Daiwa forecasts
Note: *Daiwa-covered only; foundries: TSMC, UMC, SMIC; **mean and standard deviation calculation period: 2000 to present

OSAT PBR valuation*



Source: Companies, TEJ, Daiwa forecasts
Note: *Daiwa-covered only; OSAT: ASE, SPIL; **mean and standard deviation calculation period: 2000 to present

Daiwa's tech stock valuation comparison

Stock	Ticker	Rating	MktCap (USDm)	TP LC*	PER (x)			PBR (x)			ROE (%)			EPS growth (%)		
					2015E	2016E	2017E	2015E	2016E	2017E	2015E	2016E	2017E	2015E	2016E	2017E
Greater China																
TSMC	2330 TT	Buy	111,448	165.00	12.0	11.7	10.0	3.0	2.6	2.2	26.6	23.5	23.4	14.8	3.1	16.2
MediaTek	2454 TT	Buy	12,936	375.00	15.2	11.9	9.3	1.8	1.7	1.6	11.5	14.8	18.0	-40.0	28.1	27.0
ASE	2311 TT	Buy	9,178	43.00	15.4	13.1	10.5	1.8	1.7	1.6	12.3	13.3	15.6	-18.1	17.6	24.8
UMC	2303 TT	Buy	4,703	16.00	12.8	11.8	9.8	0.7	0.7	0.7	5.5	6.0	7.0	-1.6	8.3	20.4
SPIL	2325 TT	Buy	4,290	54.00	13.1	12.3	10.8	2.0	1.9	1.8	16.1	17.2	18.7	-2.3	7.1	13.3
WinSemi	3105 TT	Buy	951	62.00	11.4	10.5	8.7	1.8	1.7	1.5	16.7	16.7	18.1	74.9	8.1	20.3
Catcher	2474 TT	Buy	7,482	480.00	9.7	8.8	7.5	2.3	2.1	1.9	25.3	25.2	26.6	41.7	9.7	17.9
Pegatron	4938 TT	Buy	6,825	115.00	9.0	8.5	7.9	1.6	1.4	1.2	18.0	17.3	16.8	63.3	5.6	8.5
Hon Hai	2317 TT	Buy	41,194	110.00	8.9	8.4	7.6	1.3	1.2	1.1	14.8	14.8	14.8	6.9	6.3	9.8
Largan	3008 TT	Buy	10,382	3,520.00	13.9	12.3	10.6	5.3	4.1	3.3	44.3	37.8	34.4	25.4	13.6	16.0
FIH Mobile	2038 HK	Buy	3,497	5.25	12.3	10.7	9.6	0.9	0.8	0.8	7.1	7.9	8.3	63.8	15.1	11.9
AAC Tech	2018 HK	Buy	8,485	58.00	17.8	15.1	13.1	4.8	3.9	3.2	29.8	28.5	26.8	32.0	17.8	15.3
Novatek	3034 TT	Outperform	2,476	133.00	12.7	11.3	10.6	2.8	2.7	2.6	22.5	24.5	24.7	-11.5	12.5	6.3
SMIC	981 HK	Outperform	4,575	0.86	16.4	17.5	13.3	1.4	1.3	1.2	8.9	7.7	9.2	49.1	-5.9	31.5
Voltronic	6409 TT	Outperform	1,121	492.00	25.7	20.0	0.0	9.1	7.6	6.2	38.4	41.2	0.0	36.4	28.4	24.6
Quanta	2382 TT	Outperform	6,688	61.00	12.0	11.9	10.9	1.8	1.8	1.7	14.5	15.0	15.7	-3.2	0.5	9.1
Lenovo	992 HK	Outperform	12,083	8.90	nm	12.9	10.2	2.5	2.0	1.7	nm	17.2	18.0	nm	nm	27.4
TPK	3673 TT	Outperform	1,000	104.00	nm	8.9	8.2	1.1	1.0	0.9	nm	11.8	11.6	nm	nm	9.0
Delta	2308 TT	Outperform	11,931	185.00	21.0	18.5	16.6	4.1	3.7	3.5	18.8	21.1	21.8	-10.3	13.7	11.5
Chroma	2360 TT	Outperform	754	69.00	20.1	17.2	15.3	2.4	2.3	2.2	12.9	13.6	14.5	-6.8	16.6	12.8
TXC	3042 TT	Outperform	335	37.00	11.8	10.8	9.9	1.2	1.2	1.1	10.4	11.0	11.6	-6.5	8.7	8.9
Kinsus	3189 TT	Hold	914	109.00	7.4	7.0	nm	1.0	0.9	nm	14.3	14.0	nm	9.3	6.7	nm
Wistron	3231 TT	Hold	1,284	16.00	14.2	7.8	6.8	0.7	0.6	0.6	4.4	8.2	9.1	-17.2	80.8	14.9
Asustek	2357 TT	Hold	6,112	270.00	11.4	10.7	10.4	1.2	1.1	1.1	10.6	10.9	10.7	-10.1	6.8	2.8
Compal	2324 TT	Hold	2,449	19.30	9.0	7.9	7.7	0.8	0.8	0.7	8.7	9.7	9.6	24.5	14.4	3.0
Casetek	5264 TT	Hold	1,725	159.00	10.7	10.0	8.2	1.9	1.7	1.5	18.2	18.1	19.9	6.9	6.7	22.7
Simplo	6121 TT	Hold	1,094	121.00	11.0	11.2	10.9	1.6	1.5	1.4	15.2	13.9	13.6	-5.0	-2.2	3.1
Ju Teng	3336 HK	Hold	616	4.20	6.0	5.6	5.2	0.7	0.8	0.7	11.9	13.1	14.0	7.9	7.0	8.2
Advantech	2395 TT	Hold	4,098	212.00	26.9	22.3	19.1	6.6	5.9	5.4	23.4	28.0	29.5	1.2	20.7	16.9
Realtek	2379 TT	Underperform	1,188	62.00	17.9	13.6	12.9	1.8	1.8	1.6	9.9	13.0	13.1	-44.1	31.6	5.0
TCL Comm	2618 HK	Underperform	919	5.40	6.3	6.3	6.0	1.4	1.2	1.1	24.4	20.3	18.9	-0.1	-1.6	5.8
HTC	2498 TT	Underperform	2,084	67.00	nm	nm	nm	1.0	1.1	1.2	nm	nm	nm	nm	nm	nm
Sunny Optical	2382 HK	Underperform	2,567	17.50	28.0	21.9	17.1	5.2	4.4	3.7	20.1	21.9	23.6	24.1	28.0	28.2
Hiiwin	2049 TT	Underperform	1,236	144.00	20.0	16.7	13.2	2.9	2.8	2.4	15.0	16.9	19.7	-18.3	19.8	25.8
Airtac	1590 TT	Underperform	783	144.00	17.6	14.9	12.4	2.8	2.9	2.5	15.4	19.1	21.3	-21.6	18.1	19.6
Acer	2353 TT	Sell	1,123	16.20	21.2	18.2	15.9	0.6	0.6	0.5	2.8	3.2	3.5	-12.9	16.9	14.5
Korea																
SEC	005930 KS	Buy	161,607	1,470,000.00	8.8	8.5	6.9	1.0	1.0	0.9	12.4	11.7	13.0	-8.1	4.1	23.3
SK Hynix	000660 KS	Buy	19,637	43,000.00	4.9	6.5	5.2	1.0	0.9	0.7	22.7	14.5	15.3	8.9	-23.8	24.0

Source: Daiwa forecasts, Factset

Note: *Local currency; based on share prices as of 4 December 2015. **March year end for Lenovo, 2015E=FY16E, 2016E=FY17E, 2017E=FY18E

Heading for the light

We turn positive on the SCM sector and cherry pick 16 tech stock ideas for 2016

Following a long period of darkness after we turned cautious and downgraded the Asian chip majors on 3 June 2015 (see [This ain't a V-shaped recovery](#)), we now see the light at the end of the tunnel. We are now positive on the global SCM sector and upgrade our ratings on TSMC, UMC, ASE and SPIL to Buy (1), with the details summarised on page 9. And we highlight 16 stocks as Daiwa's 2016 top picks in the Pan-Asia technology space, comprising Sony, Disco, Murata, SEC, TSMC, UMC, WinSemi, MTK, ASE, SPIL, Largan, Catcher, AAC, Pegatron, Hon Hai and Delta.

Separately, we see some Big Data/IoT demand verticals, in terms of product application, rising to become potential outperformers, such as fibre-optic, data storage and sensor technology, owing to bandwidth upgrades at datacentres and the broad adoption of CMOS image sensors and fingerprint technologies.

It's been 6 months since we downgraded the chip majors and followed up 2 months later with a further warning of a prolonged inventory correction (see [This tunnel is deeper and longer](#), 13 August 2015). We have been calling for this excess inventory to take 3 quarters to digest, and normalise in 1Q16, followed by restocking demand to spur the next cyclical upturn. We believe such an inflection point is not far off. Nevertheless, being selective remains our guideline for investors, with market-share gainers still our focus, as we envision just a modest upturn for 2016 in terms of SCM revenue growth.

We highlight 3 key investment themes for the tech sector in 2016: 1) a cyclical upturn, 2) the Apple supply chain, and 3) continued 4G penetration. Companies able to gain market share by capitalising on these themes are our focus for investment, given that smartphone demand growth is tapering off.

Cyclical plays

Our preferred cyclical plays: TSMC, UMC, ASE, SPIL, Disco and SEC

We see the SCM and semiconductor production equipment (SPE) stocks being the key beneficiaries of the next cyclical upturn. We upgrade TSMC to Buy (1) (from Outperform [2]) as we now expect it to benefit from the upturn by expanding its most advanced 16nm node to maintain its foundry leadership position. We upgrade UMC by 3 notches to Buy (1), as we now expect it to reclaim its status as the most viable second source in the foundry space, posting counter-seasonal business strength as a result of its expanded customer base for the 28nm business. Also, we upgrade ASE to Buy (1) (from Outperform [2]) on its share gains in Apple orders through its offering a distinctive hybrid outsourced semiconductor assembly & test (OSAT) + system-in-package (SiP)/electronics manufacturing service (EMS) model. And we upgrade SPIL to Buy (1) (from Outperform [2]) for its sustained high profitability among the other OSAT majors, helped by the cyclical upturn.

We reiterate our Buy (1) rating on Disco for its order recovery from backend packaging & testing customers, as a result of the next upturn. We also remain buyers of SEC, as we think it will reap the most benefits from an improved memory cycle in 2016, thanks to its technology leadership, as well as its likely customer base expansion in the logic foundry.

Apple plays

Our preferred Apple plays: Largan, Catcher, AAC, Hon Hai and Pegatron

We flag 5 stocks among our Pan-Asia stock picks as our preferred Apple plays on the back of their continued share gains and/or revenue growth in Apple-related component orders. We remain buyers of Largan, as we see it benefiting from continued resolution upgrades for camera lenses and the likely adoption of dual-camera solutions in the next iPhone models. Separately, we like Catcher (Buy [1]) as we expect it to handle 9%/12% of iPhone casing orders in 2015/16, respectively, and because there are high entry barriers, with Apple constantly seeking more advanced casing solutions. We rate AAC a Buy (1) as we expect it to continue to see strong earnings growth for 2016, thanks to its revenue expansion from spec upgrades for both non-acoustic and acoustic products. Pegatron (Buy

[1]) is our top pick in the PC OEM/ODM space, as we expect it to gain shares in the 4.7" iPhone market from 2016. And we like Hon Hai (Buy [1]) for its leading position in the Apple supply chain, which should help expand its margins on the back of its increased vertical integration, competitive cost structure, stable ASP and scale economies.

4G migration plays

**Our preferred 4G plays:
 Sony, MTK, WinSemi,
 Murata and Delta**

As 4G penetration continues regardless of the slowdown in smartphone shipments or demand growth, we see Sony (Buy [1]), the CMOS image sensor (CIS) leader, being perhaps the greatest beneficiary in the food chain, thanks to continued camera-resolution upgrades and the likely adoption of dual-cameras as a new industry trend. We continue to be buyers of MediaTek (MTK), given its structural share gains in the 4G market and the likelihood of a margin recovery when the next upturn comes. In addition to the rising 4G trend, which should spur the number of cellular power amplifiers (PA) per box, we see WiFi upgrades becoming a new cycle in the 4G smartphone space, which should bode well for Murata, the key supplier of surface acoustic wave (SAW) filters and WiFi PA modules, and WinSemi, the key foundry for Murata's WiFi PA products. We also like Delta, as we are positive on its datacentres solution and telecoms power business, both of which should benefit from the ongoing 4G migration trend and the proliferation of Internet of things (IoT) devices.

Summary of stocks with rating changes under Daiwa's coverage

Stock	Ticker	Rating		Target price (local currency)		EPS change	
		Current	Previous	Current	Previous	2016E	2017E
TSMC	2330 TT	Buy	Outperform	165.00	155.00	12%	9%
ASE	2311 TT	Buy	Outperform	43.00	42.00	3%	0%
SPIL	2325 TT	Buy	Outperform	54.00	47.00	7%	2%
UMC	2303 TT	Buy	Underperform	16.00	11.00	30%	32%

Source: Daiwa forecasts

Daiwa's 2016 Pan-Asia tech stock picks

Stock	Ticker	Price (LC)*	Rating	PER (x)			PBR (x)			ROE (%)			EPS Growth (%)		
				2015E	2016E	2017E	2015E	2016E	2017E	2015E	2016E	2017E	2015E	2016E	2017E
Sony	6758 JP	3,091.00	Buy	21.7	16.2	13.9	1.4	1.3	1.2	7.1	8.3	9.0	nm	33.4	16.7
Disco	6146 JP	11,870.00	Buy	20.8	18.7	na	2.6	2.4	na	12.9	13.4	na	-1.8	11.3	na
SEC	005930 KS	1,269,000.00	Buy	8.8	8.5	6.9	1.0	1.0	0.9	12.4	11.7	13.0	-8.1	4.1	23.3
TSMC	2330 TT	140.50	Buy	12.0	11.7	10.0	3.0	2.6	2.2	26.6	23.5	23.4	14.8	3.1	16.2
UMC	2303 TT	12.05	Buy	12.8	11.8	9.8	0.7	0.7	0.7	5.5	6.0	7.0	-1.6	8.3	20.4
WinSemi	3105 TT	52.20	Buy	11.4	10.5	8.7	1.8	1.7	1.5	16.7	16.7	18.1	74.9	8.1	20.3
MediaTek	2454 TT	269.00	Buy	15.2	11.9	9.3	1.8	1.7	1.6	11.5	14.8	18.0	-40.0	28.1	27.0
ASE	2311 TT	36.50	Buy	15.4	13.1	10.5	1.8	1.7	1.6	12.3	13.3	15.6	-18.1	17.6	24.8
SPIL	2325 TT	45.00	Buy	13.1	12.3	10.8	2.0	1.9	1.8	16.1	17.2	18.7	-2.3	7.1	13.3
Largan	3008 TT	2,530.00	Buy	13.9	12.3	10.6	5.3	4.1	3.3	44.3	37.8	34.4	25.4	13.6	16.0
Catcher	2474 TT	317.50	Buy	9.7	8.8	7.5	2.3	2.1	1.9	25.3	25.2	26.6	41.7	9.7	17.9
AAC	2018 HK	53.55	Buy	17.8	15.1	13.1	4.8	3.9	3.2	29.8	28.5	26.8	32.0	17.8	15.3
Hon Hai	2317 TT	84.20	Buy	8.9	8.4	7.6	1.3	1.2	1.1	14.8	14.8	14.8	6.9	6.3	9.8
Pegatron	4938 TT	85.70	Buy	9.0	8.5	7.9	1.6	1.4	1.2	18.0	17.3	16.8	63.3	5.6	8.5
Murata	6981 JP	18,860.00	Outperform	17.7	16.0	na	3.1	2.7	na	18.7	17.0	na	34.8	10.2	na
Delta	2308 TT	160.00	Outperform	21.0	18.5	16.6	4.1	3.7	3.5	18.8	21.1	21.8	-10.3	13.7	11.5

Source: Daiwa forecasts, Factset

Note: *local currency; based on share price as at 4 December 2015, **March year end for Sony, Disco and Murata, 2015E=FY16E, 2016E=FY17E, 2017E=FY18E

Summary of Daiwa's investment thesis for our Pan-Asia tech picks for 2016

Stock	Ticker	Investment thesis
Sony	6758 JP	<ul style="list-style-type: none"> We see multiple themes to boost Sony's 2016 business outlook: 1) dual-camera adoption in smartphones, 2) virtual-reality headsets for gaming and networking, and 3) likely turnaround in the music market. CIS business should be the biggest growth driver with strength driven by dual-camera upgrades followed by penetration into automotive and security applications; Sony is actively expanding capacity to facilitate the robust demand, and its recent acquisition of Toshiba's CIS plant may further add to upside.
Disco	6146 JP	<ul style="list-style-type: none"> We see upside to Disco's FY15 business performance due to orders from TSMC (likely for the InFO build) happening earlier than we previously expected. Further against the backdrop of our view calling for this inventory cutbacks to end in February 2016, we expect Disco to continue its business recovery mode into FY16, riding on the next cyclical upturn.
SEC	005930 KS	<ul style="list-style-type: none"> We see a solid earnings outlook for SEC over 2015-17, driven by its technology leadership across DRAM, NAND and system LSI. These should help it to secure share and profitability in the memory market, and gain share in the logic foundry market, backed by an expanding customer base. We expect the recently announced shareholder return initiatives, such as share buybacks and 30-50% FCF returns, to be positive share-price catalysts.
TSMC	2330 TT	<ul style="list-style-type: none"> TSMC is our preferred foundry stock, owing to its dominance in advanced technologies and broad product portfolio, allowing it to secure a strong foothold in the MCD cycle and to prepare for the next IoT cycle. Apple's A9 orders are ramping up, ensuring resilience in TSMC's business amid the current inventory correction, and we are increasingly confident that it may earn the majority of the A10 allocation in 2016.
UMC	2303 TT	<ul style="list-style-type: none"> We expect UMC to reclaim its most viable second source status in the foundry industry, in light of its material breakthrough at the 28nm process, thanks to the expansion of its customer base and a product mix shift towards the HKMG process. We expect a round of upward earnings revisions by the street, which should be a positive share-price catalyst, given our view that there will be a cyclical upturn to benefit UMC in 2016.
WinSemi	3105 TT	<ul style="list-style-type: none"> While WinSemi should continue to benefit from the 4G migration trend, lifting the PA count/device in 2016, we are positive on the fast ramp-up of the WiFi upgrade cycle, which is adding to the second leg of earnings growth. Longer term, we see WinSemi as being prepared to penetrate the next wave of high-value-added businesses, namely, fibre-optics and pre-5G satellite communications.
MediaTek	2454 TT	<ul style="list-style-type: none"> We expect MTK to soon enter a new phase of its earnings growth cycle, driven by its structural gains in the 4G market, which appears to be intact. Despite its slow margin recovery due to prolonged price competition, we forecast an earnings CAGR of 27% over 2015-17, on the back of scale economies, which should average down opex. The stock is currently trading at its downcycle valuation, which doesn't seem to justify its hefty earnings growth projection for 2016-17, in our opinion.
ASE	2311 TT	<ul style="list-style-type: none"> We expect ASE to continue to gain shares in the OSAT market, thanks to its FC & bumping sales ramp-up and the recent industry consolidation, which look short-term positive though long-term negative. On top of its OSAT strength, ASE should enjoy further non-organic growth from its SiP/EMS business, thanks to new order wins from Apple, in addition to the force-touch, fingerprint and WiFi module orders. Its hybrid OSAT+SiP/EMS business should help expand ASE's TAM and weather ASE against industry volatility such as the current inventory correction.
SPIL	2325 TT	<ul style="list-style-type: none"> Revenue ramp-up on the back of advanced packaging (FC & bumping, WLP) should resume post the inventory correction, helping SPIL sustain high margins and resume earnings growth in 2016, in our opinion. SPIL's structural profitability appears to be the highest among its OSAT peers given its pure OSAT operation, and non-margin-dilutive EMS business. However, the pending issue against ASE in terms of a controlling stake could add to business uncertainties in 2016.
Largan	3008 TT	<ul style="list-style-type: none"> Largan should enjoy a favourable multi-year industry trend of continuing spec upgrades (ie, higher MPs, dual cameras and OIS), on the back of its leading position in the high-end lens segments. The stock is trading at 12x 2016E PER, the low end of its historical trading range of 10-24x. We view the risk/reward as very attractive considering the solid operating profit growth of 17% YoY that we expect for 2016.
Catcher	2474 TT	<ul style="list-style-type: none"> Steady share gains in iPhone casing order allocations should continue to drive revenue and earnings growth at Catcher. Strong iPhone seasonality in 4Q15 will be a key catalyst for the 2H15 stock performance, in our view.
AAC	2018 HK	<ul style="list-style-type: none"> We see a promising outlook for AAC, both its acoustic and non-acoustic businesses, driven by spec upgrades, increasing adoption of both these solutions, and more project wins. We expect AAC to deliver strong operating profit growth of 21% YoY in 2016 and see its current valuation of 15x 2016 PER as undemanding
Hon Hai	2317 TT	<ul style="list-style-type: none"> We like Hon Hai for its leading position in the Apple supply chain and attractive valuations, in our view; the stock is trading at just 8x 2016E PER. We expect Hon Hai's operating profit margin uptrend to continue on the back of its increased vertical integration, competitive cost structure, stable ASP and scale economies.
Pegatron	4938 TT	<ul style="list-style-type: none"> Secured position in the iPhone supply chain remains the key revenue growth driver for Pegatron. Improving operating leverage should continue to bode well for profit margins.
Murata	6981 JP	<ul style="list-style-type: none"> Murata is the world's leading maker of passive components and modules that integrate these components, including MLCC, ultra-fine inductors and SAW filters, which stand to benefit from the 4G trend, as well as automotive and other IoT devices. We see a key growth driver for Murata in the increased component count per device needed to facilitate the rise of the 4G smartphone penetration (RF inductors, SAW filters), and automobiles (MLCCs). This should drive volume gains at Murata to outgrow the industry average.
Delta	2308 TT	<ul style="list-style-type: none"> We believe Delta's operating margin improvement trend is intact due to synergies from cost controls on Eltek and product mix improvement (less PC-related). We expect Delta to recover from the lower base in 2015, with nearly all business segments expected to deliver positive YoY revenue growth in 2016. Delta is diversifying its product lines to non-PC areas and increasing exposure to industrial automation, autos and the medical sector to ensure its longer-term growth.

Source: Daiwa

Risks to our sector call

- **Prolonged inventory correction.** Should the inventory correction run for longer than expect, we would have to push out our call for a cyclical upturn in the SCM sector. This stands as the main risk to our more bullish stance on the sector.
- **4G migration saturation.** Should the 4G penetration trend in the smartphone market fail to reach the levels that we expect, there would be a downside risk to our SCM/tech revenue forecasts for 2016-17, on aggregate.
- **New catalysts too small to move the needle.** Whereas some demand verticals under the Big Data/IoT cycle may rise earlier than others, these new demand markets could turn out to be too small to benefit the entire tech sector in the initial years, with negative implications for our Big Data/ IoT demand assumptions for 2016-18.

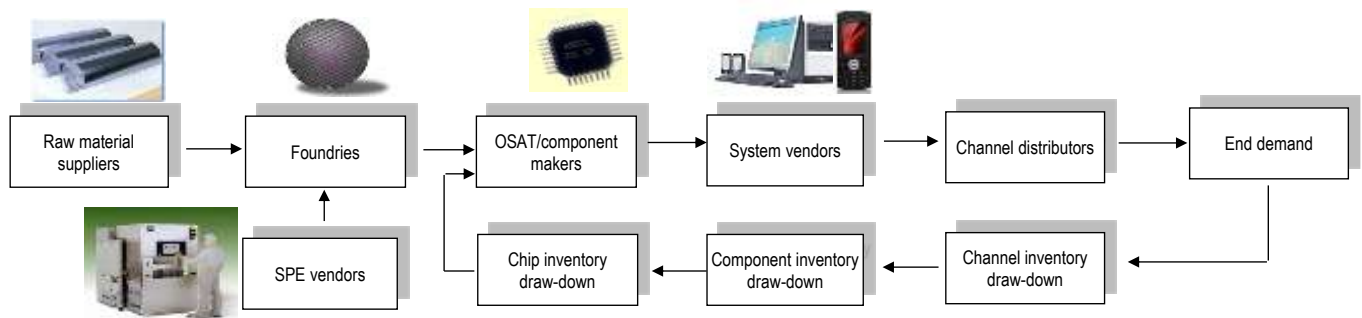
Next upturn is coming

We expect the next cyclical upturn to kick in from March 2016

Since the semiconductor (chip) industry is positioned in the upstream global tech food chain, and thus serves as an industry barometer, we monitor chip industry dynamics to gauge where we are in the industry cycle. As growth in the global chip cycle in revenue terms is seeing a structural deceleration and the SCM sector, especially the foundries, is gaining structural market share in the global chip space (see the chart below), we also use the SCM revenue cycle as a proxy to gauge where we are in the cycle.

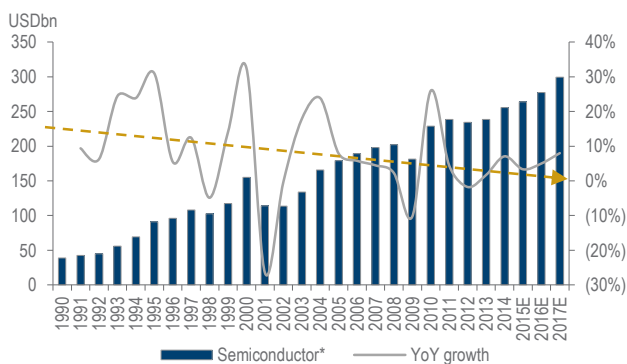
Cyclicality in the chip sector is typically caused by a supply/demand mismatch, resulting in inventory overbuilds/underbuilds. Owing to the tight foundry capacity in 2014 inflating real demand and currency volatility globally in 2015 hurting demand, the chipmakers overbuilt inventory to a level that we last saw in the Y2K bubble downturn, leading us to downgrade the chip majors on 3 June 2015. The fabless chip inventory we monitor surged to 77 days on aggregate as at end-2Q15, or 28% above the seasonal norm of around 60 days. Against the backdrop of our supply-chain-growth-differential assessments for the frontend foundries, backend OSAT and fabless players, we argued in our August report that the excess inventory this time around would take 3 quarters to digest, and that it was likely to normalise only in February 2016, followed by a new round of restocking demand from March.

Global tech food chain and inventory flows



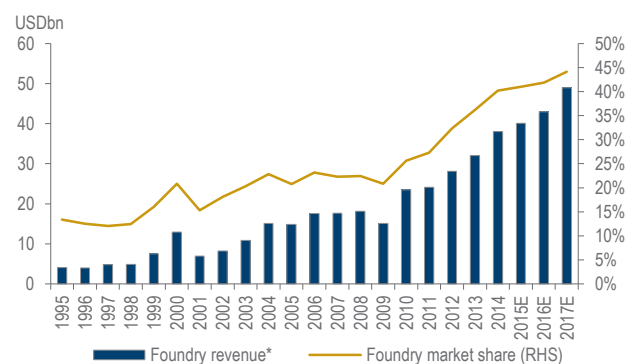
Source: Daiwa

Global semiconductor cycle trend*



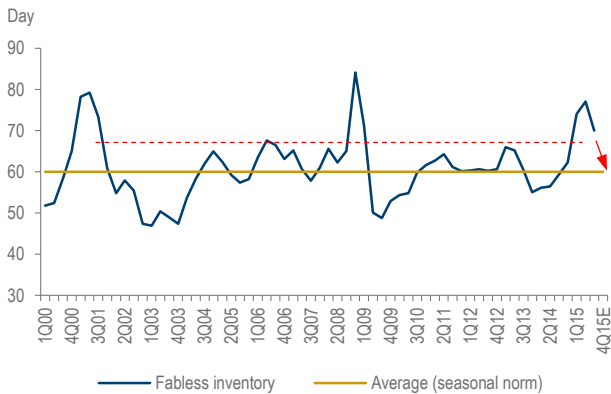
Source: WSTS, Daiwa forecasts
Note: *excluding memory devices

Global foundry revenue and market share*



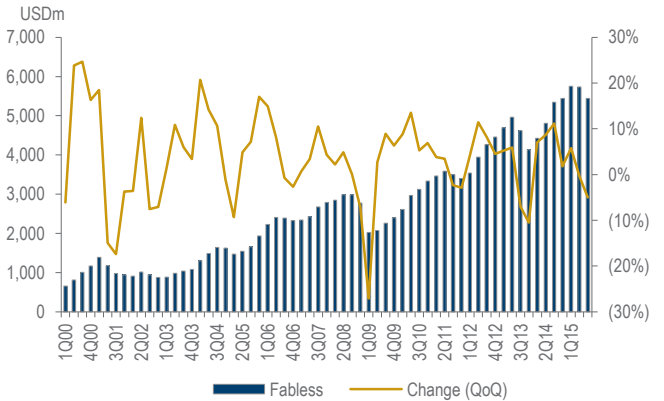
Source: WSTS, Daiwa forecasts
Note: *dedicated foundries only, excluding IDM foundries like SEC

Global fabless chip inventory*



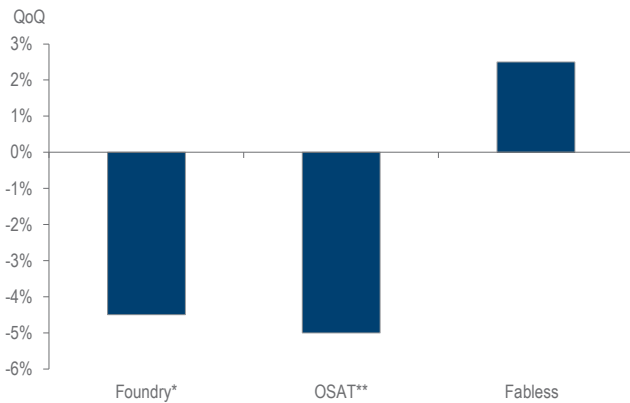
Source: Companies, Daiwa estimates
Note: *a total of 18 fabless chipmakers under monitor

Fabless chip inventory in dollar amount*



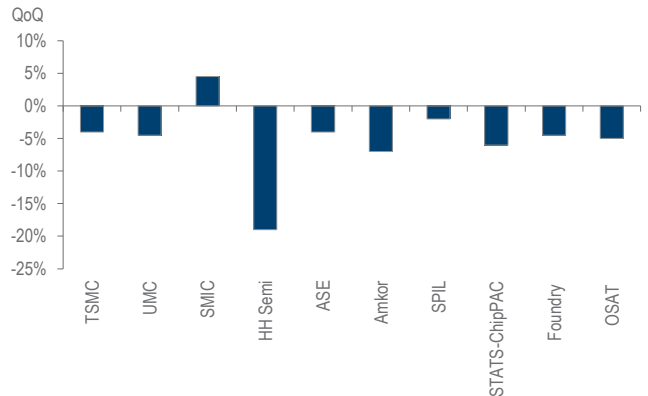
Source: Companies, Daiwa estimates
Note: *a total of 18 fabless chipmakers under monitor

Foundry/OSAT/fabless revenue growth differential in 4Q15*



Source: Companies, Daiwa estimates
Note: *foundries include TSMC, GF, UMC, and SMIC; OSAT include ASE, Amkor, SPIL and STATS-ChipPAC (JCET)

Major SCM revenue growth guidance for 4Q15*



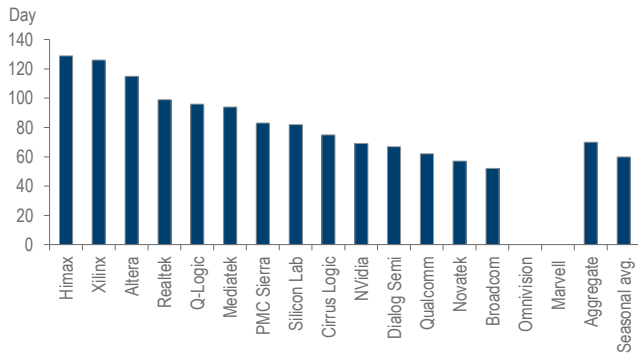
Source: Companies, Daiwa estimates
Note: *based on the mid-point of the guidance range: ASE for OSAT business only

It has been 6 months since the inventory peaked, and one encouraging sign was that, on our monitor, the chip inventory dropped by around 7 days to 70 at end-3Q15, with the dollar amount falling by 5% QoQ, on our estimates (depicted in the charts above). This appears to support our view that the inventory normalisation progress is intact. We expect inventory to drop further to 62-63 days as at end-2015, and likely to reach below the seasonal norm in 1Q16, if there are no rush orders for inventory replenishment.

Chip inventory looks to be on track to normalise in 1Q16

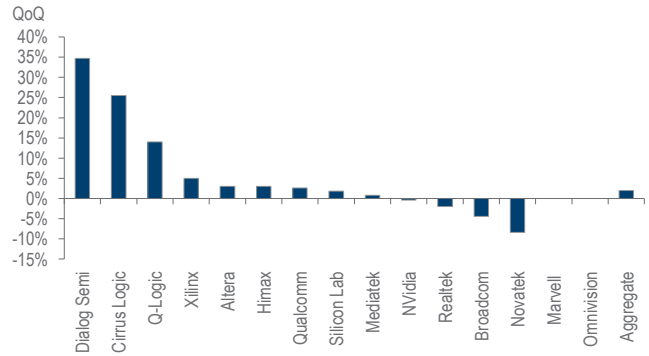
By employing our supply-chain-growth-differential assessments, also incorporating the companies' guidance, we expect the aggregate revenue for both the foundry and OSAT players to drop by some 5% QoQ each for 3Q15, and that of fabless chipmakers to grow by around 2% QoQ. Excluding factors like rising manufacturing cycle times and inventory write-offs, these growth differentials suggest that the excess chip inventory is likely to fall by a further 10-12% by end-4Q15, in terms of days, after a nice 10% digestion in 3Q15. Companies that had normalised their inventory levels as of end-3Q15 include Broadcom, Nvidia, Cirrus Logic and Dialog Semi (see Appendix 1 for details). Given that most of the fabless chipmakers have guided for a sequential rise in revenue for 4Q15, we think the excess inventory is on track to normalise in 1Q16.

Major fables inventory status as at end-September quarter*



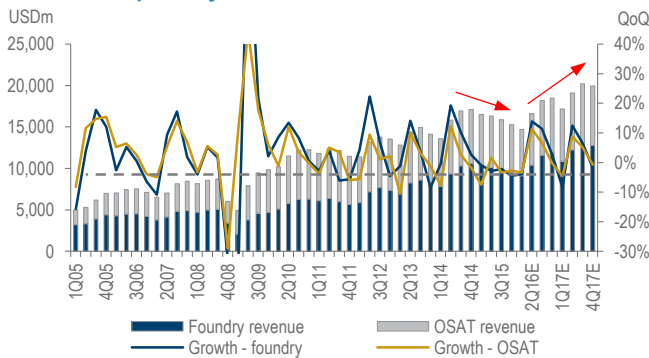
Source: Companies, Daiwa estimates
Note: *OVTi and MRVL not reported yet.

Major fables revenue growth guidance for December-quarter*



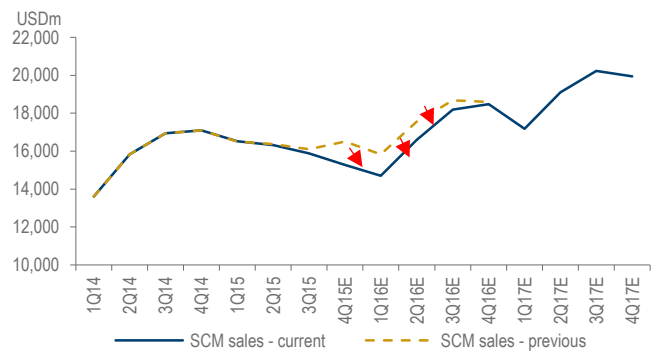
Source: Companies, Daiwa estimates
Note: *based on the mid-point of guidance range; OVTi and MRVL not reported yet

Global SCM quarterly revenue forecasts*



Source: Companies, Daiwa forecasts
Note: *dedicated foundries and OSAT makers only, excluding IDMs

SCM revenue forecast revisions



Source: Companies, Daiwa forecasts
Note: *dedicated foundries and OSAT makers only, excluding IDMs

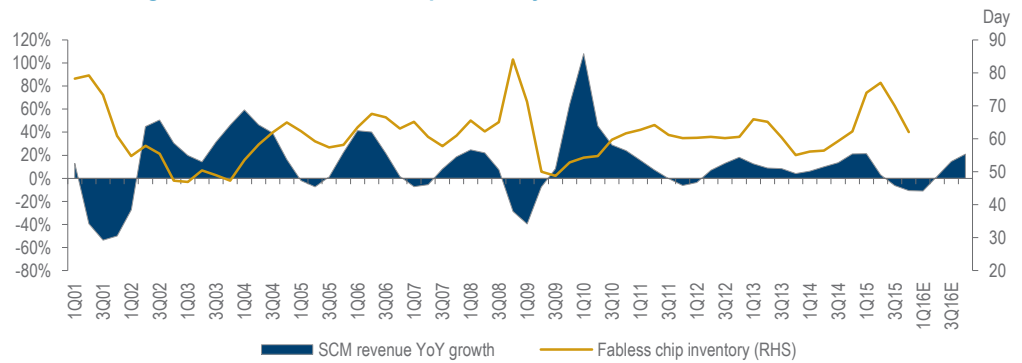
We forecast SCM revenue to grow by 6% YoY in 2016 (foundry: 7% growth, OSAT: 5%)

We stick with our view that the chip inventory will normalise in February 2016, followed by a cyclical recovery from March as the food chain starts to replenish inventory ahead of the next wave of seasonal demand. Our revised forecasts call for the SCM revenue, after seeing a 3% QoQ drop in 3Q15, to decline by 4% QoQ in both 4Q15 and 1Q16, and then start to recover in 2Q16, with 13% QoQ growth. This suggests that 1Q16 will mark the trough of this downturn, and after 6 months of inventory correction, we believe that we are not far off from such an inflection point. On an annual basis, we forecast SCM revenue to grow by 6% YoY in 2016 and 13% in 2017 (1% growth in 2015). Posting a 10% CAGR over 2015-17, the foundries should outgrow the OSAT makers, at a 7% CAGR over the same period, partially due to TSMC’s penetration of the backend space with its InFO offering.

An inverse correlation between chip inventory and the SCM revenue cycle also supports our view that the next cyclical recovery will kick in from 2Q16, as the correlation tends to imply that the SCM cycle will bottom out 1-2 quarters after the inventory peaks. **We expect the next cyclical upturn to serve as the first growth driver for tech demand across the board in 2016.**

SCM cycle tends to bottom out 1-2 quarters after the inventory peaks

SCM revenue growth trend vs. fabless chip inventory trend



Source: Companies, Daiwa forecasts

High tides lift all boats

Our preferred SPE: Disco

As high tides lift all boats, we expect the chip food-chain players to benefit from our view of that the next cyclical upturn will start soon, including for the SCM makers such as TSMC, UMC, WinSemi, ASE and SPIL. As such, we are upgrading our ratings for most of these chip majors. Semiconductor production equipment (SPE) makers that supply equipment to facilitate SCM business growth should also benefit, such as Disco, Advantest, Hitachi Hi-Tech, Tokyo Electron and Screen. Disco is the preferred stock of Toru Sugiura, our Japan tech analyst who covers these SPE names (see the company section for details of our company-specific assessments).

Our preferred SCM stocks: TSMC, UMC, ASE, SPIL

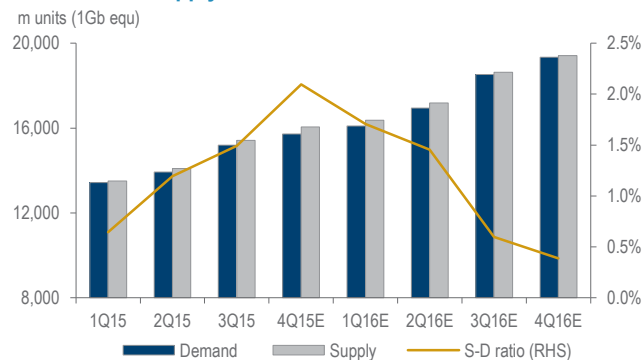
Memory comes later

Our preferred stock for memory exposure: SEC

In the memory space, we see a likely improvement in the supply/demand (S/D) imbalance, driven by technology constraints rather than any strong demand recovery, for both DRAM and NAND flash in 2H16, and that SEC should be the biggest beneficiary of this cyclical recovery in the memory space, owing to its tech leadership in both DRAM and NAND, which should be amplified when the industry migrates to 1xnm for DRAM and 3D V-NAND. According to SK Kim, our Korea tech analyst, the global DRAM market will roughly see S/D equilibrium in 2H16, due to challenges faced by SEC at the 1xnm process and by the second-tier players at the 20nm process slowing supply growth. He forecasts DRAM bit supply to grow by 21% YoY in 2016, from 23% YoY in 2015.

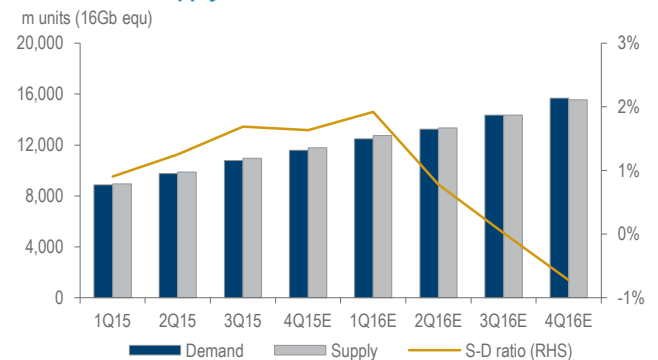
The picture looks even rosier for the NAND market, as per his forecasts, S/D sufficiency is likely to hit a balance in the middle of 2016 and reverse by the end of 2016, driven by challenges faced by the second-tier players for 3D V-NAND conversions on the supply side and rising demand for solid state drive (SSD) from enterprises and datacentres on the demand side. He forecasts NAND bit supply to grow by 35% YoY in 2016, from 42% YoY in 2015.

Global DRAM supply/demand forecasts



Source: Daiwa estimates and forecasts

Global NAND supply/demand forecasts



Source: Daiwa estimates and forecasts

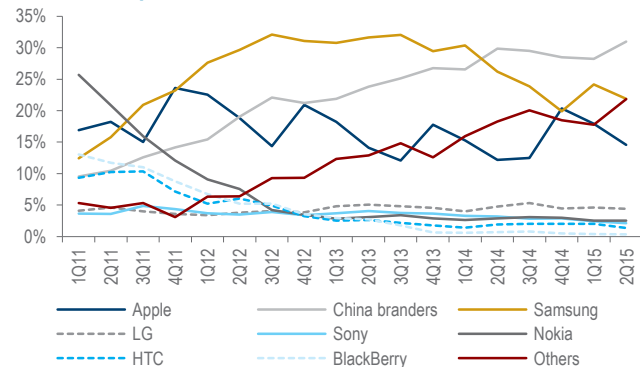
Apple supply chain still shining

We see smartphone market as consolidating into low-cost and premium segments

Based on our observations, among the smartphone brands, the winners in 2015 have been the China brands, such as Huawei and Xiaomi, and others from the emerging markets (EM) like Micromax, at the expense of SEC, Nokia, HTC and BlackBerry. Apple recovered significant market share in 4Q14, to 20%, thanks its strong iPhone 6/6+ builds, regardless of seasonal volatility. With its solid iPhone 6S/S+ builds so far, we think Apple is likely recover its market share to the 18-20% level in 4Q15. SEC, on the other hand, has continued losing share since 2H13, reaching 22% in 2Q15 (from 30%-plus).

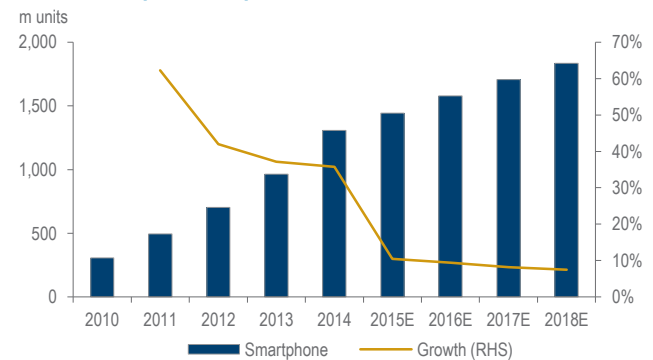
The smartphone market looks to have passed through the high-growth phase, and we forecast shipments to grow by only a low-teen percentage YoY globally for 2015, to 1.4bn units, with growth tapering off to only an 8% CAGR over 2015-18E. Accordingly, we see the smartphone market as consolidating into 2 segments: low-cost and premium.

Global smartphone market share trend



Source: Gartner "Market Share: Final PCs, Ultramobiles and Mobile Phones, All Countries, 2Q15 Update", authors include Annette Jump, Annette Zimmermann, Anshul Gupta, Atsuro Sato, Bruno Lakehal, CK Lu, David Glenn, Eileen He, Isabelle Durand, Kanae Maita, Lillian Tay, Meike Escherich, Mikako Kitagawa, Ranjit Atwal, Roberta Cozza, Tracy Tsai, Tuong Huy Nguyen, Vishal Tripathi, William Lutman, published on 14 August 2015

Global smartphone shipment forecasts



Source: IDC, Daiwa forecasts

The brands from China and the EMs should continue to lead the low-cost segment in 2016, and we see potential market-share gains for the Android-based food-chain players such as MTK, Novatek, Largan, AAC and FIH Mobile.

The Apple supply-chain players, on the other hand, have enjoyed business resilience amid this inventory correction, thanks to the new iPhone builds, and our smartphone analyst Kylie Huang expects total iPhone shipments (production basis) to expand by over 20% YoY in 2015. And she expects such strength to continue in 2016, driven by likely new form factors and upgraded component specs for the next iPhone (potentially dual cameras, 3D touch enhancements, acoustic improvements, faster CPU, etc) and a possible economy model with a 4" screen, with the goal of expanding Apple's market footprint. Asian partners should stand to benefit, including TSMC (A9/A10 and other chips), SEC (A9/A10), WinSemi (cellular/WiFi PA) and ASE (SiP modules) in the upstream segment, and Largan (lens), Catcher (casing), AAC (acoustic, haptic), Pegatron (assembly) and Hon Hai (assembly) in the downstream, with Daiwa's estimates of the related revenue contributions shown in the table on the next page.

We expect Android OS to dominate the low-cost segment and iOS to lead in the premium segment, and related food-chain players in Asia to benefit

With roughly a 45:55 split for A9 application processors (AP) between TSMC and SEC, on our estimates, both chipmakers are benefiting from the solid sell-through of the iPhone 6S/S+ and should continue to benefit from the next generation of the A10, which is likely to go into the next iPhone (ie, the iPhone 7). Further, we see a rising chance of TSMC gaining the majority of the A10 allocation, given the better performance/power proposition of its A9 variants compared with SEC's as perceived by end-users. Should Apple launch an economy-model 4" iPhone in 2016, TSMC should see further business upside. Another spec upgrade could be the adoption of dual-camera solutions for the next iPhone, which should be positive for lens suppliers like Largan and Kantasu. ASE, as a newcomer in

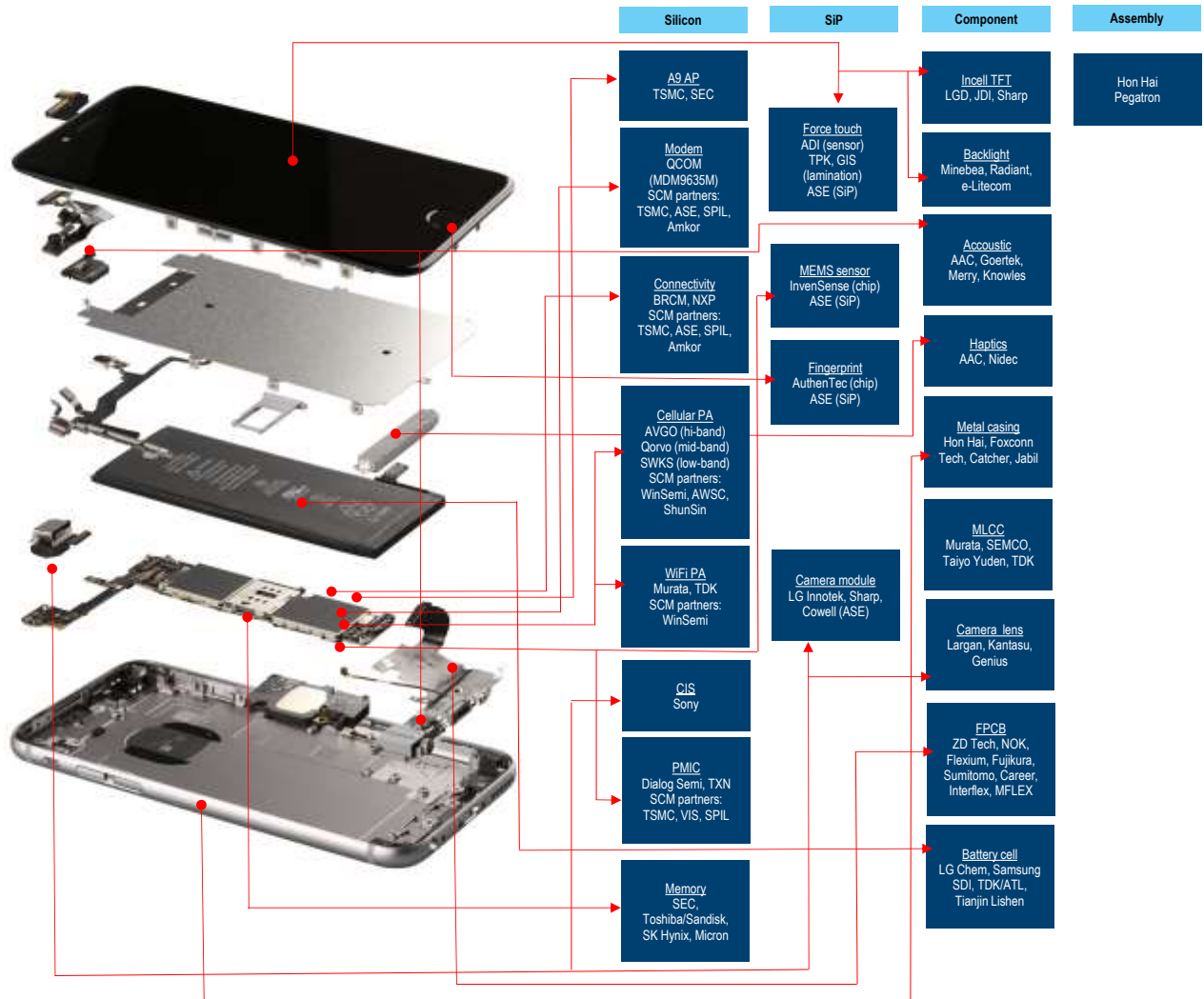
Apple's list of suppliers for camera system-in-package (SiP) modules, should also benefit. ASE currently handles SiP modules for Apple's watch, fingerprint and force-touch, on our market research.

Revenue exposure to Apple for stocks under Daiwa's coverage

Company	Ticker	Rating	Revenue contribution from Apple		
			2014E	2015E	2016E
Largan	3008 TT	Buy	40-50%	50-55%	50-60%
Catcher	2474 TT	Buy	40-45%	50-55%	55-60%
AAC	2018 HK	Buy	40-45%	50-55%	50-60%
Pegatron	4938 TT	Buy	~45%	60-65%	65-70%
Hon Hai	2317 TT	Buy	~50%	~50%	~50%
TPK	3673 TT	Outperform	~40%	40-45%	55-65%
Casetek	5264 TT	Hold	80-85%	80-85%	85-90%
WinSemi	3105 TT	Buy	30-40%	25-35%	20-30%
ASE	2311 TT	Buy	20-25%	20-25%	25-30%
TSMC	2330 TT	Buy	~10%	~10%	>10%

Source: Daiwa estimates and forecasts

iPhone 6S teardown showing key supply-chain vendors



Source: Daiwa

4G penetration continues

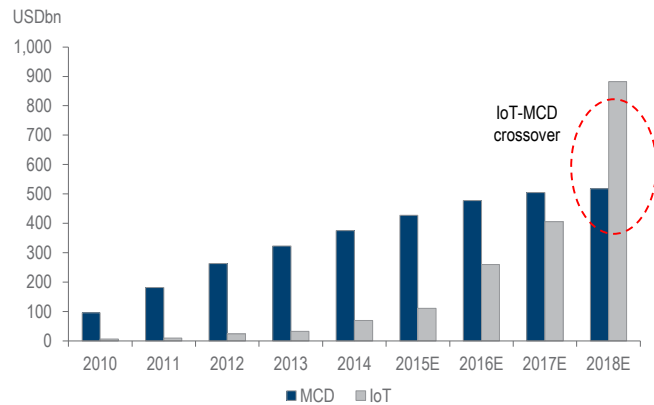
Despite growth tapering off, 4G penetration should continue to drive smartphone demand

As we flagged in our Big Data thematic report (see [Big Data: the next big thing](#)), we see 2015-16 being a transition period, whereby global IT demand shifts from mobile computing devices (MCD) to Big Data/Internet of Things (IoT). While growth in the MCD market, led by smartphones, is slowing, we expect the IoT market to deliver strong growth in 2015-18E — but it likely won't ramp up to a size large enough to bridge the revenue gap during this transition (see the IoT-MCD crossover chart below). We believe smartphones will remain the big-ticket MCD product during the transition, even with demand growth tapering off.

In this context, we believe it is important to target incremental growth across the different segments of the smartphone space, and for that reason our recommended focus is 4G. We see the ongoing migration to 4G being the key growth driver over 2016-17.

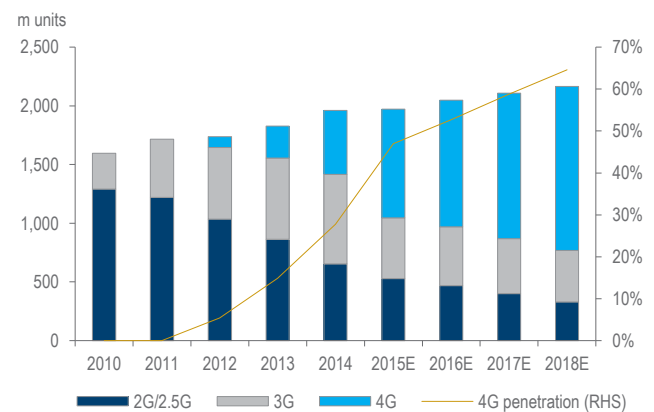
On our forecasts, global 4G penetration will rise from 28% in 2014 to over 45% in 2015 and 55% in 2016. Given that 4G penetration in China has surged over the past year and stood at 88% as of October 2015 (note: shipment base, not subscriber base), we expect the incremental ramp-up in 2016-17 to come largely from Europe, India and other emerging markets. In our view, the tech companies riding 4G migration-related trends should continue to benefit from increased silicon content/component value per box and gain market share. These trends include: 1) process tech/product-spec upgrades for the chipmakers (TSMC, SEC, ASE, SPIL, WinSemi, MTK, Novatek), and 2) process-tech/product-spec upgrades for the component makers (Sony, Largan, Catcher, AAC). SEC, however, may be a swing factor to watch on the risk front, given its insourcing strategy.

Demand transition from MCD to IoT



Source: Daiwa forecast

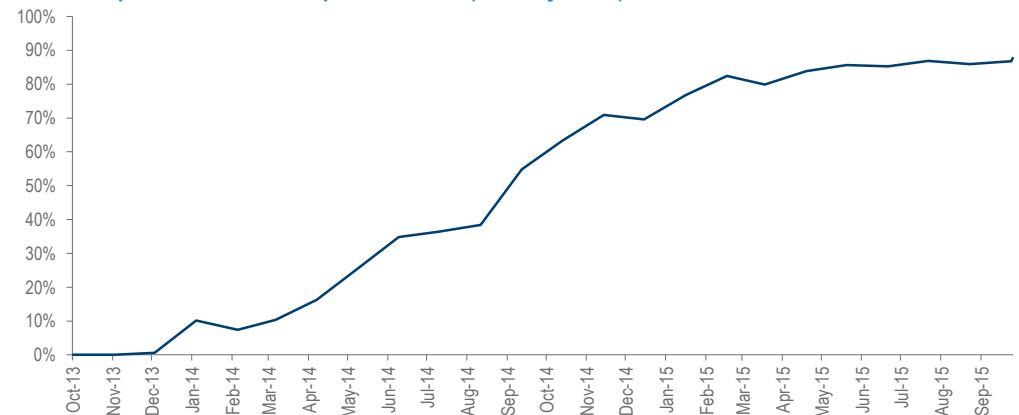
4G penetration in global mobile handset market



Source: IDC, Daiwa forecasts

4G penetration in China on shipment base rose rapidly in 2014

China: 4G penetration in smartphone market (monthly trend)



Source: China Academy of Telecommunication Research (CATR: 中國信息通信研究院)

Upstream, our focus is on AP, 14/16nm FF, InFO and WiFi upgrade

At the upstream chipmakers, the 4G migration should continue to drive process technology migration, as AP vendors like QCOM and MTK seek to optimise PPA (performance, power and silicon area), chiefly by lifting the number of process cores and reducing power leakage and chip size. We think these efforts will continue to benefit the frontend foundries (including the IDM foundries) that have the edge over their peers in commercialising cutting-edge tech nodes to meet demand.

In detail, we expect the first generation of finFET (FF) tech to replace 28nm and become the mainstream tech for advanced APs by end-2016, which should help ramp up 16nm FF at TSMC and 14nm FF at SEC. The backend OSAT makers should benefit from this continued tech migration at the front end, since more advanced packaging technologies will be needed to facilitate the more advanced APs for smaller form factors and greater degree of integration. This advanced packaging includes upgraded wafer-level chip-scale-packaging (WL-CSP), integrated fan-out (InFO) and 2.5D/3D IC packaging. Elsewhere, we expect the iPhone 6S/S+'s pioneer adoption of WiFi dual-band MIMO solutions to set a new trend in the 4G smartphone market that should benefit the PA food-chain players, including Murata and WinSemi, which provides PA foundry services for Murata.

4G migration should help price stability at fabless players on a blended basis, on both processing and resolution upgrades

Fabless chipmakers should see prices stabilise on a blended basis as a result of their rolling out new-generation APs to cope with rapid price erosion for their earlier-generation counterparts. MTK, for example, is working on its first 16nm FF version of its AP tentatively named Helio X30, which it aims to introduce at the 2016 Mobile World Congress (MWC) in Barcelona in February. We think the rise of the X30, together with MTK's current ramp-up of Helio X20 (20nm SoC), should help sustain, if not increase, MTK's 4G smartphone chipset blended ASP, which would be positive for its margin recovery story.

Elsewhere in the 4G space, QCOM plans to launch in early 2016 its first 14nm FF version of the AP, called the Snapdragon 820, which should benefit its foundry SEC, if the smartphone vendors adopt this solution in good volume. Meanwhile, as a leading supplier of smartphone display drivers (D/D), Novatek should be able to defend itself against price erosion on a blended basis, as 4G phones continue to upgrade display resolutions to HD720 (1280x720) and FHD (1920x1080), from WVGA (800x480) and HVGA (480x320).

Components upgrades are focusing on lens resolutions, dual cameras, etc

For the components makers, similar to the display-resolution upgrades in the upstream segment, we think resolution upgrades for camera-lens modules should continue to benefit the leading suppliers in the food chain, including Sony for CIS chipsets and Largan for lens modules. Meanwhile, mainstream resolutions are likely to migrate to 13MP in 2016, from 8MP in 2015. The possible adoption by the next iPhones of dual-camera modules should further add to the potential upside that we see for the food chain in 2016. Likewise, we see other spec upgrades and constant process-tech upgrades for 4G phones, such as haptics and metal casings, boding well for AAC, Nidec, and Catcher and Foxconn Tech.

New catalysts for 2016

We've argued before that, during the next Big Data/IoT cycle, demand will expand far beyond the current MCD cycle, with new verticals, in terms of product applications, covering not only consumer IoT, but smart cars, smart homes, healthcare, industrial automation and cloud computing (datacentres). However, despite the strong volume potential of the IoT cycle on the proliferation of all demand verticals, we don't expect the ramp-up across verticals to be homogeneous; some may ramp up faster than others depending on product qualifications, industry standardisation and infrastructure builds to facilitate the various ecosystems (see [This ain't a V-shaped recovery](#) for more of our analysis). Among the 5+1 demand verticals that we've identified under the Big Data/IoT cycle, we see 3 areas rising faster in terms of tech functionality: fibre optics (FO), data storage and sensors. In turn, we expect the related food-chain players to benefit from these rising demand trends.

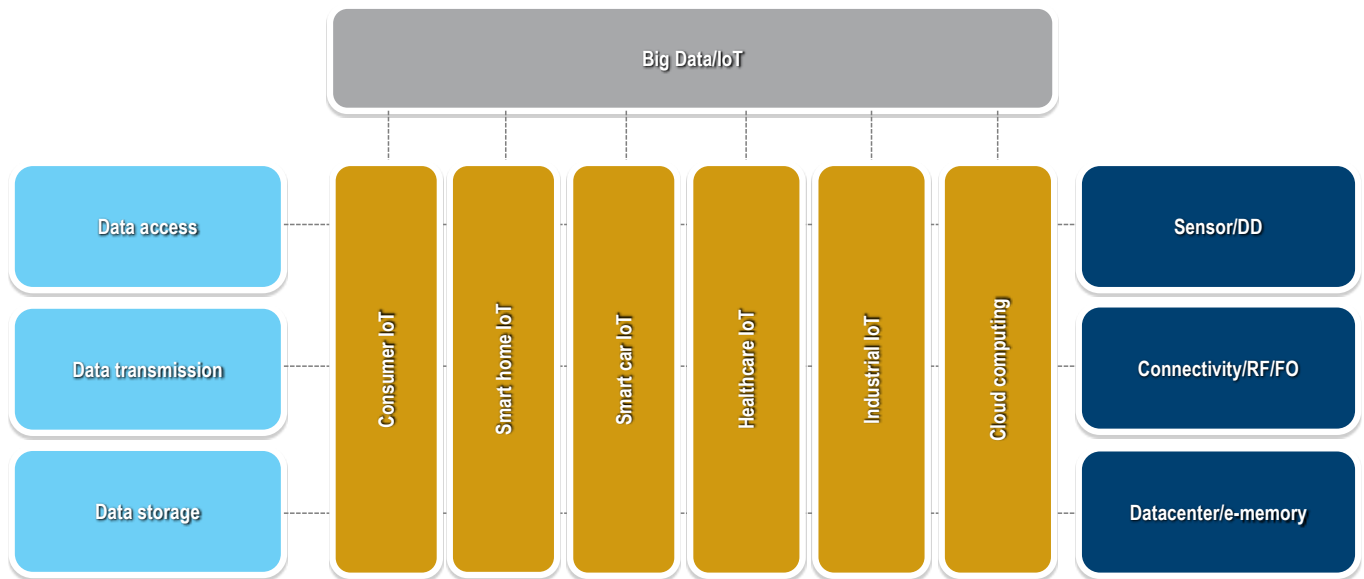
Bandwidth upgrades at the datacentres are the key drivers for the fibre optic and data storage businesses

For the fibre-optic and data storage business, we believe the key demand driver will be bandwidth upgrades at the global datacentres, driven by rising data flows from the proliferation of IoT devices. We expect high-bandwidth fibre optics to replace low-bandwidth fibre optics and copper wires to enhance datacentres connectivity. Accordingly, data storage capacity needs to be expanded too in order to accommodate the Big Data ecosystem. Potential beneficiaries include the fibre-optic and NAND-based solid-state-drive (SSD) food-chain players, in our opinion.

CIS and FP are the key focus of the sensor food chain

On the sensor front, we see broadening applications for CIS camera modules, expanding from smartphones to smart cars, medical instruments and industrial automation, as benefiting the CIS food-chain players, while the likely mushrooming fingerprint (FP) applications in smartphones and IoT devices should benefit the related food-chain players. Daiwa's tech team will closely monitor all these areas and provide detailed analysis in due course of 2016.

The Big Data/IoT matrix: demand application vs. tech functionality



Source: Daiwa

Appendices

Appendix 1: global chip inventory monitor (quarterly)

Day	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13	Mar-14	Jun-14	Sep-14	Dec-14	Mar-15	Jun-15	Sep-15
Fabless (18)												
ALTR	106	106	92	94	102	97	94	100	92	90	120	115
XLNX	115	108	99	92	99	101	118	140	129	128	129	126
BRCM	48	48	50	50	47	48	52	52	52	54	60	52
QCOM	47	53	59	51	40	41	39	44	48	63	64	62
PMC Sierra	63	60	68	77	77	74	76	75	81	84	85	83
NVDA	74	83	80	74	67	71	74	66	74	84	77	69
Cirrus Logic	84	94	139	101	64	84	96	89	53	53	64	75
MRVL	71	71	72	70	71	65	71	75	73	84	43	na
OVTi	100	132	127	116	118	106	80	93	142	146	119	na
Q-Logic	52	52	46	43	37	37	41	49	48	50	67	96
MediaTek	76	88	57	50	47	50	60	68	74	92	111	94
Realtek	67	73	76	73	66	64	60	57	72	94	103	92
Sunplus	209	115	91	78	73	95	81	81	90	110	90	94
Novatek	45	55	51	59	57	59	58	55	54	67	68	57
Himax	76	88	82	96	105	109	104	88	86	121	133	129
Siliconlab	71	84	93	74	71	70	73	68	70	77	82	82
Richtek	74	68	71	76	83	78	80	76	75	69	70	73
Dialog Semi	82	122	126	83	58	73	76	79	48	55	61	67
Fabless aggregate	61	67	66	61	55	56	57	60	62	74	77	70
IDM (16)												
Intel	81	75	76	82	75	70	72	72	75	79	85	83
AMD	61	83	86	79	80	88	88	91	82	89	96	87
Cypress	102	115	93	94	101	94	92	89	89	92	91	87
IFX	91	84	81	83	92	93	91	88	95	80	91	102
STM	88	88	88	89	89	99	98	95	95	99	95	99
Freescale	126	122	115	109	110	107	99	99	114	111	109	118
TXN	107	104	106	107	114	114	112	109	117	124	126	116
ADI	122	117	111	111	119	114	129	109	125	126	127	113
Skyworks	81	84	84	79	73	75	59	54	57	61	60	55
Agilent	117	113	120	119	123	120	118	109	101	105	100	99
NXP	101	110	103	101	97	102	96	85	82	91	89	88
Fairchild	93	84	84	87	91	86	84	90	102	98	103	119
On Semi	119	114	112	112	117	123	117	113	113	118	118	115
Avago	61	69	69	66	70	78	41	57	57	59	53	56
RFMD	73	76	75	69	71	76	70	71	73	na	na	na
TriQuint	81	86	105	100	77	124	106	97	74	na	na	na
Qorvo	na	na	na	na	na	na	na	na	na	67	82	82
Maxim	97	105	105	106	90	101	97	112	110	105	96	96
IDM aggregate	88	87	88	89	88	88	87	86	89	90	93	na
IDM aggregate ex-Intel	93	95	95	93	95	99	95	94	97	96	96	na
Total aggregate inventory	80	81	81	80	77	78	76	77	79	84	88	na
Total aggregate inventory ex-Intel	80	83	82	79	77	80	78	79	80	86	89	na

Source: Companies, Daiwa estimates

Appendix 2: global chip revenue and guidance monitor (quarterly)

USDm	Jun-14	Sep-14	Dec-14	Mar-15	Jun-15	Sep-15	Dec-qtr guidance			QoQ growth		
							mid	hi	low	mid	hi	low
Fabless (18)												
ALTR	492	500	480	435	414	400	412	412	412	3%	3%	3%
XLNX	613	604	594	567	549	528	554	565	543	5%	7%	3%
BRCM	2,041	2,260	2,143	2,058	2,096	2,187	2,090	2,226	2,024	-4%	2%	-7%
QCOM	6,243	6,692	7,099	6,894	5,832	5,456	5,600	6,000	5,200	3%	10%	-5%
PMC Sierra	127	135	137	133	125	134	na	na	na	na	na	na
NVDA	1,103	1,225	1,251	1,151	1,153	1,305	1,300	1,321	1,269	0%	2%	-2%
MRVL	962	930	857	724	711	700	na	na	na	na	na	na
OVTI	407	394	292	286	330	315	na	na	na	na	na	na
Cirrus Logic	153	210	299	255	283	307	385	400	370	26%	30%	21%
Q-Logic	119	128	140	133	113	103	118	121	115	14%	17%	11%
MediaTek	1,797	1,909	1,800	1,509	1,527	1,791	1,806	1,858	1,754	1%	4%	-2%
Realtek	268	276	246	236	232	249	244	244	244	-2%	-2%	-2%
Sunplus	80	80	71	59	75	70	67	67	67	-5%	-5%	-5%
Novatek	434	508	491	403	404	411	377	385	369	-8%	-7%	-10%
Himax	196	222	227	179	169	166	170	174	166	3%	5%	0%
Silicon Lab	155	158	162	164	165	156	159	161	156	2%	3%	0%
Richtek	98	105	99	101	101	104	90	93	88	-13%	-11%	-16%
Dialog Semi	219	281	435	311	316	330	445	460	430	35%	39%	30%
Total fabless	16,262	16,829	17,011	15,599	14,597	13,564	13,816	14,485	13,206	2%	7%	-3%
IDM (16)												
Intel	13,831	14,454	14,721	12,781	13,195	14,465	14,800	15,300	14,300	2%	6%	-1%
AMD	1,441	1,429	1,239	1,030	942	1,061	955	987	923	-10%	-7%	-13%
Cypress	184	188	184	209	485	464	445	460	430	-4%	-1%	-7%
IFX	1,522	1,612	1,409	1,671	1,745	1,758	1,652	1,687	1,617	-6%	-4%	-8%
STM	2,045	1,866	1,829	1,705	1,760	1,764	1,658	1,720	1,596	-6%	-3%	-10%
Freescall	1,191	1,213	1,103	1,169	1,198	1,120	975	1,000	950	-13%	-11%	-15%
TXN	3,292	3,501	3,269	3,150	3,232	3,429	3,200	3,330	3,070	-7%	-3%	-10%
Skyworks	587	718	806	762	810	881	928	930	925	5%	6%	5%
ADI	728	814	772	821	863	979	830	855	805	-15%	-13%	-18%
Agilent	1,766	1,805	1,026	963	1,014	1,035	1,010	1,020	1,000	-2%	-1%	-3%
NXP	1,349	1,515	1,537	1,467	1,506	1,522	1,294	1,355	1,233	-15%	-11%	-19%
Fairchild	372	381	337	356	355	342	328	335	320	-4%	-2%	-6%
On Semi	758	834	864	871	881	904	850	870	830	-6%	-4%	-8%
Maxim	642	580	567	577	583	563	505	520	490	-10%	-8%	-13%
Avago	1,269	1,590	1,635	1,614	1,735	1,840	1,768	1,793	1,743	-4%	-3%	-5%
RFMD	316	363	397	na	na	na	na	na	na	na	na	na
TriQuint	231	272	345	na	na	na	na	na	na	na	na	na
Qorvo	0	0	0	635	674	708	725	730	720	2%	3%	2%
Total IDM	31,524	33,254	32,039	29,781	30,977	28,258	27,672	28,556	26,787	na	na	na
Total sales	47,786	50,084	49,050	45,380	45,574	41,821	41,488	43,042	39,993	na	na	na
Growth (QOQ)												
Total	6%	6%	-2%	-7%	0%	na						
Fabless	3%	7%	0%	-8%	-6%	na						
IDM	8%	5%	-3%	-7%	4%	na						
Growth (YoY)												
Total	8%	9%	6%	2%	-5%	na						
Fabless	8%	9%	8%	3%	-10%	na						
IDM	9%	8%	4%	2%	-2%	na						

Source: Companies



United Microelectronics (2303 TT)

 Target price: **TWD16.00** (from TWD11.00)

 Share price (4 Dec): **TWD12.05** | Up/downside: **+32.7%**


Reclaiming its status as the most viable second source

- A likely beneficiary of the next upturn, as a high tide lifts all boats
- We see a major 28nm breakthrough adding to the upside
- Upgrading to Buy (1) with a revised TP of TWD16

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What's new: We upgrade UMC 3 notches to Buy (1) and raise our 12-month TP to TWD16 from TWD11. We believe UMC is reclaiming its most viable second-source position within the foundry industry, given our view of a 28nm breakthrough, and this should come on top of its overflow benefits from the next cyclical upturn, which we believe is not far off.

What's the impact? Overflow benefits from next upturn. Since a high tide lifts all boats, we expect UMC to benefit from the next cyclical upturn (which we expect to kick off in March 2016), on any order overflows from the sector leader, given its second-source status. While overall demand should still follow season patterns in 1Q16, we see solid loadings for its 8" wafers, likely due to demand strength for specialty tech on rising IoT demand. Moreover, we believe UMC is seeing a material breakthrough with its 28nm ramp-up, with an expanding customer base.

28nm a major breakthrough. UMC has had a bumpy 28nm ramp-up in terms of the revenue contribution since commercialising this advanced technology node in 2014, likely to due to a limited customer base. However, we expect its 28nm revenue to stabilise soon before ramping up to reach 24% of revenue in 4Q16, from 10-11% in 2H15 (see chart, page 26). According to research in the market, UMC has started commercialising this node for at least 2 new customers, bringing the total to 4 (all involved in mobile communications). We forecast the 28nm contribution in terms of the dollar amount to increase by 30% QoQ in 1Q16 to some USD150m, helping UMC cope with seasonality. And we expect the incremental increase at this node to come mostly from higher-priced HKMG, not Poly-SiON, which we think will help UMC's blended ASP.

Counter-seasonal 1Q16. Thanks to the strong 28nm ramp-up, we expect UMC to guide for a flattish 1Q16 in revenue terms, above the seasonal norm and likely outgrowing its peers in that quarter. Accordingly, we lift 2016-17E EPS by 30-32%, and expect similar moves by the market to serve as a share-price catalyst.

What we recommend: We raise our 12-month TP to TWD16, based on a revised ROE-adjusted PBR of 0.9x, up from 0.6x as a result of our forecast revisions lifting our structural ROE assumption to 6-7% pa (previous: 5-6%). Accordingly, we upgrade our rating to Buy (1), from Underperform (4). The key risks to our call: a longer-than-expected inventory correction and a slower-than-expected 28nm ramp-up by UMC.

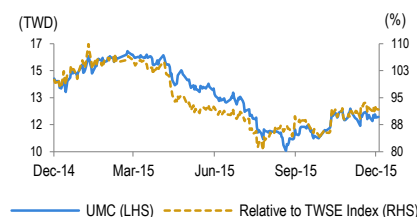
How we differ: Our 2016-17E EPS forecasts are 18-19% higher than the Bloomberg consensus, likely due to our more positive 28nm assumptions.

Forecast revisions (%)

Year to 31 Dec	15E	16E	17E
Revenue change	-	3.2	3.9
Net profit change	-	29.6	32.3
Core EPS (FD) change	-	29.6	32.3

Source: Daiwa forecasts

Share price performance



12-month range	10.05-16.05
Market cap (USDbn)	4.70
3m avg daily turnover (USDm)	13.63
Shares outstanding (m)	12,758
Major shareholder	HSUN CHIEH INVEST CO LTD (3.5%)

Financial summary (TWD)

Year to 31 Dec	15E	16E	17E
Revenue (m)	145,056	157,685	179,864
Operating profit (m)	10,993	13,067	16,361
Net profit (m)	11,976	12,976	15,622
Core EPS (fully-diluted)	0.939	1.017	1.225
EPS change (%)	(1.6)	8.3	20.4
Daiwa vs Cons. EPS (%)	2.1	19.3	17.5
PER (x)	12.8	11.8	9.8
Dividend yield (%)	4.6	4.6	4.6
DPS	0.5	0.5	0.5
PBR (x)	0.7	0.7	0.7
EV/EBITDA (x)	2.8	3.1	3.1
ROE (%)	5.5	6.0	7.0

Source: FactSet, Daiwa forecasts

Financial summary

Key assumptions

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Capacity utilisation (%)	94	79	78	82	88	89	86	89
ASP (USD)	846	858	833	785	765	758	755	744
Wafer shipment ('000)	4,523	4,206	4,306	4,997	5,577	5,888	6,471	7,515

Profit and loss (TWDm)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Foundry Revenue	120,431	105,880	115,675	116,876	129,526	141,438	156,901	178,969
New Business Revenue	0	0	0	6,936	10,486	3,619	785	895
Other Revenue	0	0	0	0	0	0	0	0
Total Revenue	120,431	105,880	115,675	123,812	140,012	145,056	157,685	179,864
Other income	0	0	0	0	0	0	0	0
COGS	(84,366)	(81,885)	(96,263)	(100,249)	(108,159)	(114,059)	(121,810)	(137,366)
SG&A	(4,857)	(4,881)	(6,120)	(7,038)	(8,112)	(7,867)	(8,617)	(9,752)
Other op.expenses	(8,579)	(8,976)	(9,787)	(12,493)	(13,664)	(12,137)	(14,192)	(16,385)
Operating profit	22,628	10,138	3,505	4,032	10,076	10,993	13,067	16,361
Net-interest inc./ (exp.)	107	36	(247)	(377)	(250)	(220)	(545)	(949)
Assoc/forex/extraord./others	2,583	1,192	4,745	10,706	3,687	2,092	2,057	2,141
Pre-tax profit	25,318	11,366	8,003	14,362	13,513	12,866	14,579	17,553
Tax	(1,419)	(756)	(2,129)	(2,257)	(2,034)	(1,452)	(2,187)	(2,633)
Min. int./pref. div./others	0	0	1,946	525	662	563	583	702
Net profit (reported)	23,899	10,610	7,819	12,630	12,141	11,976	12,976	15,622
Net profit (adjusted)	23,899	10,610	7,819	12,630	12,141	11,976	12,976	15,622
EPS (reported)(TWD)	1.912	0.845	0.619	1.010	0.972	0.939	1.017	1.225
EPS (adjusted)(TWD)	1.912	0.845	0.619	1.010	0.972	0.939	1.017	1.225
EPS (adjusted fully-diluted)(TWD)	1.884	0.836	0.616	0.995	0.954	0.939	1.017	1.225
DPS (TWD)	0.499	1.117	0.500	0.405	0.500	0.549	0.549	0.549
EBIT	22,628	10,138	3,505	4,032	10,076	10,993	13,067	16,361
EBITDA	52,816	40,646	36,851	40,231	48,330	55,578	62,139	70,444

Cash flow (TWDm)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Profit before tax	25,318	11,366	8,003	14,362	13,513	12,866	14,579	17,553
Depreciation and amortisation	30,188	30,509	33,346	36,199	38,254	44,585	49,072	54,083
Tax paid	(1,419)	(756)	(2,129)	(2,257)	(2,034)	(1,452)	(2,187)	(2,633)
Change in working capital	(1,149)	2,952	(791)	(316)	(8,043)	6,900	(11,500)	2,500
Other operational CF items	2,425	1,148	2,106	(4,516)	3,098	(957)	(1,074)	(1,039)
Cash flow from operations	55,362	45,218	40,535	43,472	44,788	61,941	48,890	70,465
Capex	(58,275)	(46,400)	(50,818)	(32,911)	(43,237)	(57,007)	(78,000)	(93,000)
Net (acquisitions)/disposals	(2,001)	(5,356)	3,313	1,477	1,423	(2,260)	0	0
Other investing CF items	10	(57)	(1,643)	(81)	(791)	0	0	0
Cash flow from investing	(60,267)	(51,814)	(49,148)	(31,516)	(42,606)	(59,267)	(78,000)	(93,000)
Change in debt	(4,412)	16,967	9,333	3,242	2,452	14,525	23,320	20,996
Net share issues/(repurchases)	0	0	0	0	0	0	0	0
Dividends paid	(6,233)	(14,034)	(6,316)	(5,061)	(6,253)	(6,999)	(6,999)	(6,999)
Other financing CF items	(4,309)	1,557	(881)	(1,795)	6,143	0	0	0
Cash flow from financing	(14,953)	4,491	2,136	(3,614)	2,342	7,526	16,321	13,997
Forex effect/others	0	0	0	0	0	0	0	0
Change in cash	(19,857)	(2,105)	(6,477)	8,342	4,524	10,200	(12,789)	(8,538)
Free cash flow	(2,913)	(1,182)	(10,283)	10,561	1,551	4,934	(29,110)	(22,535)

Source: FactSet, Daiwa forecasts

Financial summary continued ...

Balance sheet (TWDm)

As at 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Cash & short-term investment	41,119	36,650	47,580	53,598	46,953	59,413	46,624	38,085
Inventory	11,198	10,479	13,024	13,993	15,242	15,342	17,342	19,842
Accounts receivable	16,500	12,502	16,328	16,822	22,369	17,369	25,869	23,869
Other current assets	1,717	1,134	3,986	4,382	12,299	6,000	6,000	6,000
Total current assets	70,535	60,765	80,918	88,796	96,863	98,124	95,835	87,797
Fixed assets	118,352	130,951	158,854	162,353	166,690	160,656	191,147	233,930
Goodwill & intangibles	6,058	6,701	6,208	12,610	12,214	12,200	12,000	11,000
Other non-current assets	68,415	59,876	34,979	32,144	37,478	38,998	40,655	42,396
Total assets	263,361	258,293	280,959	295,903	313,246	309,978	339,637	375,123
Short-term debt	7,983	10,427	14,660	21,191	10,026	12,931	20,255	28,454
Accounts payable	5,763	3,997	6,266	7,414	6,167	8,167	7,167	10,167
Other current liabilities	25,893	17,324	19,108	19,599	31,913	21,557	23,088	25,931
Total current liabilities	39,640	31,749	40,034	48,204	48,106	42,655	50,510	64,552
Long-term debt	901	15,203	32,155	28,415	33,401	45,021	61,017	73,813
Other non-current liabilities	3,483	3,604	3,749	6,842	6,729	6,000	6,000	6,500
Total liabilities	44,024	50,556	75,938	83,462	88,237	93,677	117,527	144,866
Share capital	129,879	130,843	129,518	126,921	127,252	127,252	127,252	127,252
Reserves/R.E./others	89,458	76,894	72,932	81,200	93,907	85,763	92,154	101,003
Shareholders' equity	219,337	207,737	202,450	208,121	221,159	213,015	219,406	228,256
Minority interests	0	0	2,571	4,320	3,850	3,287	2,704	2,002
Total equity & liabilities	263,361	258,293	280,959	295,903	313,246	309,978	339,637	375,123
EV	121,499	142,714	155,540	154,061	154,058	155,560	191,086	219,918
Net debt/(cash)	(32,235)	(11,020)	(765)	(3,992)	(3,526)	(1,461)	34,648	64,182
BVPS (TWD)	16.888	15.877	15.956	16.398	17.380	16.697	17.198	17.891

Key ratios (%)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Sales (YoY)	35.9	(12.1)	9.3	7.0	13.1	3.6	8.7	14.1
EBITDA (YoY)	43.3	(23.0)	(9.3)	9.2	20.1	15.0	11.8	13.4
Operating profit (YoY)	579.1	(55.2)	(65.4)	15.1	149.9	9.1	18.9	25.2
Net profit (YoY)	516.9	(55.6)	(26.3)	61.5	(3.9)	(1.4)	8.3	20.4
Core EPS (fully-diluted) (YoY)	531.5	(55.6)	(26.3)	61.5	(4.1)	(1.6)	8.3	20.4
Gross-profit margin	29.9	22.7	16.8	19.0	22.8	21.4	22.8	23.6
EBITDA margin	43.9	38.4	31.9	32.5	34.5	38.3	39.4	39.2
Operating-profit margin	18.8	9.6	3.0	3.3	7.2	7.6	8.3	9.1
Net profit margin	19.8	10.0	6.8	10.2	8.7	8.3	8.2	8.7
ROAE	11.0	5.0	3.8	6.2	5.7	5.5	6.0	7.0
ROAA	9.3	4.1	2.9	4.4	4.0	3.8	4.0	4.4
ROCE	9.9	4.4	1.4	1.6	3.8	4.1	4.5	5.1
ROIC	12.1	4.9	1.3	1.6	4.0	4.5	4.7	5.0
Net debt to equity	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	15.8	28.1
Effective tax rate	5.6	6.7	26.6	15.7	15.0	11.3	15.0	15.0
Accounts receivable (days)	50.9	50.0	45.5	48.9	51.1	50.0	50.0	50.5
Current ratio (x)	1.8	1.9	2.0	1.8	2.0	2.3	1.9	1.4
Net interest cover (x)	n.a.	n.a.	14.2	10.7	40.3	50.0	24.0	17.2
Net dividend payout	26.1	132.3	80.8	40.1	51.5	58.4	53.9	44.8
Free cash flow yield	n.a.	n.a.	n.a.	6.9	1.0	3.2	n.a.	n.a.

Source: FactSet, Daiwa forecasts

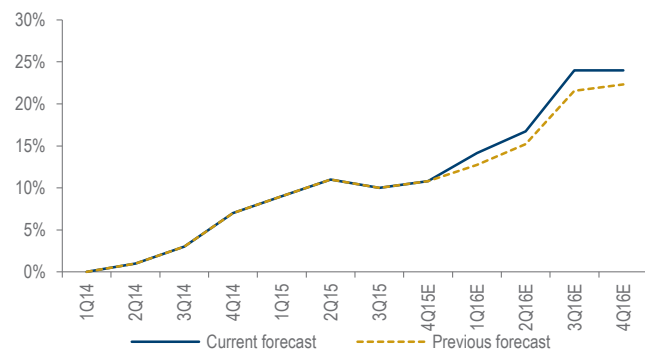
Company profile

Incorporated in Taiwan, United Microelectronics Corp (UMC) is the third-largest semiconductor foundry by revenue in the world. UMC offers a series of foundry services from masking, wafer fabrication, probing and testing. It operates wafer fabs in Taiwan, China and Singapore.

UMC: quarterly P&L

TWDM	1Q15	2Q15	3Q15	4Q15E	1Q16E	2Q16E	3Q16E	4Q16E	2014	2015E	2016E	2017E
Foundry revenue	35,999	36,523	35,078	33,838	33,726	37,829	43,520	41,826	129,526	141,438	156,901	178,969
Sub & other revenue	1,651	1,489	242	237	169	189	218	209	10,486	3,618	785	895
Total revenue	37,650	38,012	35,320	34,075	33,895	38,018	43,738	42,035	140,012	145,056	157,685	179,864
COGS	-28,495	-29,288	-28,409	-27,867	-27,339	-29,641	-32,646	-32,183	-108,159	-114,059	-121,810	-137,366
Gross profit	9,155	8,723	6,911	6,208	6,555	8,377	11,092	9,852	31,853	30,998	35,876	42,498
Opex	-5,056	-4,847	-5,126	-4,975	-4,982	-5,475	-6,298	-6,053	-21,776	-20,004	-22,808	-26,137
Operating profit	4,099	3,876	1,785	1,233	1,573	2,902	4,793	3,799	10,076	10,993	13,067	16,361
EBITDA	14,640	14,855	13,139	12,944	12,973	14,652	17,743	16,770	48,330	55,578	62,139	70,444
Non-op gain/loss	255	1,304	-394	707	210	350	785	167	3,437	1,872	1,512	1,192
Pretax profit	4,354	5,180	1,391	1,940	1,783	3,252	5,578	3,966	13,513	12,866	14,579	17,553
Income taxes	-442	-635	-84	-291	-267	-488	-837	-595	-2,034	-1,452	-2,187	-2,633
Net profit	3,980	4,600	1,708	1,688	1,587	2,895	4,965	3,530	12,141	11,976	12,976	15,622
FD O/S (m)	12,741	12,751	12,758	12,758	12,758	12,758	12,758	12,758	12,725	12,758	12,758	12,758
FD EPS (TWD)	0.31	0.36	0.13	0.13	0.12	0.23	0.39	0.28	0.95	0.94	1.02	1.22
Margin												
Gross	24%	23%	20%	18%	19%	22%	25%	23%	23%	21%	23%	24%
Operating	11%	10%	5%	4%	5%	8%	11%	9%	7%	8%	8%	9%
EBITDA	39%	39%	37%	38%	38%	39%	41%	40%	35%	38%	39%	39%
Net	11%	12%	5%	5%	5%	8%	11%	8%	9%	8%	8%	9%
Growth (QoQ)												
Foundry revenue	4%	1%	-4%	-4%	0%	12%	15%	-4%				
Sub & other revenue	-34%	-10%	-84%	-2%	-29%	12%	15%	-4%				
Total revenue	1%	1%	-7%	-4%	-1%	12%	15%	-4%				
Gross profit	-10%	-5%	-21%	-10%	6%	28%	32%	-11%				
Operating profit	-10%	-5%	-54%	-31%	28%	85%	65%	-21%				
EBITDA	1%	1%	-12%	-1%	0%	13%	21%	-5%				
Net profit	-13%	16%	-63%	-1%	-6%	82%	72%	-29%				
FD EPS	-13%	15%	-63%	-1%	-6%	82%	72%	-29%				
Growth (YoY)												
Foundry revenue	25%	12%	5%	-3%	-6%	4%	24%	24%	11%	9%	11%	14%
Sub & other revenue	-45%	-55%	-86%	-91%	-90%	-87%	-10%	-12%	51%	-65%	-78%	14%
Total revenue	19%	6%	0%	-8%	-10%	0%	24%	23%	13%	4%	9%	14%
Gross profit	55%	6%	-9%	-39%	-28%	-4%	60%	59%	35%	-3%	16%	18%
Operating profit	336%	33%	6%	-73%	-62%	-25%	169%	208%	150%	9%	19%	25%
EBITDA	43%	21%	16%	-11%	-11%	-1%	35%	30%	20%	15%	12%	13%
Net profit	237%	32%	-41%	-63%	-60%	-37%	191%	109%	-4%	-1%	8%	20%
FD EPS	236%	32%	-42%	-63%	-60%	-37%	191%	109%	-4%	-2%	8%	20%

Source: Company, Daiwa forecasts

UMC: 28nm revenue contribution forecast


Source: Company, Daiwa forecasts

UMC: PBR trend


Source: Company, TEJ, Daiwa forecasts

Taiwan Semiconductor Manufacturing (2330 TT)

 Target price: **TWD165.00** (from TWD155.00)

 Share price (4 Dec): **TWD140.50** | Up/downside: **+17.4%**

Buy
 (from Outperform)

A10 likely to add to upside potential

- We see the stock as a key beneficiary of the coming cyclical upturn
- 16nm revenue forecast to rise 4.8x YoY on diversified customer base
- Upgrading to Buy (1); with revised TP of TWD165

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What's new: We upgrade TSMC to Buy (1) from Outperform (2) and lift our TP to TWD165 (from TWD155). As the global foundry leader, TSMC stands to benefit not only from the next cyclical upturn, which we expect to start in March 2016, but from its fast 16nm ramp leveraging a diversified customer base, and the likelihood it will reclaim the majority of the allocation for Apple's A10 processor. Positive guidance given during its next results call (likely 14 January) could serve as a share-price catalyst.

What's the impact: Upturn not far off. We expect the next upturn in the SCM industry to begin in March 2016 after inventory normalisation. As a foundry leader, TSMC stands to benefit from this upturn, with restocking demand set to be spread across geometries (from 8" specialty tech to 12" cutting-edge of 16nm FF) and focus on smartphones (continued 4G penetration on Android, likely market-share gains for iOS).

Expanding 16nm addressable market. We expect the 16nm FF contribution to rise to about 10% of revenue in 4Q15, thanks to the A9 ramp-up for the iPhone 6S/S+, and reach 25% of revenue by 4Q16 due to an expanded client base (covering at least 5 new customers, with applications, including networking processors, smartphone AP, GPU and FPGA). With its 16nm revenue likely to rise 4.8x YoY to nearly USD5bn, we expect TSMC to reclaim its dominant share of the 16/14nm market in 2016, and lift its total revenue by 10% YoY to USD29bn, outgrowing the foundry average of 7% YoY, and claim around a two-thirds market share.

A10 adds to upside potential. Though subject to Apple's final decision, we see a rising possibility of TSMC reclaiming the majority of the allocation for the A10, the next-generation AP that will likely go into the next iPhones, on iPhone 6S/S+ end-user perceptions that TSMC's A9 offers a better performance/power proposition than SEC's variant. We should be able to better assess the upside potential here if Apple agrees to adopt TSMC's InFO solution (timeframe for finalisation likely by March 2016).

What we recommend: We raise our 2016-17E EPS by 9-12% and our 12-month TP to TWD165 (from TWD155), based on a revised ROE-adjusted PBR of 3.2x (previous: 3.1x) applied to our average 2015-16E BVPS. We forecast rationalised capital intensity post the smartphone high-growth cycle to lift FCF yields and add room for a cash-dividend hike. Key risks: a prolonged inventory correction and slower-than-expected 16nm ramp-up.

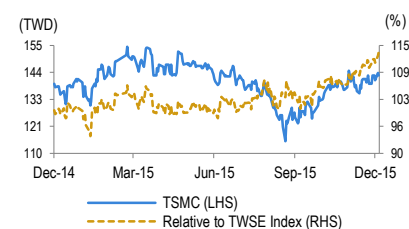
How we differ: We are 2-8% higher than the Bloomberg consensus on 2016-17E EPS, on our view of a fast 16nm FF ramp-up as a result of a likely expansion in TSMC's customer base.

Forecast revisions (%)

Year to 31 Dec	15E	16E	17E
Revenue change	-	6.3	4.6
Net profit change	-	11.9	9.2
Core EPS (FD) change	-	11.9	9.2

Source: Daiwa forecasts

Share price performance



12-month range	115.00-154.50
Market cap (USDbn)	111.44
3m avg daily turnover (USDm)	134.89
Shares outstanding (m)	25,930
Major shareholder	National Development Fund (6.4%)

Financial summary (TWD)

Year to 31 Dec	15E	16E	17E
Revenue (m)	843,503	926,753	1,066,318
Operating profit (m)	319,304	361,758	420,166
Net profit (m)	302,868	312,304	362,815
Core EPS (fully-diluted)	11.680	12.044	13.992
EPS change (%)	14.8	3.1	16.2
Daiwa vs Cons. EPS (%)	0.3	2.4	7.5
PER (x)	12.0	11.7	10.0
Dividend yield (%)	3.2	3.2	3.2
DPS	4.5	4.5	4.5
PBR (x)	3.0	2.6	2.2
EV/EBITDA (x)	6.0	5.2	4.4
ROE (%)	26.6	23.5	23.4

Source: FactSet, Daiwa forecasts

Financial summary

Key assumptions

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Wafer Shipment Utilization (%)	104.7	94.9	93.1	93.8	99.7	95.2	96.9	100.1
Blended ASP (USD)	1,090.0	1,134.6	1,204.5	1,269.4	1,340.2	1,326.2	1,297.5	1,307.2
Wafer Shipment ('000)	11,860.0	12,549.0	14,045.0	15,666.0	18,591.0	19,978.3	22,040.3	25,138.1

Profit and loss (TWDm)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Wafer Foundry Revenue	406,963	418,244	500,324	590,144	754,708	839,212	921,484	1,051,538
Sub & Other Revenue	12,574	8,836	5,924	6,880	8,099	4,291	5,269	14,780
Other Revenue	0	0	0	0	0	0	0	0
Total Revenue	419,538	427,081	506,249	597,024	762,806	843,503	926,753	1,066,318
Other income	0	0	0	0	0	0	0	0
COGS	(212,484)	(233,011)	(262,654)	(316,079)	(385,072)	(433,240)	(466,706)	(535,016)
SG&A	(18,172)	(18,682)	(22,136)	(23,398)	(25,020)	(25,816)	(27,807)	(31,161)
Other op.expenses	(29,707)	(33,830)	(40,402)	(48,118)	(56,824)	(65,144)	(70,483)	(79,974)
Operating profit	159,175	141,557	181,057	209,429	295,890	319,304	361,758	420,166
Net-interest inc./ (exp.)	1,240	852	625	(811)	(506)	592	1,442	2,296
Assoc/forex/extraord./others	9,855	2,737	(128)	6,869	6,713	28,446	4,650	4,882
Pre-tax profit	170,270	145,147	181,554	215,487	302,098	348,342	367,849	427,344
Tax	(7,988)	(10,694)	(15,590)	(27,468)	(38,317)	(45,498)	(55,177)	(64,102)
Min. int./pref. div./others	(677)	(252)	195	128	118	24	(368)	(427)
Net profit (reported)	161,605	134,201	166,159	188,147	263,899	302,868	312,304	362,815
Net profit (adjusted)	161,605	134,201	166,159	188,147	263,899	302,868	312,304	362,815
EPS (reported)(TWD)	6.238	5.179	6.410	7.257	10.178	11.680	12.044	13.992
EPS (adjusted)(TWD)	6.238	5.179	6.410	7.257	10.178	11.680	12.044	13.992
EPS (adjusted fully-diluted)(TWD)	6.238	5.178	6.409	7.256	10.177	11.680	12.044	13.992
DPS (TWD)	3.000	2.999	2.999	3.000	3.000	4.500	4.500	4.500
EBIT	159,175	141,557	181,057	209,429	295,890	319,304	361,758	420,166
EBITDA	246,986	249,240	312,407	365,612	496,143	544,681	610,568	702,575

Cash flow (TWDm)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Profit before tax	170,270	145,147	181,554	215,487	302,098	348,342	367,849	427,344
Depreciation and amortisation	87,810	107,682	131,349	156,182	200,252	225,378	248,810	282,409
Tax paid	(7,988)	(10,694)	(15,590)	(27,468)	(38,317)	(45,498)	(55,177)	(64,102)
Change in working capital	(13,810)	4,488	(20,755)	(18,393)	(64,937)	31,500	(55,000)	6,100
Other operational CF items	(6,807)	964	12,506	21,575	22,428	(3,740)	(4,320)	(4,577)
Cash flow from operations	229,476	247,587	289,064	347,384	421,524	555,981	502,162	647,175
Capex	(186,944)	(213,963)	(246,137)	(287,595)	(288,540)	(256,551)	(307,732)	(395,200)
Net (acquisitions)/disposals	(6,738)	28,244	(27,553)	5,644	4,069	70,975	(67,500)	60,000
Other investing CF items	(8,404)	3,196	494	897	2,050	0	0	0
Cash flow from investing	(202,086)	(182,523)	(273,196)	(281,054)	(282,421)	(185,576)	(375,232)	(335,200)
Change in debt	28,570	9,435	63,571	109,388	26	0	0	(103,629)
Net share issues/(repurchases)	0	0	0	0	0	0	0	0
Dividends paid	(77,708)	(77,730)	(77,749)	(77,773)	(77,786)	(116,684)	(116,685)	(116,685)
Other financing CF items	(1,640)	(1,183)	367	491	33,978	0	0	0
Cash flow from financing	(50,779)	(69,478)	(13,811)	32,106	(43,782)	(116,684)	(116,685)	(220,314)
Forex effect/others	0	0	(2,118)	850	0	0	0	0
Change in cash	(23,389)	(4,415)	(62)	99,285	95,322	253,722	10,245	91,661
Free cash flow	42,532	33,624	42,926	59,789	132,984	299,430	194,430	251,975

Source: FactSet, Daiwa forecasts

Financial summary continued ...

Balance sheet (TWDm)

As at 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Cash & short-term investment	181,574	150,622	150,918	245,343	437,006	619,752	697,497	729,158
Inventory	28,406	24,841	37,830	37,495	66,338	53,838	73,838	73,738
Accounts receivable	42,982	40,948	52,093	71,942	115,048	95,048	135,048	130,048
Other current assets	8,557	8,850	11,447	3,708	8,175	8,800	8,800	8,800
Total current assets	261,519	225,260	252,289	358,487	626,567	777,438	915,183	941,744
Fixed assets	388,444	490,375	617,529	792,666	818,199	851,306	922,669	1,049,580
Goodwill & intangibles	29,190	24,171	19,430	22,719	20,317	20,000	19,500	19,000
Other non-current assets	39,776	34,459	65,786	89,184	30,052	30,052	30,052	30,052
Total assets	718,929	774,265	955,035	1,263,055	1,495,134	1,678,796	1,887,403	2,040,375
Short-term debt	32,862	33,889	35,757	15,645	36,159	36,159	89,788	76,380
Accounts payable	12,971	11,859	15,239	16,359	23,370	22,370	27,370	28,370
Other current liabilities	77,358	71,259	91,440	157,774	141,486	145,441	153,718	163,833
Total current liabilities	123,191	117,007	142,436	189,778	201,015	203,970	270,876	268,584
Long-term debt	12,051	20,458	82,161	211,584	214,516	214,516	160,887	70,665
Other non-current liabilities	4,983	4,756	4,683	13,918	33,927	27,000	27,500	28,000
Total liabilities	140,224	142,221	229,281	415,280	449,458	445,486	459,263	367,249
Share capital	259,101	259,162	259,244	259,286	259,297	259,297	259,297	259,297
Reserves/R.E./others	315,044	370,431	463,953	588,222	786,252	973,909	1,168,372	1,412,931
Shareholders' equity	574,145	629,594	723,198	847,508	1,045,549	1,233,206	1,427,669	1,672,227
Minority interests	4,559	2,450	2,556	267	127	104	471	899
Total equity & liabilities	718,929	774,265	955,035	1,263,055	1,495,134	1,678,796	1,887,403	2,040,375
EV	3,511,063	3,549,340	3,612,721	3,625,318	3,456,961	3,274,191	3,196,813	3,061,951
Net debt/(cash)	(136,661)	(96,275)	(33,000)	(18,114)	(186,331)	(369,078)	(446,823)	(582,113)
BVPS (TWD)	22.161	24.295	27.897	32.686	40.322	47.559	55.059	64.490

Key ratios (%)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Sales (YoY)	41.9	1.8	18.5	17.9	27.8	10.6	9.9	15.1
EBITDA (YoY)	43.0	0.9	25.3	17.0	35.7	9.8	12.1	15.1
Operating profit (YoY)	73.1	(11.1)	27.9	15.7	41.3	7.9	13.3	16.1
Net profit (YoY)	81.1	(17.0)	23.8	13.2	40.3	14.8	3.1	16.2
Core EPS (fully-diluted) (YoY)	81.1	(17.0)	23.8	13.2	40.3	14.8	3.1	16.2
Gross-profit margin	49.4	45.4	48.1	47.1	49.5	48.6	49.6	49.8
EBITDA margin	58.9	58.4	61.7	61.2	65.0	64.6	65.9	65.9
Operating-profit margin	37.9	33.1	35.8	35.1	38.8	37.9	39.0	39.4
Net profit margin	38.5	31.4	32.8	31.5	34.6	35.9	33.7	34.0
ROAE	30.2	22.3	24.6	24.0	27.9	26.6	23.5	23.4
ROAA	24.6	18.0	19.2	17.0	19.1	19.1	17.5	18.5
ROCE	27.9	21.6	23.7	21.8	25.0	23.0	22.9	24.0
ROIC	39.8	26.8	26.9	24.0	30.6	32.2	33.3	34.5
Net debt to equity	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Effective tax rate	4.7	7.4	8.6	12.7	12.7	13.1	15.0	15.0
Accounts receivable (days)	34.1	35.9	33.5	37.9	44.7	45.5	45.3	45.4
Current ratio (x)	2.1	1.9	1.8	1.9	3.1	3.8	3.4	3.5
Net interest cover (x)	n.a.	n.a.	n.a.	258.3	585.1	n.a.	n.a.	n.a.
Net dividend payout	48.1	57.9	46.8	41.3	29.5	38.5	37.4	32.2
Free cash flow yield	1.2	0.9	1.2	1.6	3.7	8.2	5.3	6.9

Source: FactSet, Daiwa forecasts

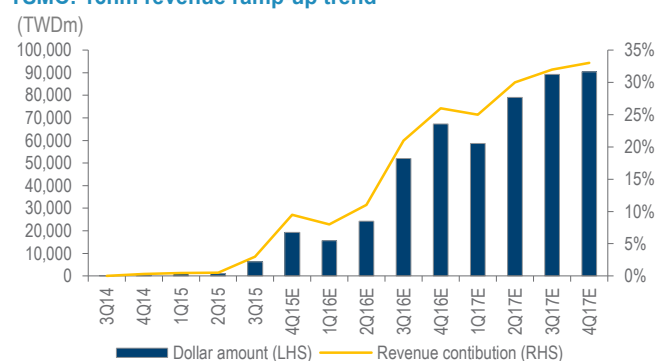
Company profile

Incorporated in Taiwan in 1987, Taiwan Semiconductor Manufacturing Co. (TSMC) is the world's largest semiconductor foundry in revenue terms. TSMC offers foundry services such as wafer masking, fabrication, probing and testing, to a high variety of customers including fabless chipmakers and IDMs. Its manufacturing fabs are located in Taiwan, China, the US and Singapore.

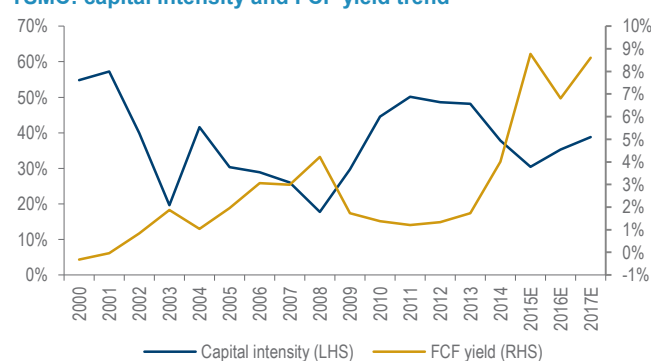
TSMC: quarterly P&L forecasts

TWDbn	1Q15	2Q15	3Q15	4Q15E	1Q16E	2Q16E	3Q16E	4Q16E	2014	2015E	2016E	2017E
Total revenue	222	205	213	204	195	221	248	262	763	844	927	1,066
COGS	-113	-106	-110	-105	-104	-113	-122	-127	-385	-433	-467	-535
Gross profit	109	100	102	99	91	107	127	135	378	410	460	531
Opex	-23	-23	-24	-22	-22	-23	-26	-27	-82	-91	-98	-111
Operating profit	87	77	78	77	69	84	101	108	296	319	362	420
EBITDA	142	132	135	136	128	145	164	173	496	545	611	703
Pretax profit	88	98	83	79	70	86	102	109	302	348	368	427
Income taxes	-9	-19	-8	-9	-11	-13	-15	-16	-38	-45	-55	-64
Net profit	79	79	75	69	60	73	87	93	264	303	312	363
FD O/S (m)	26	26	26	26	26	26	26	26	26	26	26	26
FD EPS (TWD)	3.05	3.06	2.91	2.67	2.31	2.82	3.34	3.57	10.18	11.68	12.04	13.99
Margin												
Gross	49%	49%	48%	49%	47%	49%	51%	51%	50%	49%	50%	50%
Operating	39%	38%	37%	38%	35%	39%	41%	41%	39%	38%	39%	39%
EBITDA	64%	64%	63%	67%	66%	66%	66%	66%	65%	65%	66%	66%
Net	36%	39%	35%	34%	31%	33%	35%	35%	35%	36%	34%	34%
Growth (QoQ)												
Total revenue	0%	-7%	3%	-4%	-4%	13%	13%	6%				
Gross profit	-1%	-9%	3%	-3%	-8%	18%	18%	7%				
Operating profit	-2%	-11%	2%	-1%	-11%	22%	20%	7%				
EBITDA	-2%	-7%	2%	1%	-6%	13%	13%	6%				
Net profit	-1%	1%	-5%	-8%	-13%	22%	19%	7%				
FD EPS	-1%	1%	-5%	-8%	-13%	22%	19%	7%				
Growth (YoY)												
Total revenue	50%	12%	2%	-9%	-12%	7%	17%	29%	28%	11%	10%	15%
Gross profit	55%	9%	-3%	-11%	-17%	8%	24%	37%	34%	9%	12%	15%
Operating profit	65%	9%	-7%	-12%	-20%	9%	29%	39%	41%	8%	13%	16%
EBITDA	51%	13%	-4%	-6%	-10%	10%	22%	27%	36%	10%	12%	15%
Net profit	65%	33%	-1%	-14%	-24%	-8%	15%	34%	40%	15%	3%	16%
FD EPS	65%	33%	-1%	-14%	-24%	-8%	15%	34%	40%	15%	3%	16%

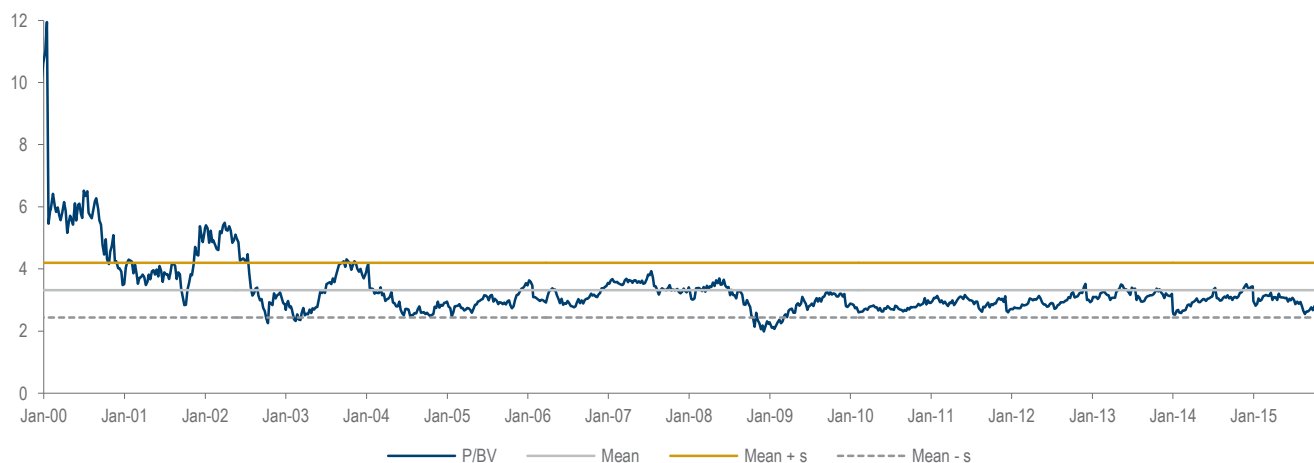
Source: Company, Daiwa forecasts

TSMC: 16nm revenue ramp-up trend


Source: Daiwa forecasts

TSMC: capital intensity and FCF yield trend


Source: Company, Daiwa forecasts

TSMC: PBR trend


Source: TEJ, Daiwa forecasts

Note: mean and standard deviation calculation period: 2000 to present

Advanced Semiconductor Engineering (2311 TT)

 Target price: **TWD43.00** (from TWD42.00)

 Share price (4 Dec): **TWD36.50** | Up/downside: **+17.8%**

Buy
 (from Outperform)

SiP/EMS adds to business upside

- An OSAT leader likely to benefit from the coming upturn
- Hybrid model should expand its share of Apple orders
- Upgrading to Buy (1), with revised TP of TWD43

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What's new: We upgrade ASE to Buy (1) from Outperform (2), and raise our TP to TWD43, on our change in stance on the global SCM sector to positive from cautious. Like TSMC in the foundry space, ASE, as the global OSAT leader, should benefit from the next cyclical upturn. Its likely share gains in Apple orders, as a result of the unique OSAT + SiP/EMS model that it operates, should add to the growth upside in 2016.

What's the impact Next upturn to drive growth. Given the back-end OSAT makers' food-chain status, which tends to move hand-in-hand with the front-end foundries, we think ASE stands to benefit from the next upturn per our industry view, though the magnitude of recovery may differ due to differing manufacturing cycle times between the front end and back end, with ASE's higher revenue exposure to Apple adding to seasonal volatility.

Expanded Apple wins should boost potential. With its unique hybrid model (OSAT + SiP/EMS), ASE has seen resilience in its business amid the inventory correction, as evidenced by its guidance for 4Q15 revenue to grow by a high-single/low-double-digit percentage QoQ, vs. a sequential decline across all SCM majors except SMIC (see chart, page 34). Thanks to this hybrid model, ASE has gained traction with Apple, according to our research in the market, securing 4 system-in-package (SiP) orders with 3 already ramping in volume: fingerprint, watch and force touch. We expect the addition of camera SiP to expand ASE's share of Apple orders in 2016.

Mid-quarter updates. We forecast ASE's 4Q15 revenue to grow by 10% QoQ (+5% YoY), with OSAT down 4% QoQ and SiP/EMS up 25% QoQ. Its sales for Oct-Nov came in at TWD54bn, reaching 67% of our 4Q15 forecast, which we see as on track to meet our expectation and guidance in terms of the monthly run rate. Recall that management has guided for ASE's 4Q15 SAT capacity to be flat QoQ, with loading down 4-6pp, and EMS capacity to be flat QoQ, with loading up by a mid-teens percentage.

What we recommend: We raise our 2016E EPS by 3% to reflect the coming cyclical upturn, and in turn raise our 12-month TP modestly to TWD43 from TWD42, based on an unchanged ROE-adjusted PBR of 1.9x. With the revisions expanding the potential upside to our TP, we upgrade our rating to Buy (1), from Outperform (2). The main risks: a prolonged inventory correction and margin execution in SiP/EMS.

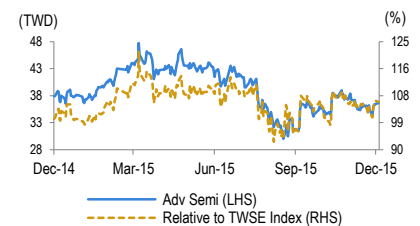
How we differ: We are ahead of the Bloomberg consensus on ASE's 2016-17E revenue, likely due to our view on the next cyclical upturn kicking off in March 2016.

Forecast revisions (%)

Year to 31 Dec	15E	16E	17E
Revenue change	-	0.3	-
Net profit change	0.1	3.3	0.2
Core EPS (FD) change	0.1	3.3	0.2

Source: Daiwa forecasts

Share price performance



12-month range	30.00-47.75
Market cap (USDbn)	9.17
3m avg daily turnover (USDm)	23.78
Shares outstanding (m)	8,220
Major shareholder	ASE Enterprises Ltd. (17.0%)

Financial summary (TWD)

Year to 31 Dec	15E	16E	17E
Revenue (m)	288,175	355,278	453,193
Operating profit (m)	23,870	27,383	34,022
Net profit (m)	19,427	22,852	28,511
Core EPS (fully-diluted)	2.363	2.780	3.469
EPS change (%)	(18.1)	17.6	24.8
Daiwa vs Cons. EPS (%)	(1.4)	(5.7)	2.4
PER (x)	15.4	13.1	10.5
Dividend yield (%)	5.4	4.7	5.2
DPS	2.0	1.7	1.9
PBR (x)	1.8	1.7	1.6
EV/EBITDA (x)	6.9	6.8	5.9
ROE (%)	12.3	13.3	15.6

Source: FactSet, Daiwa forecasts

Financial summary

Key assumptions

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Packaging Utilization Rate (%)	93.9	88.2	82.5	83.2	82.5	72.6	78.7	89.8
Testing Utilization Rate (%)	84.2	79.7	81.6	79.5	80.7	74.2	77.2	84.4
FC&bumping utilization (%)	88.4	94.3	90.4	85.3	84.8	79.6	87.0	95.4

Profit and loss (TWDm)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Packaging Revenue	101,073	102,719	104,392	112,604	121,337	115,885	129,257	151,230
Testing Revenue	21,956	21,946	22,657	24,732	25,875	24,906	27,659	32,610
Other Revenue	65,714	60,682	66,923	82,526	109,379	147,384	198,361	269,352
Total Revenue	188,743	185,347	193,972	219,862	256,591	288,175	355,278	453,193
Other income	0	0	0	0	0	0	0	0
COGS	(148,198)	(150,337)	(157,348)	(177,049)	(203,052)	(238,446)	(295,735)	(378,229)
SG&A	(10,283)	(11,070)	(10,988)	(11,700)	(13,673)	(14,519)	(17,803)	(22,814)
Other op.expenses	(6,162)	(7,118)	(7,874)	(9,069)	(10,295)	(11,340)	(14,357)	(18,128)
Operating profit	24,099	16,823	17,762	22,044	29,571	23,870	27,383	34,022
Net-interest inc./exp.)	(1,171)	(1,336)	(1,682)	(2,095)	(2,111)	(1,987)	(1,940)	(1,825)
Assoc/forex/extraord./others	(105)	1,512	511	(593)	1,013	2,855	3,484	3,894
Pre-tax profit	22,824	16,999	16,591	19,356	28,474	24,738	28,927	36,090
Tax	(3,629)	(3,018)	(3,042)	(3,202)	(4,252)	(4,483)	(5,207)	(6,496)
Min. int./pref. div./others	(857)	(253)	(458)	(466)	(629)	(829)	(868)	(1,083)
Net profit (reported)	18,337	13,727	13,092	15,689	23,593	19,427	22,852	28,511
Net profit (adjusted)	18,337	13,727	13,092	15,689	23,593	19,427	22,852	28,511
EPS (reported)(TWD)	3.105	2.082	1.758	2.089	3.069	2.363	2.780	3.469
EPS (adjusted)(TWD)	3.105	2.082	1.758	2.089	3.069	2.363	2.780	3.469
EPS (adjusted fully-diluted)(TWD)	2.384	1.783	1.724	2.023	2.887	2.363	2.780	3.469
DPS (TWD)	0.329	0.585	0.570	1.043	1.296	1.988	1.700	1.900
EBIT	24,099	16,823	17,762	22,044	29,571	23,870	27,383	34,022
EBITDA	43,953	39,767	41,176	47,515	56,881	52,979	55,610	63,240

Cash flow (TWDm)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Profit before tax	22,824	16,999	16,591	19,356	28,474	24,738	28,927	36,090
Depreciation and amortisation	19,854	22,945	23,414	25,471	27,310	29,109	28,227	29,218
Tax paid	(3,629)	(3,018)	(3,042)	(3,202)	(4,252)	(4,483)	(5,207)	(6,496)
Change in working capital	(10,713)	(7,065)	(5,705)	(4,058)	(12,542)	0	(29,000)	(12,000)
Other operational CF items	8,629	2,077	(2,241)	3,729	7,421	1,171	1,132	917
Cash flow from operations	36,965	31,937	29,018	41,296	46,411	50,536	24,079	47,729
Capex	(34,109)	(29,418)	(39,301)	(29,143)	(39,599)	(21,082)	(25,280)	(27,230)
Net (acquisitions)/disposals	(1,980)	(1,819)	(294)	(471)	1,610	(33,533)	0	0
Other investing CF items	3	(794)	(500)	(312)	(829)	0	0	0
Cash flow from investing	(36,085)	(32,031)	(40,094)	(29,926)	(38,818)	(54,615)	(25,280)	(27,230)
Change in debt	6,593	7,010	7,969	18,383	73	(2,831)	(5,537)	(4,984)
Net share issues/(repurchases)	0	0	0	3,393	0	0	0	0
Dividends paid	(1,941)	(3,858)	(4,242)	(7,835)	(9,967)	(16,344)	(13,974)	(15,618)
Other financing CF items	(4,692)	(2,034)	3,193	(551)	13,687	8,928	0	0
Cash flow from financing	(40)	1,118	6,920	13,391	3,793	(10,247)	(19,511)	(20,602)
Forex effect/others	0	0	0	0	0	0	0	0
Change in cash	840	1,024	(4,156)	24,761	11,386	(14,326)	(20,712)	(102)
Free cash flow	2,856	2,519	(10,283)	12,153	6,812	29,454	(1,201)	20,499

Source: FactSet, Daiwa forecasts

Financial summary continued ...

Balance sheet (TWDm)

As at 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Cash & short-term investment	25,095	25,268	24,436	50,168	58,217	42,368	21,656	21,554
Inventory	23,296	30,070	32,073	34,870	44,149	47,149	66,149	79,149
Accounts receivable	33,382	30,476	37,213	43,236	52,921	54,921	77,921	90,921
Other current assets	3,826	4,317	4,321	3,903	4,668	4,000	4,000	4,000
Total current assets	85,599	90,132	98,042	132,176	159,955	148,439	169,727	195,625
Fixed assets	99,854	111,779	126,150	131,497	151,587	149,869	150,304	151,777
Goodwill & intangibles	20,287	19,747	19,946	20,784	19,996	12,000	11,000	10,000
Other non-current assets	2,400	2,221	2,366	2,357	2,434	37,489	37,489	37,489
Total assets	208,140	223,878	246,504	286,814	333,971	347,796	368,519	394,891
Short-term debt	17,174	26,426	40,099	50,626	44,007	46,713	46,160	47,904
Accounts payable	24,389	21,192	24,227	28,989	35,411	40,411	53,411	67,411
Other current liabilities	18,172	19,144	20,378	21,220	31,781	26,971	29,372	31,696
Total current liabilities	59,735	66,762	84,703	100,835	111,199	114,095	128,943	147,012
Long-term debt	52,375	50,167	44,592	51,057	55,375	49,837	44,853	38,125
Other non-current liabilities	4,191	4,667	4,750	7,756	8,961	8,000	9,000	10,000
Total liabilities	116,300	121,596	134,045	159,649	175,535	171,933	182,797	195,137
Share capital	60,520	67,536	75,941	77,560	78,525	78,525	78,525	78,525
Reserves/R.E./others	28,036	33,634	33,573	45,461	71,692	88,291	97,296	110,249
Shareholders' equity	88,556	101,170	109,515	123,021	150,217	166,817	175,821	188,774
Minority interests	3,283	1,113	2,944	4,144	8,219	9,048	9,916	10,999
Total equity & liabilities	208,140	223,878	246,504	286,814	333,971	347,797	368,534	394,910
EV	347,766	352,468	363,229	355,690	349,414	363,260	379,303	375,504
Net debt/(cash)	44,453	51,325	60,254	51,516	41,165	54,182	69,357	64,475
BVPS (TWD)	11.512	14.980	14.421	15.861	18.382	20.294	21.389	22.965

Key ratios (%)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Sales (YoY)	120.0	(1.8)	4.7	13.3	16.7	12.3	23.3	27.6
EBITDA (YoY)	64.9	(9.5)	3.5	15.4	19.7	(6.9)	5.0	13.7
Operating profit (YoY)	167.3	(30.2)	5.6	24.1	34.1	(19.3)	14.7	24.2
Net profit (YoY)	171.9	(25.1)	(4.6)	19.8	50.4	(17.7)	17.6	24.8
Core EPS (fully-diluted) (YoY)	170.8	(25.2)	(3.3)	17.3	42.7	(18.1)	17.6	24.8
Gross-profit margin	21.5	18.9	18.9	19.5	20.9	17.3	16.8	16.5
EBITDA margin	23.3	21.5	21.2	21.6	22.2	18.4	15.7	14.0
Operating-profit margin	12.8	9.1	9.2	10.0	11.5	8.3	7.7	7.5
Net profit margin	9.7	7.4	6.7	7.1	9.2	6.7	6.4	6.3
ROAE	22.9	14.5	12.4	13.5	17.3	12.3	13.3	15.6
ROAA	9.9	6.4	5.6	5.9	7.6	5.7	6.4	7.5
ROCE	16.1	9.9	9.4	10.3	12.2	9.0	10.0	12.1
ROIC	16.4	9.5	8.9	10.5	13.3	9.1	9.3	10.7
Net debt to equity	50.2	50.7	55.0	41.9	27.4	32.5	39.4	34.2
Effective tax rate	15.9	17.8	18.3	16.5	14.9	18.1	18.0	18.0
Accounts receivable (days)	49.5	62.9	63.7	66.8	68.4	68.3	68.2	68.0
Current ratio (x)	1.4	1.4	1.2	1.3	1.4	1.3	1.3	1.3
Net interest cover (x)	20.6	12.6	10.6	10.5	14.0	12.0	14.1	18.6
Net dividend payout	10.6	28.1	32.4	49.9	42.2	84.1	61.1	54.8
Free cash flow yield	1.0	0.8	n.a.	4.1	2.3	9.8	n.a.	6.8

Source: FactSet, Daiwa forecasts

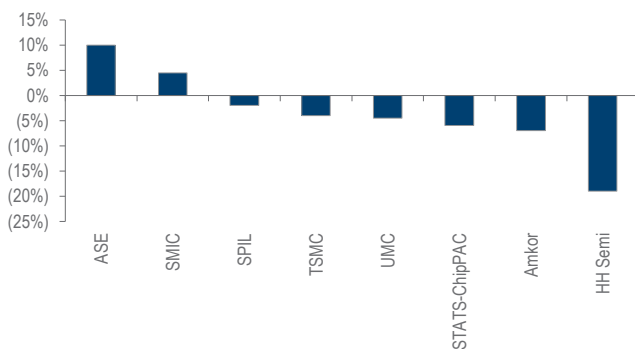
Company profile

Advanced Semiconductor Engineering (ASE) is the world's largest Outsourced Semiconductor Assembly and Test (OSAT) maker offering integrated circuit (IC) packaging and testing services with a wide range of technologies, including leadframe-based wirebonding (WB), substrate-based WB, flip-chip (FC) packaging, system in packaging (SiP) and electronics manufacturing services (EMS). Its client base overlaps to a high degree with the IC foundry companies, including the fabless chipmakers and IDMs globally.

ASE: quarterly P&L forecast

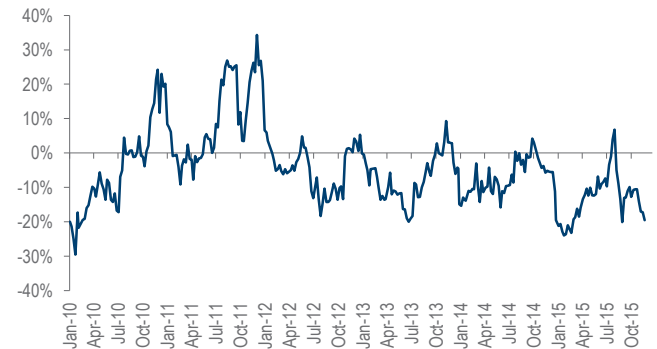
TWDM	1Q15	2Q15	3Q15	4Q15E	1Q16E	2Q16E	3Q16E	4Q16E	2014	2015E	2016E	2017E
Packaging revenue	29,321	28,618	29,575	28,370	27,695	31,838	34,960	34,763	121,337	115,885	129,257	151,230
Testing revenue	6,180	6,231	6,426	6,069	6,000	6,788	7,436	7,436	25,875	24,906	27,659	32,610
EMS & other revenue	29,161	35,373	36,869	45,981	39,009	43,225	51,934	64,192	109,380	147,384	198,361	269,352
Total revenue	64,662	70,222	72,870	80,420	72,704	81,852	94,330	106,391	256,592	288,175	355,278	453,193
COGS	-52,349	-58,657	-59,883	-67,558	-61,070	-68,337	-78,357	-87,971	-203,052	-238,446	-295,735	-378,229
Gross profit	12,313	11,565	12,987	12,863	11,634	13,514	15,973	18,421	53,541	49,729	59,542	74,964
Opex	-6,021	-6,156	-6,605	-7,077	-6,834	-7,367	-8,490	-9,469	-23,969	-25,859	-32,159	-40,942
Operating profit	6,292	5,409	6,382	5,786	4,800	6,148	7,484	8,952	29,571	23,870	27,383	34,022
EBITDA	13,685	12,769	13,683	12,842	11,828	13,176	14,650	15,956	56,881	52,979	55,610	63,240
Pretax profit	5,507	5,400	7,810	6,005	4,938	6,448	7,937	9,416	28,474	24,722	28,740	36,030
Income taxes	-856	-1,596	-1,127	-901	-889	-1,161	-1,429	-1,695	-4,252	-4,480	-5,173	-6,485
Net profit	4,469	3,651	6,368	4,924	3,901	5,094	6,270	7,438	23,593	19,413	22,704	28,464
FD O/S (m)	8,220	8,220	8,220	8,220	8,220	8,220	8,220	8,220	8,172	8,220	8,220	8,220
FD EPS (TWD)	0.54	0.44	0.77	0.60	0.47	0.62	0.76	0.90	2.89	2.36	2.76	3.46
Margin												
Gross	19%	16%	18%	16%	16%	17%	17%	17%	21%	17%	17%	17%
Operating	10%	8%	9%	7%	7%	8%	8%	8%	12%	8%	8%	8%
EBITDA	21%	18%	19%	16%	16%	16%	16%	15%	22%	18%	16%	14%
Net	7%	5%	9%	6%	5%	6%	7%	7%	9%	7%	6%	6%
Growth (QoQ)												
Packaging revenue	-8%	-2%	3%	-4%	-2%	15%	10%	-1%				
Testing revenue	-7%	1%	3%	-6%	-1%	13%	10%	0%				
EMS & other revenue	-23%	21%	4%	25%	-15%	11%	20%	24%				
Total revenue	-16%	9%	4%	10%	-10%	13%	15%	13%				
Gross profit	-25%	-6%	12%	-1%	-10%	16%	18%	15%				
Operating profit	-36%	-14%	18%	-9%	-17%	28%	22%	20%				
EBITDA	-23%	-7%	7%	-6%	-8%	11%	11%	9%				
Net profit	-43%	-18%	74%	-23%	-21%	31%	23%	19%				
FD EPS	-43%	-18%	74%	-23%	-21%	31%	23%	19%				
Growth (YoY)												
Packaging revenue	10%	-7%	-8%	-11%	-6%	11%	18%	23%	8%	-4%	12%	17%
Testing revenue	7%	-6%	-6%	-9%	-3%	9%	16%	23%	5%	-4%	11%	18%
EMS & other revenue	31%	65%	33%	21%	34%	22%	41%	40%	33%	35%	35%	36%
Total revenue	18%	20%	9%	5%	12%	17%	29%	32%	17%	12%	23%	28%
Gross profit	19%	-8%	-9%	-22%	-6%	17%	23%	43%	25%	-7%	20%	26%
Operating profit	24%	-18%	-21%	-41%	-24%	14%	17%	55%	34%	-19%	15%	24%
EBITDA	19%	-2%	-6%	-28%	-14%	3%	7%	24%	20%	-7%	5%	14%
Net profit	30%	-28%	-12%	-37%	-13%	40%	-2%	51%	50%	-18%	17%	25%
FD EPS	23%	-32%	-7%	-38%	-13%	40%	-2%	51%	43%	-18%	17%	25%

Source: Company, Daiwa forecasts

Major SCM revenue growth guidance for 4Q15*


Source: Companies, Daiwa estimates

Note: *based on the mid-point of guidance range

PBR valuation differentials: ASE vs. SPIL


Source: Companies, TEJ, Daiwa forecasts

Siliconware Precision (2325 TT)

 Target price: **TWD54.00** (from TWD47.00)

 Share price (4 Dec): **TWD45.00** | Up/downside: **+20.0%**

Buy
 (from Outperform)

Most profitable OSAT major

- Pure OSAT model looks more profitable than a hybrid one
- But concerns remain on the pending issue against ASE
- Upgrade to Buy (1) and raise TP to TWD54

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What's new: SPIL is perhaps the most profitable major in the logic OSAT space in terms of gross margin and ROE thanks to its pure OSAT model, with solid execution in advanced packaging. Although such a pure model is not as resilient in a business downturn as ASE's hybrid model, it may amplify the gross margin potential in an upturn, the next one of which we expect to kick in from 2Q16.

What's the impact: The other side of the sword at work. A pure OSAT operator such as SPIL appears to have suffered more than ASE (hybrid OSAT + SiP/EMS model) in this downturn, but should benefit more on the margin front when the next upturn comes. Despite this inventory correction hurting its top line, SPIL has delivered the highest profitability vs. other majors such as ASE, Amkor and JCET, in terms of gross margin and ROE (chart on page 38), thanks to its solid execution in advanced packaging, including the ramp-up of FC & bumping and WL-CSP. Its advanced chip-level SiP tech has been commercialised to contribute to 1-2% of revenue in 2015E, ramping up to 5% in 2016 and 13% in 2017, based on our forecasts, with applications expanding to automotive and connectivity for IoT applications (see our [Memo](#), 13 November 2015).

Mid-quarter update. SPIL expects its 4Q15 revenue to contract by 0-6% QoQ, with a gross margin of 23-25% and an operating margin of 13-15%. We believe it could meet its high-end of guidance due to rush orders from smartphone customers. Further, SPIL's 1Q16 outlook could be better than the seasonal average if holiday sell-through turns out to be promising.

Concerns remain on a pending issue. After its tender-offer execution, ASE has allegedly become the largest shareholder of SPIL with a 25% stake, despite SPIL's lawsuit against such stake claims. Now, with SPIL's failure to team up with Hon Hai, we are concerned about any interference in SPIL's controlling board in the future from ASE leading to risk-averse customers diversifying orders to peers like JCET and Amkor.

What we recommend: In light of the cyclical order recovery and expected rush-order benefits, we increase our 2015-17 EPS forecasts by 1-7%, which lifts our long-term ROE assumption to 16-18% per year and results in our higher ROE-adjusted PBR of 2.5x (previous: 2.2x). We therefore raise our 12-month TP to TWD54 (from TWD47), based on 2015-16E average book value and upgrade SPIL to Buy (1). Key risks are a prolonged inventory correction and the pending issue against ASE.

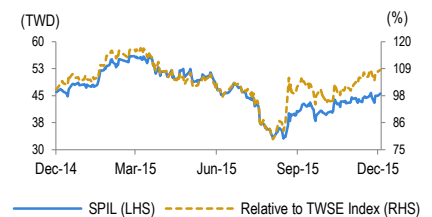
How we differ: We are above the street on our 2016-17 EPS forecasts due to our view of the next cyclical upturn and rush orders benefitting SPIL.

Forecast revisions (%)

Year to 31 Dec	15E	16E	17E
Revenue change	0.3	1.6	0.7
Net profit change	0.6	6.5	1.8
Core EPS (FD) change	0.6	6.5	1.8

Source: Daiwa forecasts

Share price performance



12-month range	33.10-56.20
Market cap (USDbn)	4.28
3m avg daily turnover (USDm)	19.37
Shares outstanding (m)	3,116
Major shareholder	ASE (23.3%)

Financial summary (TWD)

Year to 31 Dec	15E	16E	17E
Revenue (m)	81,898	90,666	104,610
Operating profit (m)	12,990	15,123	17,473
Net profit (m)	11,522	12,336	13,974
Core EPS (fully-diluted)	3.428	3.670	4.158
EPS change (%)	(2.3)	7.1	13.3
Daiwa vs Cons. EPS (%)	2.1	6.9	11.4
PER (x)	13.1	12.3	10.8
Dividend yield (%)	7.1	7.7	7.9
DPS	3.2	3.5	3.6
PBR (x)	2.0	1.9	1.8
EV/EBITDA (x)	5.3	4.8	4.2
ROE (%)	16.1	17.2	18.7

Source: FactSet, Daiwa forecasts

Financial summary

Key assumptions

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Packaging utilisation (%)	95	90	96	88	86	76	78	80
Testing utilisation (%)	78	71	78	82	82	69	66	71
FC & bumping utilisation (%)	94	94	89	81	88	74	77	82

Profit and loss (TWDm)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Wirebonding	45,504	43,642	42,809	39,886	40,233	36,489	39,976	44,708
FC & bumping	12,612	12,084	15,531	21,601	32,870	36,000	41,078	48,701
Other Revenue	5,741	5,511	6,314	7,870	9,969	9,408	9,611	11,201
Total Revenue	63,857	61,237	64,655	69,356	83,071	81,898	90,666	104,610
Other income	0	0	0	0	0	0	0	0
COGS	(54,041)	(51,746)	(52,877)	(54,926)	(62,090)	(60,990)	(67,848)	(78,512)
SG&A	(1,902)	(2,399)	(2,777)	(3,086)	(3,545)	(4,226)	(3,886)	(4,231)
Other op.expenses	(1,538)	(2,001)	(2,554)	(3,407)	(3,628)	(3,691)	(3,808)	(4,394)
Operating profit	6,376	5,090	6,446	7,937	13,808	12,990	15,123	17,473
Net-interest inc./ (exp.)	25	10	(79)	(168)	(248)	(266)	(179)	(105)
Assoc/forex/extraord./others	(12)	444	454	(313)	695	669	100	100
Pre-tax profit	6,390	5,544	6,821	7,456	14,255	13,393	15,044	17,468
Tax	(763)	(707)	(1,201)	(1,564)	(2,524)	(1,871)	(2,708)	(3,494)
Min. int./pref. div./others	0	0	0	0	0	0	0	0
Net profit (reported)	5,627	4,837	5,620	5,892	11,731	11,522	12,336	13,974
Net profit (adjusted)	5,627	4,837	5,620	5,892	11,731	11,522	12,336	13,974
EPS (reported)(TWD)	1.806	1.559	1.826	1.902	3.764	3.697	3.959	4.484
EPS (adjusted)(TWD)	1.806	1.559	1.826	1.902	3.764	3.697	3.959	4.484
EPS (adjusted fully-diluted)(TWD)	1.806	1.552	1.803	1.891	3.510	3.428	3.670	4.158
DPS (TWD)	2.580	1.627	1.420	1.659	1.800	3.217	3.451	3.559
EBIT	6,376	5,090	6,446	7,937	13,808	12,990	15,123	17,473
EBITDA	15,290	14,736	16,546	18,971	26,243	26,627	29,234	32,133

Cash flow (TWDm)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Profit before tax	6,390	5,544	6,821	7,456	14,255	13,393	15,044	17,468
Depreciation and amortisation	8,913	9,646	10,100	11,033	12,435	13,637	14,111	14,660
Tax paid	(763)	(707)	(1,201)	(1,564)	(2,524)	(1,871)	(2,708)	(3,494)
Change in working capital	487	(1,943)	(2,372)	(2,290)	(2,441)	2,500	(5,200)	250
Other operational CF items	(620)	495	19	3,113	3,220	0	0	0
Cash flow from operations	14,407	13,035	13,366	17,748	24,945	27,659	21,247	28,884
Capex	(15,321)	(10,982)	(15,142)	(14,979)	(19,561)	(14,789)	(13,106)	(12,106)
Net (acquisitions)/disposals	(1,287)	(537)	(374)	(28)	611	0	0	0
Other investing CF items	525	(385)	(356)	(582)	(293)	0	0	0
Cash flow from investing	(16,083)	(11,903)	(15,872)	(15,588)	(19,243)	(14,789)	(13,106)	(12,106)
Change in debt	5,604	5,217	6,609	3,388	13,500	(6,970)	(6,167)	(4,425)
Net share issues/(repurchases)	0	0	0	0	0	0	0	0
Dividends paid	(8,040)	(5,048)	(4,371)	(5,141)	(5,609)	(10,026)	(10,755)	(11,091)
Other financing CF items	16	(877)	185	715	(413)	0	0	0
Cash flow from financing	(2,420)	(709)	2,423	(1,037)	7,477	(16,996)	(16,923)	(15,516)
Forex effect/others	0	0	0	0	0	0	0	0
Change in cash	(4,096)	423	(84)	1,123	13,180	(4,126)	(8,782)	1,262
Free cash flow	(915)	2,053	(1,776)	2,769	5,384	12,870	8,141	16,778

Source: FactSet, Daiwa forecasts

Financial summary continued ...

Balance sheet (TWDm)

As at 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Cash & short-term investment	15,519	15,941	15,858	16,975	30,155	26,029	17,247	18,509
Inventory	3,516	3,985	3,135	3,668	4,381	3,681	5,181	5,131
Accounts receivable	9,722	10,254	12,920	15,371	18,578	15,078	22,078	21,078
Other current assets	2,436	1,472	1,871	1,811	2,094	2,000	2,000	2,000
Total current assets	31,192	31,652	33,784	37,825	55,208	46,788	46,506	46,718
Fixed assets	42,927	44,145	49,889	55,197	63,521	60,971	62,593	62,248
Goodwill & intangibles	0	0	0	355	249	200	180	150
Other non-current assets	8,438	7,895	7,548	8,432	10,774	10,576	10,076	10,076
Total assets	82,557	83,691	91,221	101,810	129,752	118,535	119,355	119,192
Short-term debt	1,461	1,514	5,617	5,688	9,660	8,858	7,115	5,573
Accounts payable	7,346	6,404	5,848	6,542	8,021	6,321	9,621	8,821
Other current liabilities	7,736	6,965	7,513	10,300	13,895	13,551	16,269	18,541
Total current liabilities	16,544	14,882	18,978	22,530	31,576	28,729	33,005	32,936
Long-term debt	4,368	9,532	12,038	15,356	24,670	17,699	11,532	7,107
Other non-current liabilities	349	481	496	1,454	1,394	1,500	2,000	2,700
Total liabilities	21,261	24,896	31,513	39,340	57,639	47,929	46,537	42,743
Share capital	31,164	31,164	31,164	31,164	31,164	31,164	31,164	31,164
Reserves/R.E./others	30,133	27,631	28,545	31,306	40,949	39,442	41,653	45,285
Shareholders' equity	61,296	58,795	59,708	62,470	72,112	70,606	72,818	76,450
Minority interests	0	0	0	0	0	0	0	0
Total equity & liabilities	82,557	83,691	91,221	101,810	129,752	118,535	119,355	119,192
EV	130,547	135,341	142,034	144,305	144,411	140,765	141,636	134,408
Net debt/(cash)	(9,689)	(4,895)	1,797	4,069	4,175	528	1,400	(5,829)
BVPS (TWD)	19.669	18.867	19.160	20.046	23.140	22.657	23.366	24.532

Key ratios (%)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Sales (YoY)	7.7	(4.1)	5.6	7.3	19.8	(1.4)	10.7	15.4
EBITDA (YoY)	(10.6)	(3.6)	12.3	14.7	38.3	1.5	9.8	9.9
Operating profit (YoY)	(21.7)	(20.2)	26.6	23.1	74.0	(5.9)	16.4	15.5
Net profit (YoY)	(36.0)	(14.0)	16.2	4.9	99.1	(1.8)	7.1	13.3
Core EPS (fully-diluted) (YoY)	(36.0)	(14.0)	16.2	4.9	85.7	(2.3)	7.1	13.3
Gross-profit margin	15.4	15.5	18.2	20.8	25.3	25.5	25.2	24.9
EBITDA margin	23.9	24.1	25.6	27.4	31.6	32.5	32.2	30.7
Operating-profit margin	10.0	8.3	10.0	11.4	16.6	15.9	16.7	16.7
Net profit margin	8.8	7.9	8.7	8.5	14.1	14.1	13.6	13.4
ROAE	9.0	8.1	9.5	9.6	17.4	16.1	17.2	18.7
ROAA	7.0	5.8	6.4	6.1	10.1	9.3	10.4	11.7
ROCE	9.8	7.4	8.8	9.9	14.5	12.8	16.0	19.4
ROIC	11.8	8.4	9.2	9.8	15.9	15.2	17.1	19.3
Net debt to equity	n.a.	n.a.	3.0	6.5	5.8	0.7	1.9	n.a.
Effective tax rate	11.9	12.7	17.6	21.0	17.7	14.0	18.0	20.0
Accounts receivable (days)	60.2	59.5	65.4	74.4	74.6	75.0	74.8	75.3
Current ratio (x)	1.9	2.1	1.8	1.7	1.7	1.6	1.4	1.4
Net interest cover (x)	n.a.	n.a.	81.6	47.2	55.8	48.8	84.5	166.4
Net dividend payout	142.9	104.4	77.8	87.2	47.8	87.0	87.2	79.4
Free cash flow yield	n.a.	1.5	n.a.	2.0	3.8	9.2	5.8	12.0

Source: FactSet, Daiwa forecasts

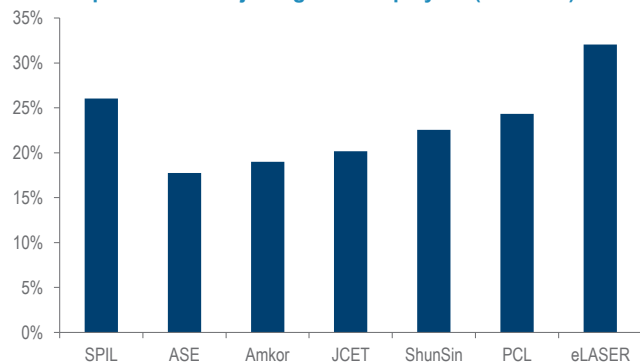
Company profile

Siliconware Precision Industrial Co. Ltd. (SPIL) is a dedicated outsourced semiconductor, assembly and test (OSAT) player offering chip packaging, testing and wafer bumping services to global customers, including fabless chipmakers and IDMs. Ranked No. 3 in the world in terms of revenue, SPIL operates in Taiwan and China. In Taiwan, it enjoys a geographic advantage from support from the semiconductor supply-chain ecosystem.

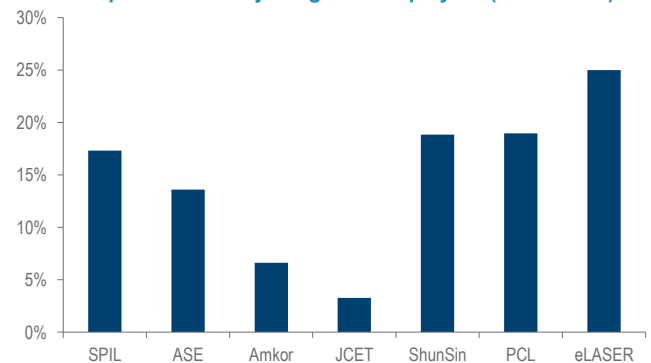
SPII: quarterly P&L forecasts

TWDM	1Q15	2Q15	3Q15	4Q15E	1Q16E	2Q16E	3Q16E	4Q16E	2014	2015E	2016E	2017E
Wirebonding revenue	9,362	9,133	9,014	8,981	8,623	9,910	10,781	10,662	40,233	36,489	39,976	44,708
FC & bumping revenue	8,946	9,558	8,813	8,683	8,673	9,997	11,058	11,350	32,870	36,000	41,078	48,701
Testing revenue & others	2,497	2,549	2,203	2,159	2,087	2,408	2,566	2,550	9,969	9,408	9,611	11,201
Total revenue	20,805	21,240	20,030	19,823	19,383	22,315	24,405	24,563	83,071	81,898	90,666	104,610
COGS	-15,359	-15,459	-15,083	-15,089	-14,976	-16,747	-18,020	-18,104	-62,090	-60,990	-67,848	-78,512
Gross profit	5,446	5,781	4,947	4,734	4,407	5,567	6,385	6,459	20,981	20,908	22,818	26,098
Opex	-1,977	-2,185	-2,011	-1,744	-1,686	-1,919	-2,050	-2,039	-7,173	-7,918	-7,694	-8,625
Operating profit	3,469	3,596	2,936	2,989	2,720	3,648	4,335	4,420	13,808	12,990	15,123	17,473
EBITDA	6,838	6,992	6,316	6,482	6,208	7,170	7,890	7,966	26,243	26,627	29,234	32,133
Pretax profit	3,014	4,332	3,058	2,989	2,705	3,628	4,315	4,396	14,255	13,393	15,044	17,468
Income taxes	-400	-655	-368	-448	-487	-653	-777	-791	-2,524	-1,871	-2,708	-3,494
Net profit	2,615	3,677	2,689	2,541	2,218	2,975	3,538	3,605	11,731	11,522	12,336	13,974
FD O/S (m)	3,342	3,342	3,361	3,361	3,361	3,361	3,361	3,361	3,342	3,361	3,361	3,361
FD EPS (TWD)	0.78	1.10	0.80	0.76	0.66	0.89	1.05	1.07	3.51	3.43	3.67	4.16
Margin												
Gross	26%	27%	25%	24%	23%	25%	26%	26%	25%	26%	25%	25%
Operating	17%	17%	15%	15%	14%	16%	18%	18%	17%	16%	17%	17%
EBITDA	33%	33%	32%	33%	32%	32%	32%	32%	32%	33%	32%	31%
Net	13%	17%	13%	13%	11%	13%	14%	15%	14%	14%	14%	13%
Growth (QoQ)												
WB revenue	-9%	-2%	-1%	0%	-4%	15%	9%	-1%				
FC revenue	4%	7%	-8%	-1%	0%	15%	11%	3%				
Test revenue	-3%	2%	-14%	-2%	-3%	15%	7%	-1%				
Total revenue	-3%	2%	-6%	-1%	-2%	15%	9%	1%				
Gross profit	-6%	6%	-14%	-4%	-7%	26%	15%	1%				
Operating profit	-10%	4%	-18%	2%	-9%	34%	19%	2%				
EBITDA	-4%	2%	-10%	3%	-4%	15%	10%	1%				
Net profit	-13%	41%	-27%	-6%	-13%	34%	19%	2%				
FD EPS	-13%	41%	-27%	-6%	-13%	34%	19%	2%				
Growth (YoY)												
WB revenue	4%	-11%	-15%	-13%	-8%	9%	20%	19%	1%	-9%	10%	12%
FC revenue	30%	6%	4%	1%	-3%	5%	25%	31%	52%	10%	14%	19%
Test revenue	15%	-3%	-15%	-16%	-16%	-6%	16%	18%	27%	-6%	2%	17%
Total revenue	15%	-3%	-7%	-8%	-7%	5%	22%	24%	20%	-1%	11%	15%
Gross profit	36%	2%	-11%	-18%	-19%	-4%	29%	36%	45%	0%	9%	14%
Operating profit	45%	-9%	-19%	-22%	-22%	1%	48%	48%	74%	-6%	16%	16%
EBITDA	28%	0%	-7%	-9%	-9%	3%	25%	23%	38%	1%	10%	10%
Net profit	25%	9%	-17%	-16%	-15%	-19%	32%	42%	99%	-2%	7%	13%
FD EPS	17%	2%	-23%	-16%	-16%	-20%	32%	42%	86%	-2%	7%	13%

Source: Company, Daiwa forecasts

GM comparison for major logic OSAT players (1Q-3Q15)


Source: Companies

ROE comparison for major logic OSAT players (4Q14-3Q15)


Source: Companies

Sony (6758 JP)

 Target price: **JPY4,600** (as of 11 Nov)

 Share price (4 Dec): **JPY3,091** | Up/downside: **+48.8%**
Buy
 (not reviewed)

Focus on dual camera, automotive applications for CIS

- Plenty of themes for 2016: dual cameras, VR, music business
- Looking for capacity additions, broader applications for CIS
- We rate Sony Buy (1) with a 12-month target price of JPY4,600

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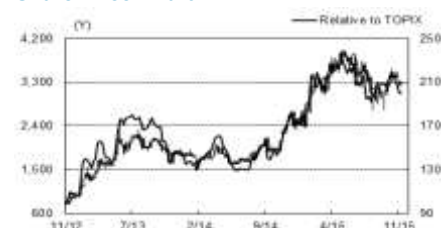

What's new: We have taken another look at the key points we see for Sony in 2016.

Details: For 2016, our focus is on: 1) the uptake of dual cameras in the smartphone market, 2) a potential boost from a new virtual reality headset in the strong game & network services segment, and 3) the possibility of a turnaround in the music market after a prolonged period of contraction (see our 16 October 2015 report titled "Focus on dual cameras, *Playstation VR*, music ops"). **Dual cameras could support higher unit sales for CMOS image sensors (CIS) and offer the potential for new earnings opportunities for camera modules (needed for accurate linking of two sensors).** While Sony plans to ramp up its CIS production capacity to 87,000 wafers per month (300mm wafer basis) by September 2016, it also reached a basic agreement with Toshiba in October to acquire the latter's CIS plant in Oita Prefecture, Japan. The acquisition, which is expected to add around 15,000 wafers to monthly CIS production capacity, has the potential to fuel further earnings growth in Sony's CIS business for a number of reasons. First is the possibility that Toshiba will outsource production of the semiconductor products that it has made at the plant to Sony following the transfer. In addition, extra capacity is likely to be funneled towards production of the pixel and circuit sections of the CIS. **There is also the potential for a broader range of applications beyond smartphones, including automotive and security applications.**

Outlook: For 2015, we forecast operating profit of JPY390bn, well above the company's target of JPY320bn. We see strong growth in 2016 as well, anticipating a 33% YoY gain in operating profit to JPY520bn. Profit growth should be driven by higher CIS unit sales, increased earnings in the games & network services segment, and smaller losses in the mobile communications segment. Our forecasts assume JPY120/\$ and JPY130/€ from 2Q15.

What we recommend: We assign Sony a 1 (Buy) rating. We set a 12-month target price of JPY4,600 using our SOTP approach based on our FY16 earnings forecast. Overall earnings would be hurt if the dollar appreciates and the euro/emerging economy currencies depreciate against the yen. For the devices segment, we see potential risks in slowing sales of smartphones by major CIS customers.

Share Price Chart



Source: Compiled by Daiwa.

Market Data

12-month range (Y)	2,315-3,970
Market cap (Y mn; 4 Dec)	3,898,344
Shares outstanding (000; 11/15)	1,261,192
Foreign ownership (%; 3/15)	56.6

Investment Indicators

	3/15	3/16 E	3/17 E
P/E (X)	NA	21.7	16.2
EV/EBITDA (X)	7.0	3.5	2.8
P/B (X)	1.56	1.40	1.30
Dividend yield (%)	Nil	0.81	0.81
ROE (%)	NA	7.1	8.3
Net debt/equity (X)	-0.4	-0.4	-0.4

Income Summary

(SEC; Y mn)	3/15	3/16 E	3/17 E
Sales	8,215,880	8,058,000	8,030,000
Op profit	68,548	390,000	520,000
Pretax income	39,729	410,000	508,000
Net income	-125,980	180,000	240,000
EPS (Y)	-113.0	142.7	190.3
DPS (Y)	0.00	25.00	25.00

See end of report for notes concerning indicators.

Sony (6758): income summary (SEC; JPY mn; YoY %)

Year to	Sales		Op profit		Pretax income		Net income		EPS (Y)	DPS (Y)
3/13	6,795,504	(5)	226,503	(profit)	242,084	(profit)	41,540	(profit)	41.3	25.00
3/14	7,767,266	(14)	26,495	(-88)	25,741	(-89)	-128,369	(loss)	-125.0	25.00
3/15	8,215,880	(6)	68,548	(159)	39,729	(54)	-125,980	(loss)	-113.0	0.00
3/16 E	8,058,000	(-2)	390,000	(469)	410,000	(932)	180,000	(profit)	142.7	25.00
3/17 E	8,030,000	(-0)	520,000	(33)	508,000	(24)	240,000	(33)	190.3	25.00
3/18 E	8,060,000	(0)	590,000	(13)	578,000	(14)	280,000	(17)	222.0	25.00
3/16 CP	7,900,000	(-4)	320,000	(367)	345,000	(768)	140,000	(profit)	-	Undecided

E: Daiwa estimates. CP: Company projections.

Chart 1: consolidated income statement (JPY mn)

(Y mil)	FY13	14	15 E	16E	17E	15CP
Sales	7,767,266	8,215,880	8,058,000	8,030,000	8,060,000	7,900,000
Mobile Communications (MC)	1,265,014	1,410,215	1,164,000	1,125,000	1,081,000	1,190,000
Game & Network Services (G&NS)	1,043,858	1,388,029	1,517,000	1,462,000	1,467,000	1,520,000
Imaging Products & Solutions (IP&S)	741,203	719,970	713,000	658,000	637,000	720,000
Home Entertainment & Sound (HE&S)	1,199,738	1,238,057	1,099,000	991,000	924,000	1,140,000
Devices	741,820	927,080	1,058,000	1,277,000	1,413,000	1,060,000
Pictures	829,584	878,681	952,000	970,000	995,000	1,000,000
Music	516,956	559,244	576,000	559,000	555,000	550,000
Financial Services	993,846	1,083,629	1,060,000	1,060,000	1,060,000	1,060,000
Other	435,246	10,975	-81,000	-72,000	-72,000	-340,000
EBITDA	403,190	423,172	764,400	924,900	1,000,900	685,000
Mobile Communications (MC)	32,536	-193,446	-41,800	22,000	25,000	-
Game & Network Services (G&NS)	-2,316	66,440	109,800	147,000	170,000	-
Imaging Products & Solutions (IP&S)	64,407	86,459	99,800	95,800	96,800	-
Home Entertainment & Sound (HE&S)	4,824	49,340	52,400	57,000	57,000	-
Devices	89,535	176,826	214,000	300,000	342,000	-
Pictures	69,697	78,507	56,700	61,700	66,700	-
Music	67,978	75,248	100,600	85,500	89,500	-
Financial Services	224,640	259,530	250,600	250,600	250,600	-
Other	-148,111	-175,732	-77,700	-94,700	-96,700	-
Operating profit	26,495	68,548	390,000	520,000	590,000	320,000
Mobile Communications (MC)	8,721	-217,574	-65,000	0	3,000	-60,000
Game & Network Services (G&NS)	-18,845	48,104	90,000	124,000	147,000	80,000
Imaging Products & Solutions (IP&S)	26,327	54,684	69,000	65,000	66,000	58,000
Home Entertainment & Sound (HE&S)	-20,982	24,102	30,000	35,000	35,000	25,000
Devices	-16,937	89,031	103,000	160,000	196,000	121,000
Pictures	51,619	58,527	35,000	40,000	45,000	35,000
Music	52,406	60,604	83,000	68,000	72,000	74,000
Financial Services	170,292	193,307	175,000	175,000	175,000	175,000
All Other, Corporate and elimination	-226,106	-242,237	-130,000	-147,000	-149,000	-188,000
Pretax income	25,741	39,729	410,000	508,000	578,000	345,000
Net income	-128,369	-125,980	180,000	240,000	280,000	140,000
Depreciation (incl. amortization of intangible assets)	376,695	354,624	374,400	404,900	410,900	365,000
Capex (increase in tangible fixed assets)	164,589	164,841	428,000	388,000	218,000	428,000
R&D	466,030	464,320	490,000	490,000	490,000	490,000

Source: Company, Daiwa estimates.

Financial Statements

(JPY mn)	3/13	3/14	3/15	3/16 E	3/17 E	3/18 E
Income statement						
Sales / Revenue	6,795,504	7,767,266	8,215,880	8,058,000	8,030,000	8,060,000
Operating profit	226,503	26,495	68,548	390,000	520,000	590,000
EBITDA	603,238	403,190	423,172	764,400	924,900	1,000,900
Pretax income	242,084	25,741	39,729	410,000	508,000	578,000
Net income	41,540	-128,369	-125,980	180,000	240,000	280,000
Balance sheet						
Liquidity on hand	1,523,958	1,879,032	1,886,144	2,256,249	2,333,551	2,665,583
Fixed assets / Non-current assets	10,564,500	11,128,834	11,636,430	12,392,230	13,047,030	13,479,830
Total assets	14,211,033	15,333,720	15,834,331	16,928,491	17,654,964	18,425,828
Interest-bearing debt	1,182,610	1,294,402	933,612	1,053,612	1,053,612	1,053,612
Total liabilities	11,536,032	12,546,464	12,900,614	13,526,457	14,042,137	14,562,209
Total net assets / Total equity	2,672,004	2,783,141	2,928,469	3,396,786	3,607,579	3,858,372
Shareholders' equity	2,192,262	2,258,137	2,317,077	2,785,394	2,996,187	3,246,980
Cash flow statement						
Cash flows from operating activities	476,165	664,116	754,640	900,123	1,004,845	1,089,576
Net income	41,540	-128,369	-125,980	180,000	240,000	280,000
Depreciation and amortization	376,735	376,695	354,624	374,400	404,900	410,900
Cash flows from investing activities	-705,280	-710,502	-639,636	-995,800	-955,800	-785,800
Free cash flow	-229,115	-46,386	115,004	-95,677	49,045	303,776
Cash flows from financing activities	88,528	207,877	-263,195	465,781	28,257	28,257
Increase (decrease) in cash and cash equivalents	-68,215	220,105	-97,053	370,105	77,302	332,033
Accounting standards	SEC	SEC	SEC	SEC	SEC	SEC
Financial indicators						
Growth						
Sales / Revenue (y/y %)	4.7	14.3	5.8	-1.9	-0.3	0.4
Operating profit (y/y %)	Profit	-88.3	158.7	468.9	33.3	13.5
Profitability						
Operating profit margin (%)	3.3	0.3	0.8	4.8	6.5	7.3
EBITDA margin (%)	8.9	5.2	5.2	9.5	11.5	12.4
ROE (%)	2.0	NA	NA	7.1	8.3	9.0
ROA (%)	0.3	NA	NA	1.1	1.4	1.6
Financial leverage/dividend policy						
Net debt-to-equity ratio (X)	-0.2	-0.3	-0.4	-0.4	-0.4	-0.5
Equity-to-assets ratio (%)	15.4	14.7	14.6	16.5	17.0	17.6
Total dividends / shareholders' equity (%)	1.2	1.2	0.0	1.1	1.1	1.0
Dividend payout ratio (%)	60.5	NA	0.0	17.5	13.1	11.3
Per-share data						
EPS (Y)	41.3	-125.0	-113.0	142.7	190.3	222.0
DPS (Y)	25.00	25.00	0.00	25.00	25.00	25.00
Book value per share (Y)	2,168.6	2,163.6	1,982.5	2,208.6	2,375.7	2,574.5
Valuations Share price: ¥3,091; market cap: ¥3,898,344mn (4 Dec 2015)						
P/E (X)	74.8	NA	NA	21.7	16.2	13.9
EV/EBITDA (X)	5.9	8.2	7.0	3.5	2.8	2.3
P/B (X)	1.43	1.43	1.56	1.40	1.30	1.20
Dividend yield (%)	0.81	0.81	Nil	0.81	0.81	0.81

Source: Company materials; compiled by Daiwa.
 E: Daiwa estimates.

Company Outline

Sony once boasted an overwhelmingly strong presence in the consumer electronics market, with runaway hits like its Trinitron CRT displays and the Walkman. It remains competitive in such fields as CMOS sensors, video games, and professional broadcasting equipment, but is implementing restructuring programs for struggling LCD TV and smartphone operations. Acquisitions of CBS Records and Columbia Pictures in the late 1980s helped it become a major global player in the music and movie industries. It initially entered the financial industry through a JV with Prudential, with domestic life insurance still a mainstay business on this front.

Daiwa

Capital Markets

DISCO (6146 JP)

 Target price: **JPY14,000** (as of 8 Dec)

 Share price (4 Dec): **JPY11,870** | Up/downside: **+17.9%**
Buy
 (not reviewed)

See upside to firm's conservative full-FY targets

- TSMC announced orders for Disco equipment on 25 Nov; order amount unsurprising; confirms advancement in packaging tech
- Firm likely to beat FY15 targets; orders to rebound in FY16

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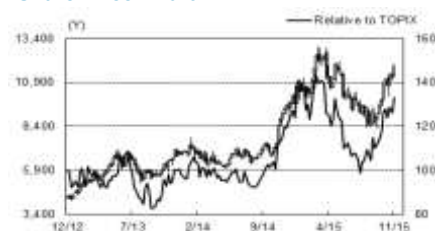

What's new: On 25 November, TSMC announced that it had ordered production equipment worth around Y7bn from Disco and other SPE manufacturers. The equipment will likely be used in the production of chips for next-generation high-end smartphones (using InFO WLP technology). The orders were placed earlier than expected by Disco, which had assumed they would come in Jan-Mar 2016. However, the timing was not that surprising given that moves by peers suggested a high likelihood of orders in Oct-Dec. The total amount for the orders was also not a surprise, as it was roughly in line with comments made by company officials during the analyst meeting for the 2Q FY15 results.

Outlook: We forecast sales of Y125.8bn (down slightly y/y) and operating profit of Y29.4bn (up 10%) for FY15. The company's top-line estimate and profit margin assumption strike us as conservative, and we thus expect Disco to overshoot its targets (Y118.8bn for sales, Y26.1bn for op profit). Orders are likely to regain momentum after bottoming in January or February with the end of semiconductor chip inventory cutbacks.

For FY16, we forecast sales of Y131.2bn (up 4% y/y) and operating profit of Y31.8bn (up 8%). We assume orders will rise 4%. Disco's orders (value basis) show a relatively strong correlation with shipment volumes for semiconductor chips. We expect such shipments to turn upward y/y from Apr-Jun 2016, creating a more favourable operating environment for Disco in FY16.

What we recommend: We reiterate Buy (1) rating and set our target price at Y14,000 or roughly 22x our FY16 EPS estimates of Y634.7. The InFO-related orders were unsurprising and are unlikely to be a lasting catalyst for meaningful share-price gains. However, the news does confirm advancements in packaging technology. Such evolving technologies have the potential to make meaningful contributions to earnings at Disco over the medium term, especially given media reports that Qualcomm, Mediatek, and other industry players are exploring the possibility of using the same technology. A risk for this scenario would be InFO technology not becoming established in the industry. Protracted semiconductor inventory cutbacks are another possible concern for earnings.

Share Price Chart



Source: Compiled by Daiwa.

Market Data

12-month range (Y)	8,300-12,960
Market cap (Y mn; 4 Dec)	424,519
Shares outstanding (000; 12/15)	35,764
Foreign ownership (%; 3/15)	38.2

Investment Indicators

	3/15	3/16 E	3/17 E
P/E (X)	20.4	20.8	18.7
EV/EBITDA (X)	11.7	10.5	9.6
P/B (X)	2.81	2.59	2.42
Dividend yield (%)	1.35	1.84	2.68
ROE (%)	14.7	12.9	13.4
Net debt/equity (X)	-0.3	-0.3	-0.3

Income Summary

(Y mn)	3/15	3/16 E	3/17 E
Sales	125,920	125,800	131,200
Op profit	26,760	29,400	31,800
Rec profit	26,489	29,600	32,000
Net income	20,067	20,400	22,700
EPS (Y)	580.7	570.4	634.7
DPS (Y)	160.00	218.00	318.00

See end of report for notes concerning indicators.

Disco (6146): Income Summary (Y mn; y/y %)

Year to	Sales		Op profit		Rec profit		Net income		EPS (Y)	DPS (Y)
3/13	93,707	(5)	11,601	(9)	11,586	(3)	7,473	(4)	221.8	56.00
3/14	104,920	(12)	17,353	(50)	17,447	(51)	12,088	(62)	357.6	90.00
3/15	125,920	(20)	26,760	(54)	26,489	(52)	20,067	(66)	580.7	160.00
3/16 E	125,800	(-0)	29,400	(10)	29,600	(12)	20,400	(2)	570.4	218.00
3/17 E	131,200	(4)	31,800	(8)	32,000	(8)	22,700	(11)	634.7	318.00
3/16 CP	118,800	(-6)	26,100	(-2)	26,300	(-1)	18,500	(-8)	517.5	218.00

E: Daiwa estimates. CP: Company projections.

Chart 1: Earnings (Y mn)

	FY09	10	11	12	13	14	15 E	16 E	15 CP
Sales	61,730	99,700	89,241	93,707	104,920	125,920	125,800	131,200	118,800
Precision processing equipment	30,200	58,800	48,100	49,100	50,900	66,400	64,200	67,900	-
Dicing systems	24,900	44,500	35,100	35,800	34,600	51,400	46,000	46,600	-
Grinders	5,300	14,300	13,000	13,400	16,300	15,000	18,200	21,300	-
Precision processing tools	15,400	17,600	17,000	18,800	21,900	26,200	28,900	30,900	-
Other	16,100	23,300	24,100	25,800	32,100	33,300	32,700	32,400	-
Operating profit	4,667	15,915	10,661	11,601	17,353	26,760	29,400	31,800	26,100
Recurring profit	4,560	17,190	11,237	11,586	17,447	26,489	29,600	32,000	26,300
Net income	2,470	10,945	7,195	7,473	12,088	20,067	20,400	22,700	18,500
Y/y %									
Sales	16	62	-10	5	12	20	-0	4	-6
Operating profit	6,041	241	-33	9	50	54	10	8	-2
Recurring profit	212	277	-35	3	51	52	12	8	-1
Net income	884	343	-34	4	62	66	2	11	-8
Capex	11,626	7,311	8,448	5,757	13,378	12,834	8,000	7,000	8,000
R&D	7,766	9,771	9,331	10,266	11,457	13,282	14,000	13,500	14,000
Orders	66,258	101,686	86,447	96,118	103,075	129,216	123,961	128,900	-
(y/y %)	(40)	(53)	(-15)	(11)	(7)	(25)	(-4)	(4)	-

Source: Company materials; compiled by Daiwa.
E: Daiwa estimates. CP: Company projections.

Chart 2: Quarterly Earnings (Y mn)

	FY13				14				15	
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q
Sales	27,405	27,205	23,199	27,111	31,081	34,117	27,122	33,598	34,197	32,402
Precision processing equipment	14,000	13,300	10,000	13,600	17,700	18,400	12,200	18,100	19,200	15,600
Dicing systems	9,800	9,300	6,000	9,500	14,200	14,700	9,800	12,700	13,400	10,900
Grinders	4,200	4,000	4,000	4,100	3,500	3,700	2,400	5,400	5,800	4,700
Precision processing tools	5,500	5,700	5,300	5,400	5,900	6,800	6,800	6,700	6,800	7,500
Other	7,900	8,200	7,900	8,100	7,500	8,900	8,100	8,800	8,200	9,300
Operating profit	4,911	4,894	3,330	4,218	5,601	8,122	6,244	6,791	9,906	7,841
Recurring profit	4,823	4,931	3,162	4,531	5,774	7,956	5,726	7,031	9,754	8,064
Net income	3,172	3,491	2,060	3,365	4,052	5,702	4,367	5,944	6,501	5,554
Y/y %										
Sales	13	0	15	23	13	25	17	24	10	-5
Operating profit	73	5	68	98	14	66	88	61	77	-3
Recurring profit	59	3	73	134	20	61	81	55	69	1
Net income	61	3	93	222	28	63	112	77	60	-3
Orders	28,383	25,233	23,390	26,069	35,454	31,294	27,509	34,959	34,527	33,434
(y/y %)	(7)	(-3)	(21)	(8)	(25)	(24)	(18)	(34)	(-3)	(7)
(q/q %)	(18)	(-11)	(-7)	(11)	(36)	(-12)	(-12)	(27)	(-1)	(-3)

Source: Company materials; compiled by Daiwa.

Financial Statements

(Y mn)	3/13	3/14	3/15	3/16 E	3/17 E
Income statement					
Sales / Revenue	93,707	104,920	125,920	125,800	131,200
Operating profit	11,601	17,353	26,760	29,400	31,800
EBITDA	17,540	23,348	32,827	36,400	38,800
Recurring profit	11,586	17,447	26,489	29,600	32,000
Net income	7,473	12,088	20,067	20,400	22,700
Balance sheet					
Liquidity on hand	31,699	31,577	52,208	54,000	63,000
Fixed assets / Non-current assets	66,102	73,348	72,352	73,500	73,500
Total assets	155,667	170,161	201,975	206,500	219,500
Interest-bearing debt	19,684	18,807	11,232	11,000	11,000
Total liabilities	45,110	46,704	50,056	41,500	43,500
Total net assets / Total equity	110,556	123,456	151,918	165,000	176,000
Shareholders' equity	108,602	121,416	151,060	164,144	175,144
Cash flow statement					
Cash flows from operating activities	15,305	14,877	25,192	28,000	28,000
Net income	7,473	12,088	20,067	20,400	22,700
Depreciation and amortization	5,939	5,995	6,067	7,000	7,000
Cash flows from investing activities	-13,779	-13,101	-3,938	-8,000	-7,000
Free cash flow	1,526	1,776	21,254	20,000	21,000
Cash flows from financing activities	7,407	-2,198	-1,467	-8,000	-11,000
Increase (decrease) in cash and cash equivalents	9,506	7	20,295	12,000	10,000
Accounting standards					
	JGAAP	JGAAP	JGAAP	JGAAP	JGAAP
Financial indicators					
Growth					
Sales / Revenue (y/y %)	5.0	12.0	20.0	-0.1	4.3
Operating profit (y/y %)	8.8	49.6	54.2	9.9	8.2
Profitability					
Operating profit margin (%)	12.4	16.5	21.3	23.4	24.2
EBITDA margin (%)	18.7	22.3	26.1	28.9	29.6
ROE (%)	7.1	10.5	14.7	12.9	13.4
ROA (%)	5.1	7.4	10.8	10.0	10.7
Financial leverage/dividend policy					
Net debt-to-equity ratio (X)	-0.1	-0.1	-0.3	-0.3	-0.3
Equity-to-assets ratio (%)	69.8	71.4	74.8	79.5	79.8
Total dividends / shareholders' equity (%)	1.7	2.5	3.8	4.7	6.5
Dividend payout ratio (%)	25.3	25.2	27.6	38.2	50.1
Per-share data					
EPS (Y)	221.8	357.6	580.7	570.4	634.7
DPS (Y)	56.00	90.00	160.00	218.00	318.00
Book value per share (Y)	3,221.9	3,579.8	4,231.3	4,589.6	4,897.2
Valuations Share price: ¥11,870; market cap: ¥424,519mn (4 Dec 2015)					
P/E (X)	53.5	33.2	20.4	20.8	18.7
EV/EBITDA (X)	23.5	17.6	11.7	10.5	9.6
P/B (X)	3.68	3.32	2.81	2.59	2.42
Dividend yield (%)	0.47	0.76	1.35	1.84	2.68

Source: Company materials; compiled by Daiwa.

E: Daiwa estimates.

Company Outline

Disco is a maker of back-end semiconductor processing equipment, with its core resources focused on cutting, grinding, and polishing technologies. Its mainstay products dicers and grinders dominate the market with global market shares of around 70%. In addition to machines, the firm also offers consumables such as grinding wheels and dicing blades, which results in enhanced earnings stability. Its main customers are Asian semiconductor makers and OSAT firms, but Disco is also expanding its customer base to fields other than semiconductors such as LEDs and electronic components.

Daiwa

Capital Markets

Samsung Electronics (005930 KS)

 Target price: **KRW1,470,000** (from KRW1,470,000)

 Share price (4 Dec): **KRW1,269,000** | Up/downside: **+15.8%**


Winner from technological inflection point

- Solid earnings outlook driven by component business (semi/display)
- Mobile to maintain 10% margin through cost rationalisation
- Shareholder return initiatives to catalyse the stock price; reaffirm Buy

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What's new: We believe SEC's earnings over 2016-17E will be driven by its component business (semiconductors/display). During its 3Q15 earnings call, SEC announced a number of shareholder-return initiatives.

What's the impact: Cash management. In its 3Q15 earnings call on 29 October, SEC announced a KRW11.3tn (USD10bn) share buyback/cancellation plan as a one-off scheme over the next year. In addition, the company plans to return to shareholders 30-50% of its free cash flow over the next 3 years, primarily in the form of dividends, in the form of a mid-term shareholder return plan. We expect these shareholder return initiatives to catalyse the share price going forward.

Semi business to remain the most competitive. We believe SEC will maintain its high operating margin in memory in 2016-17E by leveraging its technology and capacity leadership in DRAM and 3D VNAND. On the System LSI side, SEC aims to expand its customer base and gain market share going forward by establishing its technological edge from 14nm FF.

Display. We expect SEC's earnings to improve from 2016 on the back of an increase in its sales of premium LCD products, including UHDs, and increasing OLED sales to external clients. Also, we believe rising adoption of flexible/foldable displays embedded in premium smartphone/tablet products, led by SEC, will improve profitability further from 2016.

Mobile. Despite ongoing concerns in the market over muted demand and increased competition in the smartphone space, SEC's mobile business should maintain an operating margin of around 10%, on our forecasts, backed by its strong vertical integration and operational efficiency. After the introduction of new product lines embedded with new form factors and foldable displays, we believe its high-end segment will be back on an upward trajectory in terms of operating margins from 2016.

What we recommend: We reaffirm our Buy (1) rating and 12-month target price of KRW1,470,000, based on a 1.2x PBR applied to our 2016E BVPS. Our target multiple is set at the average of SEC's 12-month-forward PBR during 3Q11, when the DRAM market was going through a steep downcycle. Key riser to our call: the potential entry of China corporates into the memory industry and a sharp decline in smartphone demand.

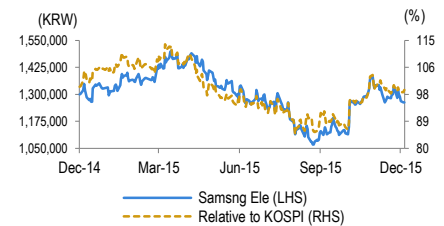
How we differ: SEC is Daiwa's top pick in the regional tech space.

Forecast revisions (%)

Year to 31 Dec	15E	16E	17E
Revenue change	-	-	-
Net profit change	-	-	-
Core EPS (FD) change	-	-	-

Source: Daiwa forecasts

Share price performance



12-month range	1,067,000-1,503,000
Market cap (USDbn)	161.60
3m avg daily turnover (USDm)	272.93
Shares outstanding (m)	147
Major shareholder	National Pension Service (8.0%)

Financial summary (KRW)

Year to 31 Dec	15E	16E	17E
Revenue (bn)	201,693	199,790	211,915
Operating profit (bn)	26,615	26,866	33,017
Net profit (bn)	21,215	22,076	27,225
Core EPS (fully-diluted)	144,027	149,875	184,831
EPS change (%)	(8.1)	4.1	23.3
Daiwa vs Cons. EPS (%)	4.0	5.6	22.1
PER (x)	8.8	8.5	6.9
Dividend yield (%)	1.6	1.6	2.0
DPS	20,000	20,000	25,000
PBR (x)	1.2	1.0	0.9
EV/EBITDA (x)	2.5	2.0	1.5
ROE (%)	12.4	11.7	13.0

Source: FactSet, Daiwa forecasts

Financial summary

Key assumptions

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
DRAM bit growth (%)	n.a.	n.a.	n.a.	23.1	57.1	32.7	24.8	15.3
DRAM ASP (%)	n.a.	n.a.	n.a.	(5.7)	(8.1)	(15.5)	(23.8)	(8.0)
NAND bit growth (%)	n.a.	n.a.	n.a.	55.5	45.1	55.2	40.8	38.2
NAND ASP (%)	n.a.	n.a.	n.a.	(24.8)	(26.9)	(28.8)	(27.9)	(20.5)
LCD Area (%)	n.a.	n.a.	n.a.	(6.2)	17.1	0.7	5.5	6.6
LCD Area ASP (%)	n.a.	n.a.	n.a.	(22.2)	(18.2)	(5.5)	(18.8)	(16.8)
OLED Unit (%)	n.a.	n.a.	n.a.	40.1	(10.7)	26.6	31.2	21.6
OLED ASP (%)	n.a.	n.a.	n.a.	(3.1)	(13.1)	(1.3)	(10.2)	(2.0)

Profit and loss (KRWbn)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Semiconductor	37,639	36,990	34,890	37,437	39,730	48,098	49,634	55,309
IT & Mobile Communication	40,070	67,440	105,840	138,817	111,764	103,018	96,168	99,201
Other Revenue	76,922	60,572	60,374	52,439	54,712	50,577	53,989	57,405
Total Revenue	154,630	165,002	201,104	228,693	206,206	201,693	199,790	211,915
Other income	13,149	16,014	15,622	16,445	18,053	20,999	22,278	23,132
COGS	(102,667)	(112,145)	(126,652)	(137,696)	(128,279)	(124,051)	(121,597)	(124,181)
SG&A	(26,243)	(27,422)	(33,870)	(39,892)	(38,517)	(37,123)	(36,358)	(39,099)
Other op.expenses	(19,413)	(21,945)	(27,155)	(30,765)	(32,439)	(34,903)	(37,247)	(38,750)
Operating profit	19,456	19,504	29,049	36,785	25,025	26,615	26,866	33,017
Net-interest inc./(exp.)	(23)	62	246	842	1,240	1,117	1,648	2,338
Assoc/forex/extraord./others	2,055	848	619	737	1,610	1,047	1,312	1,295
Pre-tax profit	21,489	20,413	29,915	38,364	27,875	28,780	29,826	36,651
Tax	(3,182)	(3,425)	(6,070)	(7,890)	(4,481)	(7,141)	(7,334)	(9,012)
Min. int./pref. div./others	(347)	(367)	(660)	(654)	(312)	(424)	(415)	(413)
Net profit (reported)	17,959	16,621	23,185	29,821	23,083	21,215	22,076	27,225
Net profit (adjusted)	17,959	16,621	23,185	29,821	23,083	21,215	22,076	27,225
EPS (reported)(KRW)	121,921	112,840	157,403	202,453	156,705	144,027	149,875	184,831
EPS (adjusted)(KRW)	121,921	112,840	157,403	202,453	156,705	144,027	149,875	184,831
EPS (adjusted fully-diluted)(KRW)	121,921	112,840	157,403	202,453	156,705	144,027	149,875	184,831
DPS (KRW)	10,000	5,500	8,000	14,300	20,000	20,000	20,000	25,000
EBIT	19,456	19,504	29,049	36,785	25,025	26,615	26,866	33,017
EBITDA	30,850	33,096	44,671	53,230	43,078	47,614	49,144	56,149

Cash flow (KRWbn)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Profit before tax	21,489	20,413	29,915	38,364	27,875	28,780	29,826	36,651
Depreciation and amortisation	11,394	13,592	15,622	16,445	18,053	20,999	22,278	23,132
Tax paid	(3,182)	(3,425)	(6,070)	(7,890)	(4,481)	(7,141)	(7,334)	(9,012)
Change in working capital	(1,394)	(1,458)	(2,341)	(1,483)	2,690	(5,951)	314	(1,871)
Other operational CF items	(4,480)	(6,205)	847	1,270	(7,163)	2,052	303	320
Cash flow from operations	23,827	22,918	37,973	46,707	36,975	38,740	45,387	49,219
Capex	(21,619)	(21,966)	(22,965)	(23,158)	(22,043)	(28,000)	(22,563)	(25,281)
Net (acquisitions)/disposals	1,228	380	644	377	386	262	224	224
Other investing CF items	(3,594)	473	(9,000)	(21,967)	(11,149)	3,746	0	0
Cash flow from investing	(23,985)	(21,113)	(31,322)	(44,747)	(32,806)	(23,993)	(22,339)	(25,058)
Change in debt	1,381	3,871	249	(3,735)	105	(1,055)	(1,894)	(1,543)
Net share issues/(repurchases)	0	0	0	0	(2,446)	0	0	0
Dividends paid	(1,497)	(827)	(1,265)	(1,250)	(2,234)	(3,076)	(3,017)	(3,017)
Other financing CF items	1,870	(452)	(848)	847	(928)	(708)	695	1,547
Cash flow from financing	1,755	2,592	(1,865)	(4,137)	(5,503)	(4,839)	(4,215)	(3,013)
Forex effect/others	180	665	144	330	250	402	445	461
Change in cash	1,776	5,062	4,931	(1,846)	(1,084)	10,310	19,278	21,609
Free cash flow	2,208	952	15,008	23,550	14,932	10,740	22,824	23,937

Source: FactSet, Daiwa forecasts

Financial summary continued ...

Balance sheet (KRWbn)

As at 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Cash & short-term investment	22,480	26,878	37,448	54,496	61,817	80,896	99,637	120,696
Inventory	13,365	15,717	17,747	19,135	17,318	19,561	19,174	19,581
Accounts receivable	19,215	21,989	23,861	25,256	24,695	26,344	26,095	27,679
Other current assets	6,343	6,919	8,212	11,873	11,317	10,062	9,857	9,832
Total current assets	61,403	71,502	87,269	110,760	115,146	136,862	154,763	177,788
Fixed assets	52,965	62,044	68,485	75,496	80,873	76,258	77,596	80,866
Goodwill & intangibles	2,779	3,355	3,730	3,981	4,785	5,607	5,907	6,202
Other non-current assets	17,142	18,730	21,588	23,838	29,619	25,984	26,083	25,784
Total assets	134,289	155,631	181,072	214,075	230,423	244,710	264,348	290,639
Short-term debt	9,554	9,684	9,443	8,864	9,808	8,866	7,222	5,882
Accounts payable	9,149	10,277	9,489	8,437	7,915	6,854	6,719	6,862
Other current liabilities	21,242	24,358	28,001	34,014	34,291	32,038	31,648	31,600
Total current liabilities	39,945	44,319	46,933	51,315	52,014	47,759	45,588	44,343
Long-term debt	1,222	4,963	5,452	2,296	1,458	1,344	1,095	892
Other non-current liabilities	3,773	4,504	7,206	10,447	8,863	9,476	9,657	9,694
Total liabilities	44,940	53,786	59,591	64,059	62,335	58,579	56,340	54,930
Share capital	898	898	898	898	898	898	898	898
Reserves/R.E./others	84,692	96,702	116,197	143,545	161,284	177,980	197,040	221,248
Shareholders' equity	85,590	97,600	117,094	144,443	162,182	178,878	197,937	222,146
Minority interests	3,760	4,246	4,386	5,573	5,906	7,253	10,071	13,564
Total equity & liabilities	134,289	155,631	181,072	214,075	230,423	244,710	264,348	290,639
EV	170,643	169,733	159,970	142,738	137,045	118,140	100,239	81,443
Net debt/(cash)	(11,705)	(12,231)	(22,553)	(43,335)	(50,552)	(70,685)	(91,320)	(113,922)
BVPS (KRW)	525,173	598,623	714,032	881,758	987,982	1,094,033	1,222,624	1,385,446

Key ratios (%)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Sales (YoY)	13.4	6.7	21.9	13.7	(9.8)	(2.2)	(0.9)	6.1
EBITDA (YoY)	39.3	7.3	35.0	19.2	(19.1)	10.5	3.2	14.3
Operating profit (YoY)	77.2	0.2	48.9	26.6	(32.0)	6.4	0.9	22.9
Net profit (YoY)	94.5	(7.4)	39.5	28.6	(22.6)	(8.1)	4.1	23.3
Core EPS (fully-diluted) (YoY)	94.5	(7.4)	39.5	28.6	(22.6)	(8.1)	4.1	23.3
Gross-profit margin	33.6	32.0	37.0	39.8	37.8	38.5	39.1	41.4
EBITDA margin	20.0	20.1	22.2	23.3	20.9	23.6	24.6	26.5
Operating-profit margin	12.6	11.8	14.4	16.1	12.1	13.2	13.4	15.6
Net profit margin	11.6	10.1	11.5	13.0	11.2	10.5	11.0	12.8
ROAE	23.2	18.2	21.6	22.8	15.1	12.4	11.7	13.0
ROAA	14.6	11.5	13.8	15.1	10.4	8.9	8.7	9.8
ROCE	21.3	18.0	23.0	24.7	14.7	14.2	13.0	14.4
ROIC	23.8	19.4	24.6	28.4	18.7	17.2	17.5	20.9
Net debt to equity	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Effective tax rate	14.8	16.8	20.3	20.6	16.1	24.8	24.6	24.6
Accounts receivable (days)	43.7	45.6	41.6	39.2	44.2	46.2	47.9	46.3
Current ratio (x)	1.5	1.6	1.9	2.2	2.2	2.9	3.4	4.0
Net interest cover (x)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Net dividend payout	8.2	4.9	5.1	7.1	12.8	13.9	13.3	13.5
Free cash flow yield	1.2	0.5	8.0	12.6	8.0	5.7	12.2	12.8

Source: FactSet, Daiwa forecasts

Company profile

Samsung Electronics Co., Ltd. manufactures a wide range of consumer and industrial electronic equipment and products such as semiconductors, handsets, personal computers, peripherals, and etc.

Daiwa

Capital Markets

Win Semiconductors (3105 TT)

 Target price: **TWD62.00** (from TWD55.50)

 Share price (4 Dec): **TWD52.20** | Up/downside: **+18.7%**

 Buy
 (unchanged)

Multiple growth engines

- 4G driving growth now, WiFi upgrade cycle next
- Fibre optics: another potential earnings growth driver
- Target price raised to TWD62; reiterate Buy (1) rating

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What's new: We've been a buyer of WinSemi on its multiple demand drivers: 4G migration, the WiFi upgrade and fibre-optic (FO) potential. The coming cyclical upturn we envision could cement its earnings growth in the next 2 years. In our view, any share pullback driven by profit-taking on a seasonally weak 1Q16 would provide an opportunity for accumulation.

What's the impact: Rising 4G to support demand. We expect a cyclical upturn in 2016 with restocking strength from 4G smartphones, which should continue to lift 4G penetration (see main report). With over half of its revenue exposure in the 4G cellular RF PA, including smartphones and base stations, WinSemi has benefited from this 4G migration trend in 2015 and should continue to benefit, given its dominant position in the GaAs foundry sector for RF PA. More interestingly, the WiFi upgrade cycle is rising fast to take over 4G and become another growth engine for WinSemi.

WiFi the biggest earnings driver. WinSemi's revenue contribution from WiFi PA rose for the first time in 3Q15 to a level comparable to cellular PA (40-45%, see page 54), leading it to a record-high gross margin (the gross margin on WiFi is above the corporate average). This WiFi upgrade cycle appears to be rising fast, thanks to technology upgrades to 802.11ac dual-band with multi-input/multi-output (MIMO) at access points such as WiFi routers for home gateways followed by smartphones driven by high-end models like iPhone 6S/S+. As Apple typically leads the trend in tech upgrades, we expect other smartphone vendors to follow suit and expand their WiFi MIMO footprints into mid- and low-end segments. This bodes well for WinSemi as demand for WiFi PA, for which it provides foundry services, should more than double per device through this upgrade cycle.

FO potential. FO with higher bandwidth (>1Gbps) looks likely to rise and replace the lower bandwidth and traditional copper wire in the connectivity system of the datacentres due to bandwidth upgrades to facilitate the Big Data ecosystem. We see such infrastructure demand as a potential growth driver for WinSemi, since FO transceivers are an extension of WinSemi's know-how in compound semiconductor technologies.

What we recommend: We lift our 4Q15 forecasts to reflect stronger demand and reaffirm our Buy (1) call and raise our 12-month TP to TWD62 (from TWD55.5), now based on a 2.1x ROE-adjusted PBR (from 2.0x); we also shift our book-value calculation base to the 2015-16E average (previous: 2015E). Key risk: a prolonged inventory correction.

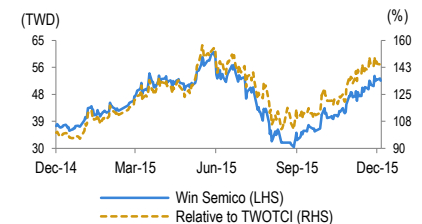
How we differ: We are ahead of consensus on 2017E EPS but note that its number may not be meaningful due to limited coverage on the stock.

Forecast revisions (%)

Year to 31 Dec	15E	16E	17E
Revenue change	0.4	-	-
Net profit change	0.8	-	-
Core EPS (FD) change	0.8	-	-

Source: Daiwa forecasts

Share price performance



12-month range	30.40-61.23
Market cap (USDbn)	0.95
3m avg daily turnover (USDm)	12.74
Shares outstanding (m)	595
Major shareholder	FUBON LIFE INSURANCE (4.4%)

Financial summary (TWD)

Year to 31 Dec	15E	16E	17E
Revenue (m)	11,974	12,818	15,395
Operating profit (m)	3,431	3,657	4,415
Net profit (m)	2,731	2,953	3,554
Core EPS (fully-diluted)	4.587	4.960	5.968
EPS change (%)	74.9	8.1	20.3
Daiwa vs Cons. EPS (%)	1.3	(1.5)	10.6
PER (x)	11.4	10.5	8.7
Dividend yield (%)	4.2	4.2	3.8
DPS	2.2	2.2	2.0
PBR (x)	1.8	1.7	1.5
EV/EBITDA (x)	5.6	5.0	4.3
ROE (%)	16.7	16.7	18.1

Source: FactSet, Daiwa forecasts

Financial summary

Key assumptions

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Wafer Shipment (wpy)	n.a.	n.a.	211,659	206,078	207,166	247,680	278,880	362,400
Utilisation Rate (%)	n.a.	n.a.	82	73	72	86	89	89
ASP (USD)	n.a.	n.a.	1,797	1,705	1,578	1,523	1,432	1,328

Profit and loss (TWDm)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Cellular	n.a.	n.a.	6,005	5,669	4,962	5,313	5,021	5,537
Infrastructure	n.a.	n.a.	1,528	1,610	2,108	2,197	2,175	2,848
Other Revenue	n.a.	n.a.	3,705	3,202	2,840	4,464	5,622	7,010
Total Revenue	6,982	8,901	11,238	10,481	9,910	11,974	12,818	15,395
Other income	0	0	0	0	0	0	0	0
COGS	(4,903)	(6,097)	(7,598)	(7,249)	(6,400)	(7,266)	(7,787)	(9,354)
SG&A	(467)	(577)	(652)	(627)	(633)	(686)	(733)	(856)
Other op.expenses	(415)	(450)	(530)	(495)	(562)	(591)	(641)	(770)
Operating profit	1,197	1,777	2,457	2,110	2,315	3,431	3,657	4,415
Net-interest inc./(exp.)	(42)	(58)	(98)	(64)	(31)	(21)	(25)	(28)
Assoc/forex/extraord./others	554	(550)	(431)	167	145	67	60	55
Pre-tax profit	1,709	1,170	1,928	2,212	2,429	3,478	3,692	4,442
Tax	(0)	109	(281)	(401)	(465)	(747)	(738)	(888)
Min. int./pref. div./others	0	0	0	0	0	0	0	0
Net profit (reported)	1,709	1,279	1,648	1,812	1,963	2,731	2,953	3,554
Net profit (adjusted)	1,709	1,279	1,648	1,812	1,963	2,731	2,953	3,554
EPS (reported)(TWD)	2.839	2.045	2.448	2.402	2.649	4.587	4.960	5.968
EPS (adjusted)(TWD)	2.839	2.045	2.448	2.402	2.649	4.587	4.960	5.968
EPS (adjusted fully-diluted)(TWD)	2.768	1.971	2.404	2.369	2.623	4.587	4.960	5.968
DPS (TWD)	0.853	0.830	1.688	1.472	0.201	2.200	2.200	2.000
EBIT	1,197	1,777	2,457	2,110	2,315	3,431	3,657	4,415
EBITDA	2,176	2,811	3,764	3,932	4,196	5,406	5,925	6,720

Cash flow (TWDm)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Profit before tax	1,709	1,170	1,928	2,212	2,429	3,478	3,692	4,442
Depreciation and amortisation	979	1,034	1,307	1,822	1,882	1,974	2,268	2,305
Tax paid	(0)	109	(281)	(401)	(465)	(747)	(738)	(888)
Change in working capital	(261)	(478)	(572)	887	(118)	(320)	120	(720)
Other operational CF items	210	31	508	478	103	0	0	0
Cash flow from operations	2,638	1,865	2,890	4,998	3,830	4,385	5,342	5,139
Capex	(2,378)	(3,336)	(3,317)	(2,815)	(738)	(3,800)	(3,100)	(3,500)
Net (acquisitions)/disposals	0	0	0	0	0	0	0	0
Other investing CF items	(1,448)	(172)	(639)	1,233	(535)	0	0	0
Cash flow from investing	(3,826)	(3,508)	(3,956)	(1,583)	(1,272)	(3,800)	(3,100)	(3,500)
Change in debt	909	2,076	718	(2,942)	(783)	(588)	1,030	2,162
Net share issues/(repurchases)	0	304	3,029	(515)	0	0	0	0
Dividends paid	0	(513)	(519)	(1,136)	(1,110)	(149)	(1,310)	(1,310)
Other financing CF items	219	164	51	112	25	(1,480)	100	100
Cash flow from financing	1,128	2,030	3,279	(4,481)	(1,867)	(2,216)	(180)	952
Forex effect/others	0	0	0	0	0	0	0	0
Change in cash	(60)	388	2,213	(1,065)	690	(1,631)	2,061	2,590
Free cash flow	260	(1,470)	(427)	2,183	3,092	585	2,242	1,639

Source: FactSet, Daiwa forecasts

Financial summary continued ...

Balance sheet (TWDm)

As at 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Cash & short-term investment	2,010	2,399	5,039	3,714	4,676	3,045	5,106	7,697
Inventory	1,369	1,894	2,101	1,127	1,500	1,490	1,690	2,140
Accounts receivable	481	653	1,049	650	690	940	840	1,290
Other current assets	243	620	675	198	259	200	200	200
Total current assets	4,104	5,566	8,865	5,689	7,125	5,675	7,836	11,326
Fixed assets	8,685	11,267	13,228	12,636	11,653	13,232	14,077	15,087
Goodwill & intangibles	338	250	128	624	345	340	300	300
Other non-current assets	1,762	1,516	1,370	2,162	2,694	2,694	2,694	2,694
Total assets	14,889	18,599	23,591	21,112	21,816	21,940	24,907	29,408
Short-term debt	365	0	0	0	0	0	0	0
Accounts payable	871	1,090	1,122	635	930	850	1,070	1,250
Other current liabilities	2,114	1,976	2,464	1,692	1,819	1,713	1,770	1,678
Total current liabilities	3,351	3,066	3,586	2,327	2,749	2,562	2,840	2,928
Long-term debt	2,662	5,484	5,559	3,721	2,938	2,351	3,381	5,542
Other non-current liabilities	2	4	21	171	189	194	210	217
Total liabilities	6,015	8,554	9,166	6,220	5,876	5,107	6,430	8,687
Share capital	6,176	6,486	7,542	7,393	7,422	5,955	5,955	5,955
Reserves/R.E./others	2,698	3,559	6,883	7,499	8,517	10,879	12,522	14,766
Shareholders' equity	8,874	10,045	14,425	14,892	15,940	16,833	18,477	20,720
Minority interests	0	0	0	0	0	0	0	0
Total equity & liabilities	14,889	18,599	23,591	21,112	21,816	21,940	24,907	29,408
EV	32,100	34,167	31,603	31,091	29,345	30,389	29,357	28,929
Net debt/(cash)	1,017	3,084	520	8	(1,737)	(694)	(1,726)	(2,154)
BVPS (TWD)	14.741	16.063	21.434	19.746	21.508	28.270	31.029	34.797

Key ratios (%)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Sales (YoY)	45.8	27.5	26.3	(6.7)	(5.5)	20.8	7.0	20.1
EBITDA (YoY)	63.3	29.2	33.9	4.4	6.7	28.8	9.6	13.4
Operating profit (YoY)	89.2	48.5	38.3	(14.1)	9.7	48.2	6.6	20.7
Net profit (YoY)	205.5	(25.2)	28.9	10.0	8.4	39.1	8.1	20.3
Core EPS (fully-diluted) (YoY)	195.8	(28.8)	21.9	(1.4)	10.7	74.9	8.1	20.3
Gross-profit margin	29.8	31.5	32.4	30.8	35.4	39.3	39.2	39.2
EBITDA margin	31.2	31.6	33.5	37.5	42.3	45.1	46.2	43.7
Operating-profit margin	17.1	20.0	21.9	20.1	23.4	28.7	28.5	28.7
Net profit margin	24.5	14.4	14.7	17.3	19.8	22.8	23.0	23.1
ROAE	21.7	13.5	13.5	12.4	12.7	16.7	16.7	18.1
ROAA	12.9	7.6	7.8	8.1	9.1	12.5	12.6	13.1
ROCE	11.0	13.0	13.8	10.9	12.3	18.0	17.8	18.4
ROIC	12.8	15.4	15.0	11.6	12.9	17.8	17.8	20.0
Net debt to equity	11.5	30.7	3.6	0.1	n.a.	n.a.	n.a.	n.a.
Effective tax rate	0.0	n.a.	14.6	18.1	19.2	21.5	20.0	20.0
Accounts receivable (days)	28.7	23.2	27.6	29.6	24.7	24.8	25.3	25.3
Current ratio (x)	1.2	1.8	2.5	2.4	2.6	2.2	2.8	3.9
Net interest cover (x)	28.7	30.9	25.0	33.0	74.3	163.4	146.3	157.7
Net dividend payout	30.0	40.6	69.0	61.3	7.6	48.0	44.4	33.5
Free cash flow yield	0.8	n.a.	n.a.	7.0	9.9	1.9	7.2	5.3

Source: FactSet, Daiwa forecasts

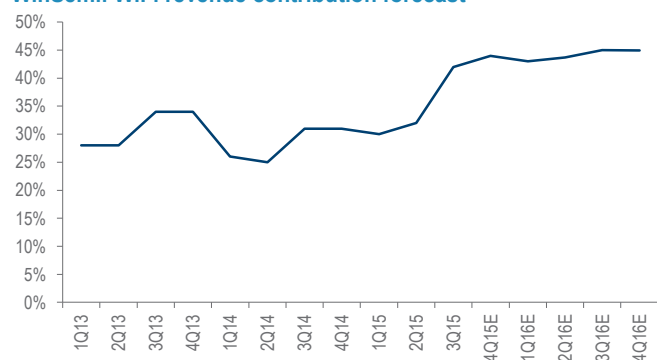
Company profile

Founded in 1999, Win Semiconductors Corp (WinSemi) is the world's largest compound semiconductor foundry, focusing on gallium-arsenide (GaAs) foundry services for customers in both wireless and fixed-line communication markets and infrastructure applications. It has a diverse technology portfolio of processes that supports microwave frequency requirements from 50MHz to 100GHz. End-market applications for its products encompass smartphones, tablet PCs, infrastructure base-stations, very small aperture terminal (VSAT) hubs, fibre optics, cable televisions (CATV) and the automotive industry.

WinSemi: quarterly P&L forecasts

TWDM	1Q15	2Q15	3Q15	4Q15E	1Q16E	2Q16E	3Q16E	4Q16E	2014	2015E	2016E	2017E
Cellular	1,403	1,580	1,194	1,135	1,055	1,245	1,432	1,289	4,961	5,313	5,021	5,537
Infrastructure	561	527	495	613	454	519	602	600	2,108	2,196	2,175	2,848
WiFi	842	992	1,223	1,407	1,140	1,368	1,573	1,541	2,841	4,463	5,621	7,010
Total revenue	2,807	3,099	2,913	3,155	2,649	3,132	3,607	3,430	9,910	11,974	12,818	15,395
COGS	-1,744	-1,898	-1,735	-1,890	-1,679	-1,931	-2,132	-2,044	-6,400	-7,266	-7,787	-9,354
Gross profit	1,063	1,201	1,178	1,266	969	1,201	1,475	1,386	3,510	4,708	5,031	6,041
Opex	-288	-300	-351	-338	-297	-335	-379	-364	-1,195	-1,277	-1,374	-1,626
Operating profit	774	902	827	928	673	866	1,096	1,022	2,315	3,431	3,657	4,415
EBITDA	1,247	1,376	1,307	1,475	1,226	1,468	1,666	1,565	4,196	5,406	5,925	6,720
Pretax profit	742	843	964	928	681	875	1,106	1,030	2,429	3,478	3,692	4,442
Income taxes	-124	-306	-159	-158	-136	-175	-221	-206	-465	-747	-738	-888
Net profit	618	537	805	771	544	700	885	824	1,963	2,731	2,953	3,554
FD O/S (m)	744	744	595	595	595	595	595	595	749	595	595	595
FD EPS (TWD)	0.83	0.72	1.35	1.29	0.91	1.18	1.49	1.38	2.62	4.59	4.96	5.97
Margin												
Gross	38%	39%	40%	40%	37%	38%	41%	40%	35%	39%	39%	39%
Operating	28%	29%	28%	29%	25%	28%	30%	30%	23%	29%	29%	29%
EBITDA	44%	44%	45%	47%	46%	47%	46%	46%	42%	45%	46%	44%
Net	22%	17%	28%	24%	21%	22%	25%	24%	20%	23%	23%	23%
Growth (QoQ)												
Cellular revenue	3%	13%	-24%	-5%	-7%	18%	15%	-10%				
Infrastructure revenue	9%	-6%	-6%	24%	-26%	14%	16%	0%				
WiFi revenue	0%	18%	23%	15%	-19%	20%	15%	-2%				
Total revenue	3%	10%	-6%	8%	-16%	18%	15%	-5%				
Gross profit	5%	13%	-2%	7%	-23%	24%	23%	-6%				
Operating profit	14%	16%	-8%	12%	-28%	29%	27%	-7%				
EBITDA	9%	10%	-5%	13%	-17%	20%	13%	-6%				
Net profit	11%	-13%	50%	-4%	-29%	29%	27%	-7%				
FD EPS	12%	-13%	88%	-4%	-29%	29%	27%	-7%				
Growth (YoY)												
Cellular revenue	79%	26%	-24%	-16%	-25%	-21%	20%	14%	-12%	7%	-5%	10%
Infrastructure revenue	25%	-11%	-10%	19%	-19%	-1%	22%	-2%	31%	4%	-1%	31%
WiFi revenue	94%	61%	29%	67%	35%	38%	29%	10%	-11%	57%	26%	25%
Total revenue	68%	26%	-5%	16%	-6%	1%	24%	9%	-5%	21%	7%	20%
Gross profit	113%	39%	4%	25%	-9%	0%	25%	9%	9%	34%	7%	20%
Operating profit	281%	58%	-4%	37%	-13%	-4%	32%	10%	10%	48%	7%	21%
EBITDA	86%	32%	-2%	28%	-2%	7%	27%	6%	7%	29%	10%	13%
Net profit	190%	22%	7%	38%	-12%	30%	10%	7%	8%	39%	8%	20%
FD EPS	191%	23%	34%	74%	10%	63%	10%	7%	11%	75%	8%	20%

Source: Company, Daiwa forecasts

WinSemi: WiFi revenue contribution forecast


Source: Company, Daiwa forecasts

WinSemi: PBR trend


Source: Company, TEJ, Daiwa forecasts

MediaTek (2454 TT)

 Target price: **TWD375.00** (from TWD375.00)

 Share price (4 Dec): **TWD269.00** | Up/downside: **+39.4%**


Turning over a new leaf

- We see a reversal of earnings growth round the corner
- Margin recovery likely on frugal opex and 4G market-share gains
- Reiterating Buy (1) ahead of the next growth cycle

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What's new: Although fabless chipmakers may not benefit as strongly as SCM players from the next cyclical upturn, we see MTK benefiting from continued share gains in the 4G smartphone market, riding on the trend of 4G penetration. We believe this company-specific strength should help margins recover and lead to a new earnings growth cycle that will catalyse the share price. MTK's share price is highly correlated to its earnings cycle, where we see an inflection point in 2Q16. We are not far off.

What's the impact: Mid-quarter update. MTK is on track to meet its guidance and our forecasts, with 4Q15 revenue rising by 4% QoQ (+6% YoY) to TWD59bn on a 9.8% operating margin – the trough of this margin cycle – on our forecasts. Although we expect no surprises in the 4Q15 results and look for 1Q16 to follow seasonality, the monthly revenue run rate looks on track to meet our forecast for a reversal in March to positive YoY growth. This should augur well for an earnings turnaround story in 2016 after the tough 2015 during the 3G/4G transition (chart on page 58).

4G share gains to continue. As we had expected ([New growth cycle is approaching](#)), MTK has gained share in the 4G smartphone chipset market this year, with annual shipments now likely to reach 160m, up some 3.8x YoY, ahead of its 150m guidance and giving it an 18-19% market share globally, on our estimates (from 6% in 2014). We forecast MTK's 4G market share to expand to 25-27% in 2016 and to over 35% in 2017, which should help mitigate competition from the likes of SPRD/RDA in the shrinking 3G market, leading to a sustained recovery in blended ASP, especially if MTK introduces advanced 16nm FF solutions at the 2016 Mobile World Congress.

Inflection point in sight. With a rising 4G market share helping its ASP, MTK's gross margin looks set to recover from 2Q16, while its operating margin should expand even faster on strict opex control (flat YoY in dollar terms per guidance). This supports our view that MTK will soon enter a new earnings growth cycle that catalyses the stock to the upside. We forecast a 28% EPS CAGR for 2015-17, with the growth trend to reverse from 2Q16.

What we recommend: We reiterate our Buy (1) on MTK and 12-month TP of TWD375 on an unchanged 18x one-year forward PER, as we believe we are not far away from a reversal of its earnings cycle. Key risks are a margin recovery and 4G market share falling short of expectations.

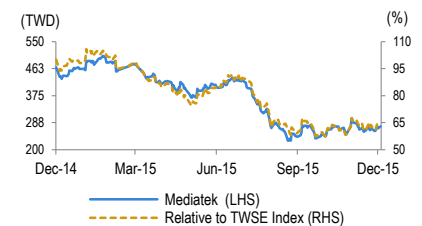
How we differ: We are more bullish than the market on MTK's 2016-17E EPS, on our stronger view of a margin recovery.

Forecast revisions (%)

Year to 31 Dec	15E	16E	17E
Revenue change	-	-	-
Net profit change	-	-	-
Core EPS (FD) change	-	-	-

Source: Daiwa forecasts

Share price performance



12-month range	229.00-504.00
Market cap (USDbn)	12.93
3m avg daily turnover (USDm)	85.68
Shares outstanding (m)	1,572
Major shareholder	Capital Group (6.5%)

Financial summary (TWD)

Year to 31 Dec	15E	16E	17E
Revenue (m)	210,556	241,321	280,869
Operating profit (m)	27,955	35,418	46,247
Net profit (m)	27,853	35,682	45,332
Core EPS (fully-diluted)	17.723	22.698	28.837
EPS change (%)	(40.0)	28.1	27.0
Daiwa vs Cons. EPS (%)	1.3	29.2	50.2
PER (x)	15.2	11.9	9.3
Dividend yield (%)	7.4	7.4	7.4
DPS	20.0	20.0	20.0
PBR (x)	1.8	1.7	1.6
EV/EBITDA (x)	8.0	6.4	4.7
ROE (%)	11.5	14.8	18.0

Source: FactSet, Daiwa forecasts

Financial summary

Key assumptions

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Blended Smartphone ASP (US\$)	0.0	13.4	12.6	11.4	10.4	8.1	7.5	7.1
Smartphone Shipment ('000)	0	16,992	86,117	198,499	357,194	402,427	513,225	655,074
Total Handset Market Share (%)	32	31	24	25	34	35	39	44

Profit and loss (TWDm)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Optical Storage Revenue	19,265	17,729	15,887	15,925	15,150	15,639	16,028	15,132
Digital Home Revenue	14,643	11,354	14,393	14,648	42,748	46,130	46,764	44,475
Other Revenue	79,614	57,774	68,983	105,483	155,165	148,786	178,529	221,262
Total Revenue	113,522	86,857	99,263	136,056	213,063	210,556	241,321	280,869
Other income	0	0	0	0	0	0	0	0
COGS	(52,614)	(47,513)	(58,201)	(76,250)	(109,194)	(118,305)	(139,641)	(159,801)
SG&A	(6,519)	(5,816)	(6,174)	(8,108)	(13,290)	(16,632)	(17,472)	(18,647)
Other op.expenses	(23,311)	(21,184)	(22,384)	(26,454)	(43,337)	(47,665)	(48,790)	(56,174)
Operating profit	31,079	12,345	12,505	25,244	47,241	27,955	35,418	46,247
Net-interest inc./ (exp.)	586	1,007	1,621	1,609	2,647	3,305	3,335	3,475
Assoc/forex/extraord./others	623	852	2,494	2,694	2,462	460	1,500	1,500
Pre-tax profit	32,288	14,203	16,620	29,547	52,350	31,719	40,253	51,222
Tax	(1,351)	(587)	(971)	(2,062)	(5,951)	(3,815)	(4,571)	(5,891)
Min. int./pref. div./others	25	7	39	30	(1)	(51)	0	0
Net profit (reported)	30,961	13,623	15,688	27,515	46,398	27,853	35,682	45,332
Net profit (adjusted)	30,961	13,623	15,688	27,515	46,398	27,853	35,682	45,332
EPS (reported)(TWD)	28.439	12.350	12.896	20.508	30.039	17.718	22.698	28.837
EPS (adjusted)(TWD)	28.439	12.350	12.896	20.508	30.039	17.718	22.698	28.837
EPS (adjusted fully-diluted)(TWD)	28.149	11.872	12.896	20.391	29.526	17.723	22.698	28.837
DPS (TWD)	26.034	19.943	8.491	9.000	15.181	20.000	20.000	20.000
EBIT	31,079	12,345	12,505	25,244	47,241	27,955	35,418	46,247
EBITDA	34,056	15,074	16,202	26,971	50,007	32,840	41,003	52,639

Cash flow (TWDm)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Profit before tax	32,288	14,203	16,620	29,547	52,350	31,719	40,253	51,222
Depreciation and amortisation	2,978	2,729	3,696	1,727	2,766	4,885	5,586	6,392
Tax paid	(1,351)	(587)	(971)	(2,062)	(5,951)	(3,815)	(4,571)	(5,891)
Change in working capital	(4,488)	379	(3,650)	5,374	(14,258)	6,000	(7,500)	2,100
Other operational CF items	(19)	(16)	(4,292)	4,987	9,423	(51)	0	0
Cash flow from operations	29,408	16,707	11,403	39,573	44,330	38,738	33,767	53,824
Capex	(2,122)	(2,585)	(2,268)	(1,629)	(9,828)	(4,211)	(4,826)	(5,617)
Net (acquisitions)/disposals	(3,406)	(260)	231	(369)	(4,741)	0	0	0
Other investing CF items	(746)	3,860	(2,140)	(216)	32,370	0	0	0
Cash flow from investing	(6,274)	1,016	(4,177)	(2,214)	17,802	(4,211)	(4,826)	(5,617)
Change in debt	0	4,255	4,768	20,145	(25)	(22)	(13)	(8)
Net share issues/(repurchases)	0	(2,110)	0	0	0	0	0	0
Dividends paid	(28,343)	(21,999)	(10,328)	(12,074)	(23,448)	(31,440)	(31,440)	(31,440)
Other financing CF items	270	(62)	139	(23)	207	0	0	0
Cash flow from financing	(28,073)	(19,917)	(5,421)	8,048	(23,266)	(31,462)	(31,453)	(31,448)
Forex effect/others	(3,781)	2,088	(1,759)	1,724	3,825	0	0	0
Change in cash	(8,721)	(106)	46	47,131	42,691	3,065	(2,512)	16,759
Free cash flow	27,285	14,123	9,134	37,944	34,502	34,527	28,941	48,206

Source: FactSet, Daiwa forecasts

Financial summary continued ...

Balance sheet (TWDm)

As at 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Cash & short-term investment	92,073	91,032	90,276	139,219	205,294	208,359	205,848	222,606
Inventory	9,388	9,392	13,867	9,347	22,341	19,841	26,841	26,741
Accounts receivable	7,164	7,384	6,585	7,628	12,552	7,552	14,552	11,052
Other current assets	3,970	4,234	7,343	5,547	8,367	5,000	5,000	5,000
Total current assets	112,595	112,042	118,071	161,741	248,555	240,753	252,241	265,400
Fixed assets	7,808	9,810	10,708	11,312	23,295	19,247	22,398	26,097
Goodwill & intangibles	9,572	16,151	15,842	15,509	60,758	50,000	45,000	40,000
Other non-current assets	8,059	9,738	65,622	70,075	18,511	17,501	18,001	18,001
Total assets	138,035	147,741	210,243	258,637	351,119	327,500	337,639	349,498
Short-term debt	0	4,089	8,880	29,052	46,161	46,161	46,161	46,161
Accounts payable	24,088	24,736	22,187	10,944	14,605	13,105	19,605	18,105
Other current liabilities	1,698	1,603	1,806	21,389	40,854	27,022	25,513	24,508
Total current liabilities	25,786	30,428	32,873	61,385	101,620	86,287	91,279	88,774
Long-term debt	0	148	114	87	54	32	19	12
Other non-current liabilities	535	837	1,482	1,812	1,839	1,800	1,800	1,800
Total liabilities	26,321	31,413	34,469	63,283	103,513	88,120	93,098	90,585
Share capital	10,999	11,475	13,494	13,495	15,714	15,716	15,716	15,716
Reserves/R.E./others	100,714	104,803	162,246	181,821	231,454	223,278	228,438	242,810
Shareholders' equity	111,713	116,278	175,740	195,315	247,168	238,994	244,155	258,526
Minority interests	0	50	34	38	438	387	387	387
Total equity & liabilities	138,035	147,741	210,243	258,637	351,119	327,500	337,639	349,498
EV	330,795	336,123	341,620	312,825	264,226	261,088	263,587	246,821
Net debt/(cash)	(92,073)	(86,796)	(81,282)	(110,081)	(159,080)	(162,166)	(159,668)	(176,434)
BVPS (TWD)	102.612	105.409	144.473	145.577	160.024	152.032	155.315	164.457

Key ratios (%)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Sales (YoY)	(1.7)	(23.5)	14.3	37.1	56.6	(1.2)	14.6	16.4
EBITDA (YoY)	(14.1)	(55.7)	7.5	66.5	85.4	(34.3)	24.9	28.4
Operating profit (YoY)	(14.6)	(60.3)	1.3	101.9	87.1	(40.8)	26.7	30.6
Net profit (YoY)	(15.6)	(56.0)	15.2	75.4	68.6	(40.0)	28.1	27.0
Core EPS (fully-diluted) (YoY)	(17.0)	(57.8)	8.6	58.1	44.8	(40.0)	28.1	27.0
Gross-profit margin	53.7	45.3	41.4	44.0	48.8	43.8	42.1	43.1
EBITDA margin	30.0	17.4	16.3	19.8	23.5	15.6	17.0	18.7
Operating-profit margin	27.4	14.2	12.6	18.6	22.2	13.3	14.7	16.5
Net profit margin	27.3	15.7	15.8	20.2	21.8	13.2	14.8	16.1
ROAE	28.1	12.0	10.7	14.8	21.0	11.5	14.8	18.0
ROAA	22.4	9.5	8.8	11.7	15.2	8.2	10.7	13.2
ROCE	28.2	10.6	8.2	12.3	18.2	9.6	12.3	15.5
ROIC	188.0	48.1	19.0	26.1	48.2	29.7	38.7	48.9
Net debt to equity	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Effective tax rate	4.2	4.1	5.8	7.0	11.4	12.0	11.4	11.5
Accounts receivable (days)	23.2	30.6	25.7	19.1	17.3	17.4	16.7	16.6
Current ratio (x)	4.4	3.7	3.6	2.6	2.4	2.8	2.8	3.0
Net interest cover (x)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Net dividend payout	91.5	161.5	65.8	43.9	50.5	112.9	88.1	69.4
Free cash flow yield	6.5	3.3	2.2	9.0	8.2	8.2	6.8	11.4

Source: FactSet, Daiwa forecasts

Company profile

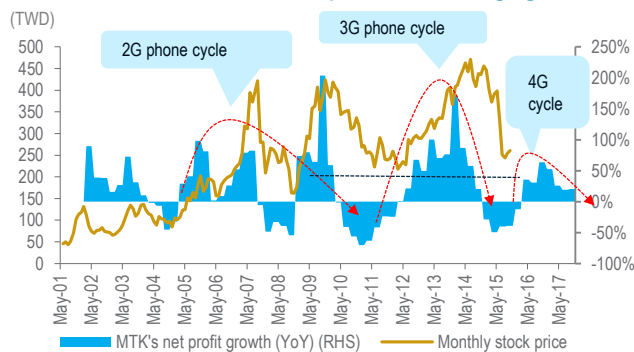
MediaTek was the largest fabless chipmaker (IC design house) in Asia and the third-largest in the world in terms of 2014 revenue. It has successfully captured the industry demand cycles of the past decade, from optical disk drives to feature phones and now smartphones. MediaTek is also the global leader in optical storage and TV SoC IC supply, as well as a major supplier in the global handset chipset market.

MTK: quarterly P&L and key assumptions

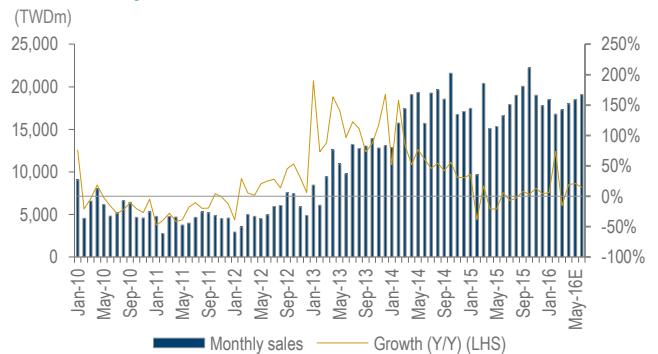
TWDm	1Q15	2Q15	3Q15	4Q15E	1Q16E	2Q16E	3Q16E	4Q16E	2014	2015E	2016E	2017E
Handset revenue	28,581	26,862	32,833	32,571	29,622	31,362	37,714	38,018	130,570	120,848	136,716	160,989
Digital home revenue	9,596	10,382	12,748	12,750	10,211	10,224	12,100	11,736	42,748	45,476	44,271	42,306
Optical storage revenue	3,501	3,817	4,086	4,013	3,714	3,804	3,909	3,746	15,150	15,417	15,174	14,394
Tablet revenue	3,284	2,482	2,436	3,677	3,148	2,587	3,106	3,859	12,412	11,879	13,951	19,759
Networking & other revenue	2,575	3,500	4,860	6,001	5,881	7,620	9,500	9,457	12,183	16,936	31,208	43,421
Total revenue	47,536	47,044	56,962	59,013	52,576	55,598	66,330	66,816	213,063	210,556	241,321	280,869
COGS	-25,038	-25,448	-32,658	-35,161	-31,639	-31,746	-37,830	-38,427	-109,194	-118,305	-139,641	-159,801
Gross profit	22,499	21,596	24,304	23,852	20,937	23,852	28,500	28,390	103,869	92,251	101,679	121,068
Opex	-14,827	-14,731	-16,682	-18,058	-15,089	-15,289	-17,909	-17,974	-56,627	-64,297	-66,262	-74,821
Operating profit	7,672	6,866	7,622	5,794	5,848	8,563	10,591	10,416	47,241	27,954	35,418	46,247
EBITDA	8,727	7,983	8,928	7,201	7,113	9,832	12,104	11,953	50,007	32,839	41,003	52,639
Non-op gain/loss	470	541	1,452	1,302	1,310	1,160	1,160	1,205	5,109	3,765	4,835	4,975
Pretax profit	8,142	7,406	9,074	7,096	7,158	9,723	11,751	11,621	52,350	31,719	40,253	51,222
Income taxes	-891	-1,030	-1,114	-781	-823	-1,118	-1,351	-1,278	-5,951	-3,815	-4,571	-5,891
Net profit	7,226	6,350	7,954	6,323	6,335	8,605	10,400	10,343	46,398	27,852	35,682	45,332
FD O/S (m)	1,572	1,572	1,572	1,572	1,572	1,572	1,572	1,572	1,571	1,572	1,572	1,572
FD EPS (TWD)	4.60	4.04	5.06	4.02	4.03	5.47	6.62	6.58	29.53	17.72	22.70	28.84
Margin												
Gross	47%	46%	43%	40%	40%	43%	43%	42%	49%	44%	42%	43%
Operating	16%	15%	13%	10%	11%	15%	16%	16%	22%	13%	15%	16%
EBITDA	18%	17%	16%	12%	14%	18%	18%	18%	23%	16%	17%	19%
Net	15%	13%	14%	11%	12%	15%	16%	15%	22%	13%	15%	16%
Revenue mix												
Handset revenue	60%	57%	58%	55%	56%	56%	57%	57%	61%	57%	57%	57%
Digital home revenue	20%	22%	22%	22%	19%	18%	18%	18%	20%	22%	18%	15%
Optical storage revenue	7%	8%	7%	7%	7%	7%	6%	6%	7%	7%	6%	5%
Tablet revenue	7%	5%	4%	6%	6%	5%	5%	6%	6%	6%	6%	7%
Networking & other revenue	5%	7%	9%	10%	11%	14%	14%	14%	6%	8%	13%	15%
Growth (QoQ)												
Total revenue	-14%	-1%	21%	4%	-11%	6%	19%	1%				
Gross profit	-15%	-4%	13%	-2%	-12%	14%	19%	0%				
Operating profit	-22%	-11%	11%	-24%	1%	46%	24%	-2%				
EBITDA	-18%	-9%	12%	-19%	-1%	38%	23%	-1%				
Net profit	-30%	-12%	25%	-21%	0%	36%	21%	-1%				
FD EPS	-30%	-12%	25%	-21%	0%	36%	21%	-1%				
Growth (YoY)												
Total revenue	3%	-13%	-1%	6%	11%	18%	16%	13%	57%	-1%	15%	16%
Gross profit	1%	-19%	-14%	-10%	-7%	10%	17%	19%	74%	-11%	10%	19%
Operating profit	-29%	-46%	-45%	-41%	-24%	25%	39%	80%	87%	-41%	27%	31%
EBITDA	-24%	-40%	-39%	-32%	-18%	23%	36%	66%	85%	-34%	25%	28%
Net profit	-29%	-49%	-40%	-39%	-12%	36%	31%	64%	69%	-40%	28%	27%
FD EPS	-29%	-49%	-40%	-39%	-12%	35%	31%	64%	45%	-40%	28%	27%
Shipment (000)												
Smartphone - 3G	59,778	53,055	70,201	62,200	54,574	56,801	63,432	59,277	323,851	245,233	234,083	218,052
Smartphone - 4G	25,619	33,920	48,784	48,871	50,376	59,119	80,732	88,916	33,342	157,194	279,142	437,023
Total smartphone	85,397	86,975	118,985	111,071	104,949	115,919	144,164	148,193	357,194	402,427	513,225	655,074
ASP (USD)												
Smartphone - 3G	9.1	8.7	7.4	7.3	7.1	6.9	6.8	6.7	10.3	8.1	6.9	6.4
Smartphone - 4G*	8.8	8.4	7.7	8.5	8.2	8.1	7.9	7.8	10.9	8.3	8.0	7.5
Gross margin												
Smartphone - 3G	51%	48%	43%	41%	40%	38%	38%	37%	51%	46%	38%	37%
Smartphone - 4G	37%	38%	34%	32%	32%	44%	44%	43%	36%	35%	42%	44%

Source: Company, Daiwa forecasts

Note: * Excluding discrete shipment effect, assuming all SoC type

MTK: correlation between stock price and earnings growth


Source: Company, TEJ, Daiwa forecasts

MTK: monthly revenue trend


Source: Company, TEJ, Daiwa forecasts

Largan Precision (3008 TT)

 Target price: **TWD3,520** (from TWD3,520)

 Share price (4 Dec): **TWD2,530** | Up/downside: **+39.1%**


An undervalued industry leader

- Favourable industry trends for spec upgrades to continue into 2016
- Market concerns appear overdone; market position remains solid
- Risk/reward profile looks attractive; reiterate Buy (1)

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What's new: We expect Largan to deliver solid operating profit growth of 17% YoY in 2016, driven by favourable industry trends and the company's market-leading position. We suggest investors take advantage of near-term muted sentiment to build positions.

What's the impact: Spec upgrades to continue in 2016. Largan is poised to benefit from the industry trend of lens-spec upgrades, given its leading technology and production scale in the high-end lens space, as well as its strong customer profile (it is a major supplier to Apple and the China brands). Our market research suggests that upgrades to lens specs (such as megapixel migration, wider aperture ratios, optical zoom, and the use of multi-cameras and OIS) will continue in coming years. For the China brands, we expect increased adoption of 16-20MP+ cameras for flagship models in 2016, after the tightness in CMOS sensor supply is relieved. Moreover, we see a high possibility of at least one new iPhone model (released in 2H16) adopting a dual camera, which should broaden Largan's addressable market. In addition, we haven't factored in the potential upside into our earnings estimates.

Market concerns seem overdone. Largan's share price has corrected by 30% over the past 3 months, due mainly to market concerns over its market-share loss for the iPhones 6S amid intense price pressure. Our research indicates that Largan's leading position in Apple's business is unchanged. At the analyst meeting in October, Largan's CEO said the company had not seen a meaningful change in pricing competition or in its share of orders for major customers, which reaffirms our confidence.

Lukewarm near-term outlook provides good entry point. In 1Q16, driven by a sequential slowdown in iPhone and iPad shipments after the initial strong ramp-up and seasonal factors (see page 62), we expect Largan's revenue to reach TWD10.9 bn (down by 35% QoQ, up by 3% YoY). The stock is trading at a 12.4x 2016E PER, and we see the risk/reward profile as attractive.

What we recommend: We cut our 2015-17E earnings by 1-2% to factor in our more conservative revenue assumptions. We reiterate our Buy (1) rating and 12 month TP of TWD3,520, based on a 2016E PER of 17x, around the midpoint of the stock's past-5-year trading range of 8-24x. Key risk to our call: weaker-than-expected smartphone sell-through.

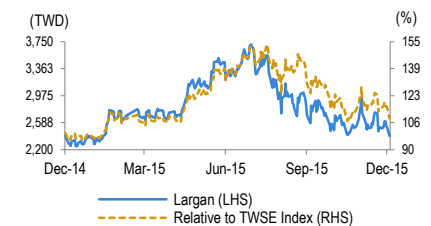
How we differ: We are more positive on Largan's shipments for Apple, and thus our 2016E EPS is 6.4% above consensus.

Forecast revisions (%)

Year to 31 Dec	15E	16E	17E
Revenue change	(2.3)	(3.3)	(3.2)
Net profit change	(2.4)	(1.5)	(1.4)
Core EPS (FD) change	(2.4)	(1.5)	(1.4)

Source: Daiwa forecasts

Share price performance



12-month range	2,250-3,710
Market cap (USDbn)	10.38
3m avg daily turnover (USDm)	99.50
Shares outstanding (m)	134
Major shareholder	Ch'en Shih Ch'ing (5.0%)

Financial summary (TWD)

Year to 31 Dec	15E	16E	17E
Revenue (m)	57,120	65,000	74,050
Operating profit (m)	27,235	31,720	36,944
Net profit (m)	23,786	27,261	31,670
Core EPS (fully-diluted)	177.324	203.224	236.096
EPS change (%)	22.4	14.6	16.2
Daiwa vs Cons. EPS (%)	(0.9)	6.4	8.8
PER (x)	14.3	12.4	10.7
Dividend yield (%)	2.5	3.2	3.7
DPS	62.1	81.3	94.4
PBR (x)	5.4	4.1	3.3
EV/EBITDA (x)	10.2	8.9	7.2
ROE (%)	43.5	37.5	34.3

Source: FactSet, Daiwa forecasts

Financial summary

Key assumptions

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Mobile phone lens shipment ('000 units)	215,100	286,554	344,730	483,614	691,655	804,869	894,999	1,004,986
Blended ASP of handset lens (USD)	1.21	1.33	1.34	1.47	1.77	1.79	1.81	1.85
Gross margin of VCM assembly (%)	7.3	6.8	5.3	6.0	7.4	7.4	7.5	7.5

Profit and loss (TWDm)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Mobile Phone Lens Revenues	11,433	15,243	19,190	26,623	44,926	56,788	64,671	73,809
DSC Lens Revenues	555	391	415	449	393	41	40	40
Other Revenue	363	351	468	362	491	292	289	201
Total Revenue	12,351	15,984	20,072	27,433	45,810	57,120	65,000	74,050
Other income	0	0	0	0	0	0	0	0
COGS	(6,546)	(9,043)	(11,710)	(14,472)	(21,291)	(25,573)	(28,730)	(32,108)
SG&A	(374)	(506)	(530)	(887)	(1,349)	(1,685)	(1,778)	(1,953)
Other op.expenses	(770)	(963)	(1,034)	(1,293)	(2,103)	(2,627)	(2,772)	(3,045)
Operating profit	4,661	5,472	6,798	10,781	21,067	27,235	31,720	36,944
Net-interest inc./(exp.)	28	50	84	122	250	271	411	566
Assoc/forex/extraord./others	(356)	314	(71)	598	1,646	1,152	322	283
Pre-tax profit	4,334	5,837	6,811	11,501	22,963	28,658	32,453	37,792
Tax	(289)	(638)	(1,234)	(1,891)	(3,525)	(4,872)	(5,192)	(6,122)
Min. int./pref. div./others	0	0	0	0	0	0	0	0
Net profit (reported)	4,044	5,199	5,578	9,610	19,438	23,786	27,261	31,670
Net profit (adjusted)	4,044	5,199	5,578	9,610	19,438	23,786	27,261	31,670
EPS (reported)(TWD)	30.150	38.755	41.581	71.640	144.909	177.324	203.224	236.096
EPS (adjusted)(TWD)	30.150	38.755	41.581	71.640	144.909	177.324	203.224	236.096
EPS (adjusted fully-diluted)(TWD)	30.150	38.755	41.581	71.640	144.909	177.324	203.224	236.096
DPS (TWD)	13.500	17.000	17.000	28.500	51.000	62.063	81.290	94.439
EBIT	4,661	5,472	6,798	10,781	21,067	27,235	31,720	36,944
EBITDA	5,398	6,372	8,005	12,229	22,728	29,292	31,720	36,944

Cash flow (TWDm)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Profit before tax	4,334	5,837	6,811	11,501	22,963	28,658	32,453	37,792
Depreciation and amortisation	737	900	1,208	1,448	1,661	2,058	2,633	3,208
Tax paid	(289)	(638)	(1,234)	(1,891)	(3,525)	(4,872)	(5,192)	(6,122)
Change in working capital	(539)	1,202	(783)	(363)	(920)	(2,405)	(998)	(1,655)
Other operational CF items	21	18	(2)	51	(32)	(2)	(3)	(3)
Cash flow from operations	4,263	7,318	6,000	10,746	20,147	23,436	28,893	33,219
Capex	(1,066)	(3,149)	(2,865)	(1,504)	(5,568)	(5,000)	(5,000)	(5,000)
Net (acquisitions)/disposals	(1)	(2)	(101)	9	194	(10)	(10)	(10)
Other investing CF items	(21)	(23)	(19)	(1,593)	(695)	2,335	0	1
Cash flow from investing	(1,088)	(3,173)	(2,985)	(3,088)	(6,069)	(2,675)	(5,010)	(5,009)
Change in debt	142	319	(356)	12	108	(112)	0	0
Net share issues/(repurchases)	0	0	0	0	0	0	0	0
Dividends paid	(1,341)	(1,811)	(2,280)	(2,280)	(3,823)	(6,841)	(8,325)	(10,904)
Other financing CF items	(23)	37	(43)	51	138	0	0	0
Cash flow from financing	(1,223)	(1,456)	(2,679)	(2,217)	(3,577)	(6,954)	(8,325)	(10,904)
Forex effect/others	0	0	0	0	0	0	0	0
Change in cash	1,952	2,690	336	5,440	10,501	13,808	15,558	17,306
Free cash flow	3,197	4,169	3,136	9,242	14,579	18,436	23,893	28,219

Source: FactSet, Daiwa forecasts

Financial summary continued ...

Balance sheet (TWDm)

As at 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Cash & short-term investment	8,579	11,268	11,604	17,045	27,546	41,354	56,912	74,218
Inventory	902	1,461	2,532	2,693	3,538	3,934	4,104	4,522
Accounts receivable	3,182	3,510	6,581	6,823	13,338	14,867	16,918	19,273
Other current assets	153	234	255	248	388	439	464	529
Total current assets	12,815	16,473	20,973	26,809	44,809	60,595	78,398	98,542
Fixed assets	5,795	8,057	9,731	9,800	13,722	16,664	19,032	20,824
Goodwill & intangibles	0	0	0	0	0	0	0	0
Other non-current assets	386	379	485	2,004	2,523	199	212	224
Total assets	18,996	24,909	31,188	38,614	61,054	77,458	97,642	119,590
Short-term debt	112	444	93	83	190	100	100	100
Accounts payable	560	1,358	3,555	2,507	4,999	6,005	6,746	7,565
Other current liabilities	1,871	3,243	4,426	5,507	9,594	8,160	8,667	9,030
Total current liabilities	2,543	5,045	8,075	8,097	14,783	14,265	15,513	16,696
Long-term debt	0	0	0	0	0	0	0	0
Other non-current liabilities	67	54	49	71	72	50	50	50
Total liabilities	2,610	5,099	8,124	8,168	14,855	14,315	15,563	16,746
Share capital	1,341	1,341	1,341	1,341	1,341	1,341	1,341	1,341
Reserves/R.E./others	15,045	18,469	21,723	29,104	44,857	61,802	80,737	101,503
Shareholders' equity	16,386	19,810	23,064	30,445	46,198	63,143	82,079	102,844
Minority interests	0	0	0	0	0	0	0	0
Total equity & liabilities	18,996	24,909	31,188	38,614	61,054	77,458	97,642	119,590
EV	330,908	328,550	327,863	322,412	312,019	298,121	282,563	265,257
Net debt/(cash)	(8,467)	(10,824)	(11,511)	(16,962)	(27,356)	(41,254)	(56,812)	(74,118)
BVPS (TWD)	122.156	147.685	171.943	226.965	344.402	470.726	611.887	766.694

Key ratios (%)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Sales (YoY)	51.5	29.4	25.6	36.7	67.0	24.7	13.8	13.9
EBITDA (YoY)	61.4	18.0	25.6	52.8	85.9	28.9	8.3	16.5
Operating profit (YoY)	71.3	17.4	24.2	58.6	95.4	29.3	16.5	16.5
Net profit (YoY)	62.7	28.5	7.3	72.3	102.3	22.4	14.6	16.2
Core EPS (fully-diluted) (YoY)	61.7	28.5	7.3	72.3	102.3	22.4	14.6	16.2
Gross-profit margin	47.0	43.4	41.7	47.2	53.5	55.2	55.8	56.6
EBITDA margin	43.7	39.9	39.9	44.6	49.6	51.3	48.8	49.9
Operating-profit margin	37.7	34.2	33.9	39.3	46.0	47.7	48.8	49.9
Net profit margin	32.7	32.5	27.8	35.0	42.4	41.6	41.9	42.8
ROAE	26.9	28.7	26.0	35.9	50.7	43.5	37.5	34.3
ROAA	23.3	23.7	19.9	27.5	39.0	34.3	31.1	29.2
ROCE	30.8	29.8	31.3	40.2	54.8	49.7	43.6	39.9
ROIC	57.9	57.7	54.2	72.0	110.3	111.0	113.0	114.7
Net debt to equity	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Effective tax rate	6.7	10.9	18.1	16.4	15.4	17.0	16.0	16.2
Accounts receivable (days)	82.1	76.4	91.7	89.2	80.3	90.1	89.2	89.2
Current ratio (x)	5.0	3.3	2.6	3.3	3.0	4.2	5.1	5.9
Net interest cover (x)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Net dividend payout	44.8	43.9	40.9	39.8	35.2	35.0	40.0	40.0
Free cash flow yield	0.9	1.2	0.9	2.7	4.3	5.4	7.0	8.3

Source: FactSet, Daiwa forecasts

Company profile

In Asia ex-Japan, Largan Precision is the leading lens manufacturer for mobile handsets. Nokia, Motorola, Sony Ericsson, Apple, HTC, and Blackberry are the company's major customers. It currently has about a 28% share of the global handset-lens market.

Largan: quarterly and annual P&L statement

(TWDm)	2015E				2016E				2014	2015E	2016E
	1Q	2Q	3Q	4QE	1QE	2QE	3QE	4QE			
Net sales	10,567	13,776	16,086	16,692	10,880	14,015	18,184	21,921	45,810	57,120	65,000
COGS	4,574	5,825	7,222	7,952	4,896	6,026	8,274	9,534	21,291	25,573	28,730
Gross profit	5,994	7,951	8,863	8,740	5,984	7,988	9,910	12,387	24,520	31,547	36,270
Operating costs	813	845	1,447	1,208	844	933	1,260	1,513	3,453	4,313	4,550
Operating profit	5,181	7,106	7,416	7,532	5,140	7,056	8,650	10,874	21,067	27,235	31,720
Pre-tax income	5,082	6,972	9,219	7,385	5,323	7,239	8,833	11,058	22,963	28,658	32,453
Net income	4,407	4,824	8,206	6,349	4,631	5,212	7,685	9,732	19,438	23,786	27,261
Net EPS (TWD)	32.86	35.96	61.17	47.33	34.53	38.86	57.29	72.55	144.91	177.32	203.22
Operating ratios											
Gross margin	56.7%	57.7%	55.1%	52.4%	55.0%	57.0%	54.5%	56.5%	53.5%	55.2%	55.8%
Operating margin	49.0%	51.6%	46.1%	45.1%	47.2%	50.3%	47.6%	49.6%	46.0%	47.7%	48.8%
Pre-tax margin	48.1%	50.6%	57.3%	44.2%	48.9%	51.7%	48.6%	50.4%	50.1%	50.2%	49.9%
Net margin	41.7%	35.0%	51.0%	38.0%	42.6%	37.2%	42.3%	44.4%	42.4%	41.6%	41.9%
YoY (%)											
Net revenue	54%	38%	33%	-1%	3%	2%	13%	31%	67%	25%	14%
Gross profit	57%	37%	40%	2%	0%	0%	12%	42%	89%	29%	15%
Operating income	61%	39%	37%	3%	-1%	-1%	17%	44%	95%	29%	17%
Pre-tax income	44%	39%	53%	-12%	5%	4%	-4%	50%	100%	25%	13%
Net income	47%	30%	55%	-15%	5%	8%	-6%	53%	102%	22%	15%
QoQ (%)											
Net revenue	-37%	30%	17%	4%	-35%	29%	30%	21%			
Gross profit	-30%	33%	11%	-1%	-32%	33%	24%	25%			
Operating income	-29%	37%	4%	2%	-32%	37%	23%	26%			
Pre-tax income	-39%	37%	32%	-20%	-28%	36%	22%	25%			
Net income	-41%	9%	70%	-23%	-27%	13%	47%	27%			

Source: Company, Daiwa forecasts

iPhone: production volume by model

(m units)	1Q15	2Q15	3Q15	4Q15E	1Q16E
iPhone 4 & 4S	2.0	0.5	0.0	0.0	0.0
iPhone 5C	2.5	1.0	0.5	0.0	0.0
iPhone 5S	8.0	4.5	4.0	2.5	2.0
iPhone 6 & 6 Plus	45.5	47.0	19.5	13.5	8.0
iPhone 6S & 6S Plus	0.0	0.0	22.0	60.0	42.0
Total	58.0	53.0	46.0	76.0	52.0

Source: Daiwa estimates and forecasts

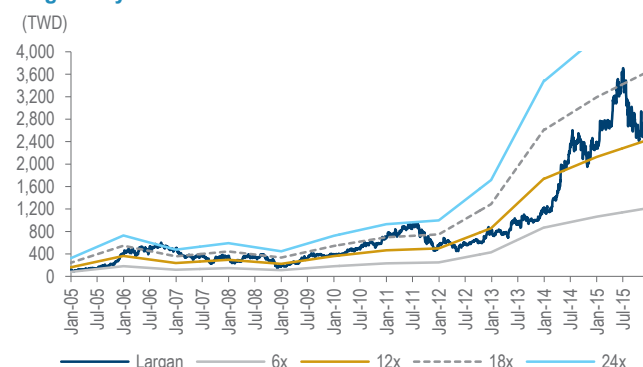
Note: This table represents Daiwa's iPhone production estimates and forecasts, which differ slightly from the iPhone sales figures reported by Apple

iPad: production volume by model

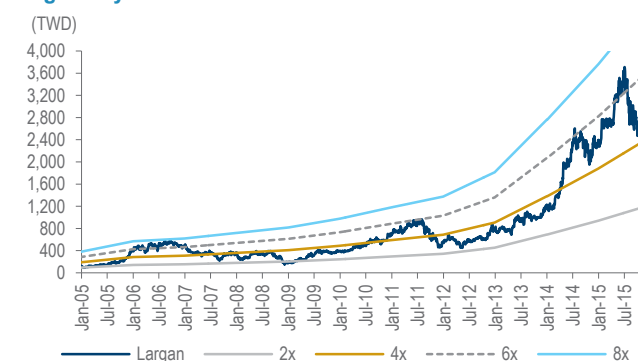
(m units)	1Q15	2Q15	3Q15	4Q15E	1Q16E
iPad Air	7.5	6.0	7.0	7.0	5.0
iPad mini	0.5	0.5	0.0	0.0	0.0
iPad mini Retina	4.0	3.5	4.0	5.0	4.0
iPad Pro	0.0	0.0	0.0	3.0	2.0
Total	12.0	10.0	11.0	15.0	11.0

Source: Daiwa estimates and forecasts

Note: This table represents Daiwa's iPad production estimates and forecasts, which differ slightly from the iPad sales figures reported by Apple

Largan: 1-year-forward PER


Source: TEJ, Daiwa forecasts

Largan: 1-year-forward PBR


Source: TEJ, Daiwa forecasts

Catcher Technology (2474 TT)

 Target price: **TWD480.00** (from TWD480.00)

 Share price (4 Dec): **TWD317.50** | Up/downside: **+51.1%**


Our top pick in the casing realm

- Solid 4Q15 revenue, followed by likely above-seasonal 1Q16
- Sustained share gains in key client's order allocations in 2016
- Reiterate Buy (1) and target price of TWD480

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What's new: We expect Catcher to continue to register solid revenue and earnings growth, driven primarily by its sustained market-share gains in metal casings order allocations for the 4.7" iPhone (both 6 and 6S).

What's the impact: Near-term update. Catcher guides for 15% QoQ growth in revenue in 4Q15, in line with our forecast of 16% QoQ growth (TWD24.8bn). The company's October revenue (TWD8.2bn, up 3% MoM and 52% YoY, respectively) achieved 33% of our 4Q15 forecast and seems on track. Management has been positive on monthly revenue momentum since September, and we expect this momentum, driven mainly by iPhone 6S, to have extended into November.

1Q16 likely to see above-seasonal revenue. Looking into 1Q16, Catcher's order book remains solid and the company expects its capacity utilisation to remain high, although the Lunar New Year holiday in February will likely mean a decline in revenue due to fewer working days. As such, we expect above-seasonal revenue momentum in 1Q16 – we factor into our forecasts a 17% QoQ revenue decline for 1Q16, although total iPhone shipments may drop by 32% QoQ in 1Q16, based on Daiwa's smartphone analyst Kylie Huang's forecasts.

iPhone business the main growth driver. We still expect Catcher to handle 9% of iPhone casings in 2015 and 12% in 2016, and to continue to gain more market share. As Apple consistently pursues more advanced casing solutions to maintain its premium, this should mean a consistently high entry barrier for other metal casing makers. Aside from Apple, Catcher is still seeing favourable adoption of high-end metal casings by many of its clients for their advanced models, including notebooks and smartphones. Management expects a robust capacity increase in 2016 (vs. 30% in 2015E), with more details to be released in due course.

What we recommend: We reaffirm our Buy (1) rating and 12-month target price of TWD480, based on a 14x PER (the high end of the stock's past-3-year trading range of 6-14x) applied to our 1-year-forward EPS forecast (ie, 4Q15-3Q16). We remain positive on Catcher's long-term competitiveness in the light metal casing business and steady share gains in iPhone casing order allocations. Favourable seasonality in 4Q15 and likely above-seasonal revenue momentum in 1Q16 would be effective catalysts. The key risk: weaker-than-expected iPhone demand.

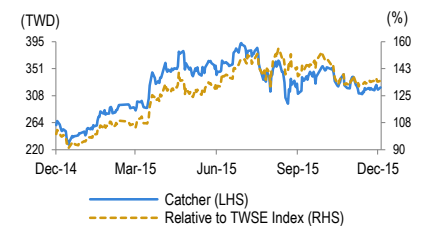
How we differ: We are less worried than the market about competition for Catcher's iPhone casing orders, given its experience in metal casings and the likelihood of further market-share gains in future order allocations.

Forecast revisions (%)

Year to 31 Dec	15E	16E	17E
Revenue change	-	-	-
Net profit change	-	-	-
Core EPS (FD) change	-	-	-

Source: Daiwa forecasts

Share price performance



12-month range	228.00-393.00
Market cap (USDbn)	7.48
3m avg daily turnover (USDm)	56.44
Shares outstanding (m)	770
Major shareholder	Kai I Invest Co Ltd (4.2%)

Financial summary (TWD)

Year to 31 Dec	15E	16E	17E
Revenue (m)	83,688	99,741	116,431
Operating profit (m)	30,408	36,928	43,272
Net profit (m)	25,340	27,791	32,755
Core EPS (fully-diluted)	32.892	36.074	42.518
EPS change (%)	41.7	9.7	17.9
Daiwa vs Cons. EPS (%)	6.7	0.5	2.3
PER (x)	9.7	8.8	7.5
Dividend yield (%)	6.9	6.7	7.4
DPS	21.9	21.4	23.4
PBR (x)	2.3	2.1	1.9
EV/EBITDA (x)	6.0	5.0	4.2
ROE (%)	25.3	25.2	26.6

Source: FactSet, Daiwa forecasts

Financial summary

Key assumptions

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
PC casing ASP YoY%	n.a.	(2.1)	(2.2)	(2.8)	0.3	1.9	(0.2)	0.5
PC casing shipment YoY%	n.a.	59.9	6.5	(24.3)	(3.4)	(5.7)	(0.4)	1.8
Handset casing ASP YoY%	n.a.	0.0	(5.7)	20.3	25.8	24.7	8.0	2.1
Handset casing shipment YoY%	n.a.	92.4	(8.2)	24.5	29.5	49.7	15.6	19.9

Profit and loss (TWDm)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Notebook casings	13,350	19,520	20,592	15,032	14,874	14,934	15,189	15,535
Mobile device casings	6,226	14,458	14,785	27,201	39,466	67,793	83,597	99,876
Other Revenue	2,268	1,936	1,652	1,013	937	961	956	1,020
Total Revenue	21,845	35,914	37,029	43,246	55,277	83,688	99,741	116,431
Other income	0	0	0	0	0	0	0	0
COGS	(14,092)	(19,023)	(20,990)	(24,925)	(29,176)	(44,505)	(52,651)	(61,685)
SG&A	(1,964)	(2,897)	(2,942)	(3,562)	(5,016)	(7,339)	(8,595)	(9,790)
Other op. expenses	(701)	(781)	(939)	(843)	(1,060)	(1,435)	(1,566)	(1,685)
Operating profit	5,087	13,213	12,158	13,916	20,025	30,408	36,928	43,272
Net-interest inc./(exp.)	20	126	338	367	661	487	488	490
Assoc/forex/extraord./others	80	366	1,455	3,245	2,858	3,960	612	988
Pre-tax profit	5,187	13,705	13,951	17,528	23,545	34,854	38,029	44,750
Tax	(740)	(3,040)	(3,042)	(3,711)	(5,657)	(9,491)	(10,237)	(11,995)
Min. int./pref. div./others	(17)	12	(19)	(16)	(11)	(24)	0	0
Net profit (reported)	4,430	10,677	10,890	13,801	17,877	25,340	27,791	32,755
Net profit (adjusted)	4,430	10,677	10,890	13,801	17,877	25,340	27,791	32,755
EPS (reported)(TWD)	6.662	14.224	14.507	18.384	23.205	32.892	36.074	42.518
EPS (adjusted)(TWD)	6.662	14.224	14.507	18.384	23.205	32.892	36.074	42.518
EPS (adjusted fully-diluted)(TWD)	6.662	14.224	14.507	18.384	23.205	32.892	36.074	42.518
DPS (TWD)	2.000	4.153	5.034	6.000	5.009	21.883	21.380	23.448
EBIT	5,087	13,213	12,158	13,916	20,025	30,408	36,928	43,272
EBITDA	7,122	15,778	16,433	19,141	26,092	37,268	44,500	51,623

Cash flow (TWDm)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Profit before tax	5,187	13,705	13,951	17,528	23,545	34,854	38,029	44,750
Depreciation and amortisation	2,035	2,564	4,275	5,225	6,067	6,860	7,572	8,352
Tax paid	(740)	(3,040)	(3,042)	(3,711)	(5,657)	(9,491)	(10,237)	(11,995)
Change in working capital	(2,045)	(3,163)	(2,681)	(2,312)	(3,808)	(6,667)	(4,547)	(4,648)
Other operational CF items	36	1,428	(1,023)	3,385	6,526	(414)	146	147
Cash flow from operations	4,473	11,494	11,479	20,116	26,672	25,142	30,962	36,606
Capex	(5,219)	(8,057)	(8,387)	(9,629)	(20,212)	(18,166)	(15,294)	(12,906)
Net (acquisitions)/disposals	(560)	(258)	(237)	(2,720)	3,601	(32)	(50)	(50)
Other investing CF items	6,217	3,423	282	1,621	730	357	0	0
Cash flow from investing	437	(4,893)	(8,343)	(10,728)	(15,880)	(17,841)	(15,344)	(12,956)
Change in debt	1,374	11,591	6,178	(11,037)	(1,629)	308	0	0
Net share issues/(repurchases)	(15)	6,209	0	0	0	0	0	0
Dividends paid	(1,330)	(2,761)	(3,779)	(4,504)	(3,760)	(16,858)	(16,471)	(18,064)
Other financing CF items	163	(233)	385	(1,044)	(90)	125	0	0
Cash flow from financing	192	14,806	2,785	(16,586)	(5,479)	(16,426)	(16,471)	(18,064)
Forex effect/others	(1,579)	1,544	(393)	1,177	3,117	(726)	0	0
Change in cash	3,523	22,951	5,528	(6,021)	8,430	(9,852)	(853)	5,585
Free cash flow	(747)	3,437	3,092	10,486	6,461	6,976	15,668	23,700

Source: FactSet, Daiwa forecasts

Financial summary continued ...

Balance sheet (TWDm)

As at 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Cash & short-term investment	17,896	41,659	46,663	42,643	48,137	37,965	37,112	42,697
Inventory	2,136	2,538	2,449	3,873	5,600	7,226	8,548	10,015
Accounts receivable	9,560	12,490	15,386	17,767	21,430	29,671	35,363	41,280
Other current assets	4,868	1,308	2,135	1,064	4,710	4,470	4,470	4,470
Total current assets	34,461	57,995	66,633	65,347	79,878	79,331	85,493	98,462
Fixed assets	20,931	28,408	30,998	34,903	45,405	57,780	65,502	70,057
Goodwill & intangibles	0	0	0	0	0	0	0	0
Other non-current assets	2,702	2,875	3,295	5,129	11,682	12,077	12,100	12,122
Total assets	58,094	89,278	100,926	105,379	136,965	149,188	163,095	180,642
Short-term debt	11,784	17,040	24,440	16,156	15,527	15,835	15,835	15,835
Accounts payable	4,680	5,722	5,959	7,393	10,280	13,479	15,946	18,682
Other current liabilities	7,395	2,988	6,343	8,026	6,373	6,964	6,964	6,964
Total current liabilities	23,859	25,751	36,741	31,575	32,180	36,278	38,745	41,481
Long-term debt	1,307	7,413	2,863	0	0	0	0	0
Other non-current liabilities	74	110	111	124	8,695	8,289	8,289	8,289
Total liabilities	25,240	33,273	39,716	31,699	40,876	44,566	47,034	49,770
Share capital	6,649	7,506	7,507	7,507	7,704	7,704	7,704	7,704
Reserves/R.E./others	26,027	48,305	53,524	66,002	88,194	96,762	108,201	123,012
Shareholders' equity	32,676	55,812	61,031	73,509	95,898	104,466	115,905	130,716
Minority interests	178	193	179	171	191	156	156	156
Total equity & liabilities	58,094	89,278	100,926	105,379	136,965	149,188	163,095	180,642
EV	239,971	227,586	225,418	218,282	212,180	222,625	223,478	217,893
Net debt/(cash)	(4,805)	(17,206)	(19,360)	(26,487)	(32,610)	(22,130)	(21,277)	(26,863)
BVPS (TWD)	49.144	74.352	81.299	97.921	124.479	135.601	150.450	169.675

Key ratios (%)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Sales (YoY)	28.6	64.4	3.1	16.8	27.8	51.4	19.2	16.7
EBITDA (YoY)	29.3	121.5	4.2	16.5	36.3	42.8	19.4	16.0
Operating profit (YoY)	42.9	159.7	(8.0)	14.5	43.9	51.8	21.4	17.2
Net profit (YoY)	33.4	141.0	2.0	26.7	29.5	41.7	9.7	17.9
Core EPS (fully-diluted) (YoY)	33.4	113.5	2.0	26.7	26.2	41.7	9.7	17.9
Gross-profit margin	35.5	47.0	43.3	42.4	47.2	46.8	47.2	47.0
EBITDA margin	32.6	43.9	44.4	44.3	47.2	44.5	44.6	44.3
Operating-profit margin	23.3	36.8	32.8	32.2	36.2	36.3	37.0	37.2
Net profit margin	20.3	29.7	29.4	31.9	32.3	30.3	27.9	28.1
ROAE	13.7	24.1	18.6	20.5	21.1	25.3	25.2	26.6
ROAA	7.9	14.5	11.5	13.4	14.8	17.7	17.8	19.1
ROCE	10.7	20.9	14.4	15.6	19.9	26.2	29.3	31.1
ROIC	14.4	30.8	23.6	24.6	27.5	30.3	30.4	31.9
Net debt to equity	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Effective tax rate	14.3	22.2	21.8	21.2	24.0	27.2	26.9	26.8
Accounts receivable (days)	132.5	112.1	137.4	139.9	129.4	111.4	119.0	120.1
Current ratio (x)	1.4	2.3	1.8	2.1	2.5	2.2	2.2	2.4
Net interest cover (x)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Net dividend payout	30.0	29.2	34.7	32.6	21.6	66.5	59.3	55.1
Free cash flow yield	n.a.	1.4	1.3	4.3	2.6	2.9	6.4	9.7

Source: FactSet, Daiwa forecasts

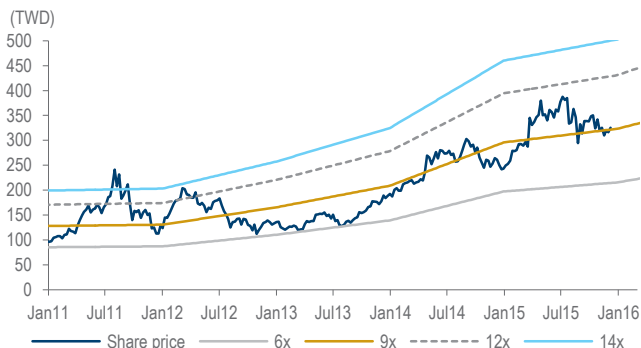
Company profile

Established in 1984, Catcher Technology (Catcher) started out producing aluminium die-casting for hard-disk drives. The company launched its first magnesium-alloy products for notebook PCs in 1996, and aggressively expanded its production lines thereafter. It has become one of the world's largest suppliers of light metal casings/enclosures for mobile electronic products. Its operations have been extended to other consumer products, such as smartphones, portable media players and digital cameras.

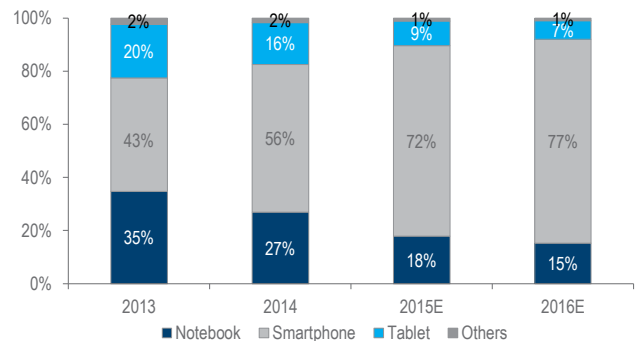
Catcher: quarterly and annual P&L statement

(TWDm)	2015				2016				2014	2015E	2016E
	1Q	2Q	3Q	4QE	1QE	2QE	3QE	4QE			
Net sales	17,400	20,129	21,405	24,754	20,552	23,277	25,875	30,038	55,277	83,688	99,741
COGS	(9,291)	(10,581)	(11,447)	(13,186)	(10,941)	(12,371)	(13,543)	(15,796)	(29,176)	(44,505)	(52,651)
Gross profit	8,109	9,548	9,958	11,568	9,611	10,906	12,332	14,241	26,101	39,183	47,090
Operating expense	(1,866)	(2,039)	(2,333)	(2,537)	(2,107)	(2,386)	(2,665)	(3,004)	(6,076)	(8,775)	(10,161)
Operating profit	6,243	7,509	7,625	9,031	7,504	8,520	9,667	11,238	20,025	30,408	36,928
Non-operating profit	6	652	3,356	404	189	177	273	284	3,520	4,418	922
Pre-tax profit	6,250	8,161	10,981	9,434	7,693	8,697	9,939	11,522	23,545	34,826	37,851
Taxes	(1,585)	(2,903)	(2,808)	(2,170)	(1,923)	(3,131)	(2,485)	(2,650)	(5,657)	(9,466)	(10,189)
Net profit	4,652	5,247	8,154	7,264	5,770	5,566	7,454	8,872	17,877	25,317	27,662
Net EPS (TWD)	6.04	6.81	10.58	9.43	7.49	7.22	9.68	11.52	23.21	32.86	35.91
Operating Ratios											
Gross margin	46.6%	47.4%	46.5%	46.7%	46.8%	46.9%	47.7%	47.4%	47.2%	46.8%	47.2%
Operating margin	35.9%	37.3%	35.6%	36.5%	36.5%	36.6%	37.4%	37.4%	36.2%	36.3%	37.0%
Pre-tax margin	35.9%	40.5%	51.3%	38.1%	37.4%	37.4%	38.4%	38.4%	42.6%	41.6%	37.9%
Net margin	26.7%	26.1%	38.1%	29.3%	28.1%	23.9%	28.8%	29.5%	32.3%	30.3%	27.7%
YoY (%)											
Net revenues	67%	51%	47%	45%	18%	16%	21%	21%	28%	51%	19%
Gross profit	88%	46%	40%	42%	19%	14%	24%	23%	42%	50%	20%
Operating income	95%	46%	40%	46%	20%	13%	27%	24%	44%	52%	21%
Pre-tax income	62%	50%	74%	19%	23%	7%	-9%	22%	34%	48%	9%
Net income	56%	44%	69%	13%	24%	6%	-9%	22%	30%	42%	9%
QoQ (%)											
Net revenues	2%	16%	6%	16%	-17%	13%	11%	16%			
Gross profit	0%	18%	4%	16%	-17%	13%	13%	15%			
Operating income	1%	20%	2%	18%	-17%	14%	13%	16%			
Pre-tax income	-21%	31%	35%	-14%	-18%	13%	14%	16%			
Net income	-28%	13%	55%	-11%	-21%	-4%	34%	19%			

Source: Company, Daiwa forecasts

Catcher: 1-year-forward PER


Source: TEJ, Daiwa forecasts

Catcher: revenue breakdown by product


Source: Company, Daiwa forecasts

AAC Technologies (2018 HK)

 Target price: **HKD58.00** (from HKD58.00)

 Share price (4 Dec): **HKD53.55** | Up/downside: **+8.3%**

 5 4 3 2 1
Buy
 (unchanged)

Multiple revenue growth drivers in 2016

- Promising outlook for non-acoustic products
- Spec upgrades for acoustic products likely to kick in in 2016
- 2016 looks good, with 21% YoY operating profit growth; reaffirm Buy (1)

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What's new: We expect 2016 to be another strong year for AAC, driven by multiple revenue growth drivers for both acoustic and non-acoustic products.

What's the impact: Strong ramp-up in non-acoustic orders. In non-acoustics, AAC sees its haptics order share at its major customer remaining solid and expects sequential revenue growth in 2016, on spec upgrades and the increasing adoption for smartphones. In addition to haptics, AAC expects the revenue contribution from its RF mechanical products to ramp up in 2016 on more project wins. We forecast AAC's non-acoustic sales mix to rise to 40-45% in 2016, from 35-40% in 2015 and 20% in 2014, on a higher ASP for haptics and more orders secured for RF products.

Acoustics: spec upgrades and increasing adoption. For the acoustics business, AAC expects product spec upgrades and increasing speaker-box penetration in the China market to be major revenue-growth drivers. Our supply-chain research indicates that the next iPhones in 2H16 are likely to come with waterproof function speaker boxes, which should push up AAC's ASP. We expect AAC's acoustic business to deliver high-single digit revenue growth in 2016, from 4% YoY in 2015 and a 10% YoY decline in 2014.

Positive tone for 2016. At the analyst meeting on 12 November, AAC's CEO was positive on 2016 and expects double-digit revenue growth in 2016 (up to 20% YoY). We forecast 16% YoY revenue growth in 2016, with operating profit growth of 21% YoY.

What we recommend: We reaffirm our Buy (1) rating on AAC and our 12-month target price of HKD58, based on 2016E PER of 16x, which is around the midpoint of the stock's past-3-year trading range of 10-20x. The key risk to our call: greater-than-expected pricing competition.

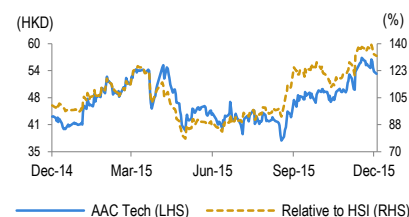
How we differ: Our 2015-17 earnings forecasts are 5-8% higher than consensus as we are more positive on AAC's non-acoustics business.

Forecast revisions (%)

Year to 31 Dec	15E	16E	17E
Revenue change	-	-	-
Net profit change	-	-	-
Core EPS (FD) change	-	-	-

Source: Daiwa forecasts

Share price performance



12-month range	37.60-56.75
Market cap (USDbn)	8.48
3m avg daily turnover (USDm)	26.16
Shares outstanding (m)	1,228
Major shareholder	Chun Yuan Wu Ingrid (21.4%)

Financial summary (CNY)

Year to 31 Dec	15E	16E	17E
Revenue (m)	11,580	13,450	15,200
Operating profit (m)	3,239	3,927	4,537
Net profit (m)	3,060	3,605	4,155
Core EPS (fully-diluted)	2.492	2.936	3.383
EPS change (%)	32.0	17.8	15.3
Daiwa vs Cons. EPS (%)	5.2	6.1	7.6
PER (x)	17.8	15.1	13.1
Dividend yield (%)	1.7	2.0	2.3
DPS	0.748	0.881	1.015
PBR (x)	4.8	3.9	3.2
EV/EBITDA (x)	13.7	10.9	8.9
ROE (%)	29.8	28.5	26.8

Source: FactSet, Daiwa forecasts

Financial summary

Key assumptions

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Receiver sales growth (% YoY)	39.9	35.8	49.0	30.3	21.6	(24.6)	(17.6)	(9.2)
Speaker box sales growth (% YoY)	0.0	109.0	91.4	79.0	(24.1)	14.2	24.3	26.7
Non-acoustic products sales growth (% YoY)	0.0	0.0	0.0	0.0	1,858.8	138.6	31.3	16.1

Profit and loss (CNYm)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Acoustic products	2,849	3,688	5,826	7,602	6,857	7,174	7,705	8,519
Non-acoustic	0	0	0	93	1,812	4,325	5,678	6,590
Other Revenue	500	372	457	401	210	81	67	91
Total Revenue	3,349	4,060	6,283	8,096	8,879	11,580	13,450	15,200
Other income	0	0	0	0	0	0	0	0
COGS	(1,839)	(2,275)	(3,509)	(4,637)	(5,201)	(6,769)	(7,801)	(8,770)
SG&A	(237)	(290)	(464)	(530)	(537)	(1,022)	(1,119)	(1,230)
Other op. expenses	(214)	(358)	(462)	(553)	(656)	(550)	(603)	(662)
Operating profit	1,060	1,136	1,849	2,376	2,485	3,239	3,927	4,537
Net-interest inc./(exp.)	20	22	4	6	10	2	7	12
Assoc/forex/extraord./others	20	(17)	163	453	85	155	85	85
Pre-tax profit	1,099	1,142	2,016	2,835	2,581	3,396	4,020	4,634
Tax	(112)	(109)	(259)	(263)	(270)	(343)	(422)	(487)
Min. int./pref. div./others	(1)	3	6	6	7	7	n.a.	n.a.
Net profit (reported)	987	1,036	1,763	2,578	2,318	3,060	3,605	4,155
Net profit (adjusted)	987	1,036	1,763	2,578	2,318	3,060	3,605	4,155
EPS (reported)(CNY)	0.804	0.844	1.435	2.099	1.887	2.492	2.936	3.383
EPS (adjusted)(CNY)	0.804	0.844	1.435	2.099	1.887	2.492	2.936	3.383
EPS (adjusted fully-diluted)(CNY)	0.804	0.844	1.435	2.099	1.887	2.492	2.936	3.383
DPS (CNY)	0.359	0.360	0.574	0.603	0.857	0.748	0.881	1.015
EBIT	1,060	1,136	1,849	2,376	2,485	3,239	3,927	4,537
EBITDA	1,257	1,395	2,192	2,828	3,010	3,934	4,881	5,748

Cash flow (CNYm)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Profit before tax	1,099	1,142	2,016	2,835	2,581	3,396	4,020	4,634
Depreciation and amortisation	197	259	343	452	525	695	953	1,211
Tax paid	(112)	(109)	(259)	(263)	(270)	(343)	(422)	(487)
Change in working capital	(264)	(325)	(521)	(97)	(890)	(257)	(1,214)	(730)
Other operational CF items	(1)	(0)	6	(21)	8	15	8	8
Cash flow from operations	919	967	1,584	2,905	1,953	3,506	3,344	4,637
Capex	(576)	(1,189)	(1,253)	(782)	(1,827)	(2,000)	(2,000)	(1,500)
Net (acquisitions)/disposals	(104)	(75)	(60)	264	(12)	0	1	1
Other investing CF items	(177)	(100)	(59)	(464)	(341)	(52)	(54)	(56)
Cash flow from investing	(857)	(1,363)	(1,373)	(981)	(2,180)	(2,052)	(2,053)	(1,555)
Change in debt	283	437	172	(108)	447	43	44	45
Net share issues/(repurchases)	0	0	0	0	0	0	0	0
Dividends paid	(245)	(441)	(442)	(705)	(740)	(1,052)	(918)	(1,081)
Other financing CF items	(101)	41	(2)	(71)	(231)	0	0	0
Cash flow from financing	(62)	36	(272)	(884)	(525)	(1,010)	(874)	(1,036)
Forex effect/others	0	0	0	0	0	0	0	0
Change in cash	(1)	(361)	(60)	1,040	(752)	444	417	2,046
Free cash flow	62	(396)	212	1,924	(227)	1,454	1,344	3,137

Source: FactSet, Daiwa forecasts

Financial summary continued ...

Balance sheet (CNYm)

As at 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Cash & short-term investment	1,735	1,374	1,314	2,354	1,603	2,047	2,471	4,523
Inventory	343	559	958	832	1,267	1,612	2,053	2,506
Accounts receivable	1,293	1,488	2,329	2,581	3,850	4,283	5,527	6,247
Other current assets	32	5	6	36	30	39	45	51
Total current assets	3,402	3,425	4,607	5,802	6,750	7,980	10,096	13,326
Fixed assets	1,752	2,697	3,624	3,969	5,285	6,605	7,668	7,973
Goodwill & intangibles	0	0	0	0	0	0	0	0
Other non-current assets	430	592	694	906	1,244	1,273	1,303	1,334
Total assets	5,584	6,714	8,926	10,677	13,279	15,858	19,067	22,633
Short-term debt	470	891	1,035	905	1,418	1,460	1,504	1,549
Accounts payable	857	897	1,575	1,617	2,388	2,782	3,206	3,604
Other current liabilities	80	99	141	157	195	331	384	434
Total current liabilities	1,408	1,887	2,751	2,679	4,001	4,573	5,094	5,588
Long-term debt	0	0	0	0	0	0	0	0
Other non-current liabilities	0	16	44	66	0	0	0	0
Total liabilities	1,408	1,903	2,796	2,745	4,001	4,573	5,094	5,588
Share capital	100	100	100	100	100	100	100	100
Reserves/R.E./others	4,076	4,712	6,030	7,832	9,178	11,186	13,873	16,946
Shareholders' equity	4,176	4,811	6,130	7,932	9,278	11,286	13,973	17,046
Minority interests	0	0	0	0	0	0	0	0
Total equity & liabilities	5,584	6,714	8,926	10,677	13,279	15,858	19,067	22,633
EV	53,057	53,838	54,042	52,872	54,136	53,734	53,355	51,347
Net debt/(cash)	(1,264)	(483)	(279)	(1,450)	(185)	(587)	(967)	(2,974)
BVPS (CNY)	3.401	3.918	4.992	6.459	7.555	9.190	11.378	13.881

Key ratios (%)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Sales (YoY)	52.0	21.2	54.8	28.9	9.7	30.4	16.1	13.0
EBITDA (YoY)	54.1	11.0	57.1	29.0	6.5	30.7	24.1	17.8
Operating profit (YoY)	64.1	7.2	62.8	28.5	4.6	30.3	21.3	15.5
Net profit (YoY)	60.5	5.0	70.1	46.2	(10.1)	32.0	17.8	15.3
Core EPS (fully-diluted) (YoY)	60.5	5.0	70.1	46.2	(10.1)	32.0	17.8	15.3
Gross-profit margin	45.1	44.0	44.2	42.7	41.4	41.6	42.0	42.3
EBITDA margin	37.5	34.4	34.9	34.9	33.9	34.0	36.3	37.8
Operating-profit margin	31.6	28.0	29.4	29.3	28.0	28.0	29.2	29.9
Net profit margin	29.5	25.5	28.1	31.8	26.1	26.4	26.8	27.3
ROAE	25.6	23.1	32.2	36.7	26.9	29.8	28.5	26.8
ROAA	20.1	16.9	22.5	26.3	19.3	21.0	20.6	19.9
ROCE	25.3	22.0	28.7	29.7	25.4	27.6	27.8	26.6
ROIC	38.9	28.4	31.7	34.9	28.6	29.4	29.7	30.0
Net debt to equity	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Effective tax rate	10.2	9.5	12.8	9.3	10.5	10.1	10.5	10.5
Accounts receivable (days)	110.2	125.0	110.9	110.7	132.2	128.2	133.1	141.4
Current ratio (x)	2.4	1.8	1.7	2.2	1.7	1.7	2.0	2.4
Net interest cover (x)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Net dividend payout	44.7	42.7	40.0	28.7	45.4	30.0	30.0	30.0
Free cash flow yield	0.1	n.a.	0.4	3.5	n.a.	2.7	2.5	5.8

Source: FactSet, Daiwa forecasts

Company profile

AAC Technologies designs and manufactures miniature acoustic components, including speakers, receivers, microphones and hands-free headsets, for use in mobile phones and other consumer handheld devices.

AAC: quarterly and annual P&L statement

(CNYm)	2015E				2016E				2014	2015E	2016E
	1Q	2Q	3Q	4QE	1QE	2QE	3QE	4QE			
Net sales	2,305	2,402	3,184	3,689	2,723	2,768	3,392	4,566	8,879	11,580	13,450
COGS	1,349	1,405	1,859	2,156	1,598	1,621	1,954	2,628	5,201	6,769	7,801
Gross profit	956	997	1,324	1,534	1,126	1,147	1,438	1,938	3,678	4,811	5,649
Operating costs	328	327	459	459	362	379	456	525	1,193	1,573	1,722
Operating profit	628	671	865	1,075	764	768	982	1,413	2,485	3,239	3,927
Pre-tax profit	662	709	942	1,083	787	791	1,005	1,436	2,581	3,396	4,020
Net profit	606	639	851	964	710	714	906	1,274	2,318	3,060	3,605
Net EPS (CNY)	0.49	0.52	0.69	0.78	0.58	0.58	0.74	1.04	1.89	2.49	2.94
Net EPS (HKD)	0.62	0.65	0.87	0.98	0.71	0.71	0.90	1.27	2.36	3.11	3.60
Margins											
Gross margin	41.5%	41.5%	41.6%	41.6%	41.3%	41.4%	42.4%	42.4%	41.4%	41.6%	42.0%
Operating margin	27.2%	27.9%	27.2%	29.1%	28.1%	27.8%	28.9%	30.9%	28.0%	28.0%	29.2%
Pre-tax margin	28.7%	29.5%	29.6%	29.4%	28.9%	28.6%	29.6%	31.4%	29.1%	29.3%	29.9%
Net margin	26.3%	26.6%	26.7%	26.1%	26.1%	25.8%	26.7%	27.9%	26.1%	26.4%	26.8%
YoY (%)											
Net revenue	24%	29%	54%	19%	18%	15%	7%	24%	10%	30%	16%
Gross profit	28%	27%	52%	20%	18%	15%	9%	26%	6%	31%	17%
Operating income	21%	31%	46%	25%	22%	15%	13%	31%	5%	30%	21%
Pre-tax income	22%	28%	55%	23%	19%	12%	7%	33%	-9%	32%	18%
Net income	24%	30%	55%	22%	17%	12%	7%	32%	-10%	32%	18%
QoQ (%)											
Net revenue	-26%	4%	33%	16%	-26%	2%	23%	35%			
Gross profit	-25%	4%	33%	16%	-27%	2%	25%	35%			
Operating income	-27%	7%	29%	24%	-29%	1%	28%	44%			
Pre-tax income	-25%	7%	33%	15%	-27%	1%	27%	43%			
Net income	-23%	5%	33%	13%	-26%	1%	27%	41%			

Source: Company, Daiwa forecasts

AAC: 1-year forward PER



Source: Bloomberg, Daiwa forecasts

AAC: 1-year forward PBR



Source: Bloomberg, Daiwa forecasts

Hon Hai Precision Industry (2317 TT)

 Target price: **TWD110.00** (from TWD110.00)

 Share price (4 Dec): **TWD84.20** | Up/downside: **+30.6%**

 5 4 3 2 1
Buy
 (unchanged)

Upward margin trend set to continue in 2016

- Operating profit should rise solidly in 2016 on margin expansion
- Attractive cash yield with undemanding valuation, in our view
- Reaffirm Buy (1) and target price of TWD110

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What's new: We reaffirm our Buy (1) rating for Hon Hai based on what we see as its undemanding valuation, leading industry position, solid operating profit growth, and attractive cash dividend in 2016.

What's the impact: Operating margin expansion in 2016. Thanks to solid cost control, improving operating efficiency, and stable ASP environment, Hon Hai's operating margin looks poised to expand to 4.0% in 2016 from 3.8% in 2015 and 3.4% in 2014. In total, we forecast Hon Hai's operating profit to increase by 10% YoY in 2016.

Leading position in the Apple supply chain remains solid. Hon Hai's 3Q15 revenue came in at TWD1,065bn (up 10% QoQ and 12% YoY), which beat our and the street's estimates by 4-8%, due mainly to better-than-expected iPhone 6S/6S Plus sell-through. Hon Hai was positive on 4Q15 and indicated that orders from customers are on track, which echoes our earlier tone in [Solid results and positive outlook](#) (13 August 2015). We expect Hon Hai to achieve 33% QoQ revenue growth in 4Q15 on a ramp-up of shipments of iPhone 6S/6S Plus and the iPad Pro entering mass production.

Risk/reward undemanding; soft 1Q16 could provide good entry point.

We expect Hon Hai to encounter a slow season in 1Q16 with a 31% QoQ revenue decline to TWD981bn on a sequential slowdown for iPhones and iPads after the initial strong ramp-up and seasonal factors (see page 74). This scenario could provide a good opportunity to accumulate shares, considering Hon Hai's industry-leader position and what we view as an attractive PER of 8.4x and solid earnings growth of 10% YoY in 2016.

Raising cash dividend payout. Hon Hai raised its cash payout ratio this year. For 2014 earnings, it paid a DPS of TWD3.8, representing a payout ratio of 43%, compared to 22% for 2013. We expect Hon Hai to maintain its payout ratio of 40%+ in coming years. The current share price implies a 5% cash dividend, which we view as attractive for long-term investors.

What we recommend: We reaffirm our Buy (1) rating and 12-month target price of TWD110, based on an 11x PER on our 2016E EPS. We see Hon Hai as a good investment vehicle in this highly uncertain macro environment due to its steady earnings growth, leading industry position, and undemanding valuation. The key risk is intensified competition.

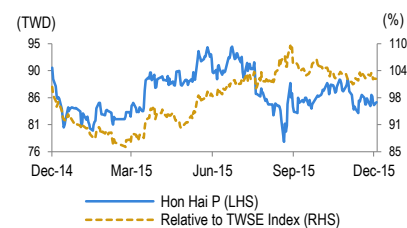
How we differ: Our earnings forecasts are 9-16% higher than the market for 2016-17E due to our optimistic operating-margin assumptions.

Forecast revisions (%)

Year to 31 Dec	15E	16E	17E
Revenue change	-	-	-
Net profit change	-	-	-
Core EPS (FD) change	-	-	-

Source: Daiwa forecasts

Share price performance



12-month range	77.71-94.47
Market cap (USDbn)	41.19
3m avg daily turnover (USDm)	71.67
Shares outstanding (m)	15,993
Major shareholder	Terry Kuo (12.4%)

Financial summary (TWD)

Year to 31 Dec	15E	16E	17E
Revenue (m)	4,470,000	4,660,000	4,970,000
Operating profit (m)	169,413	185,468	202,776
Net profit (m)	145,485	160,396	176,090
Core EPS (fully-diluted)	9.430	10.029	11.010
EPS change (%)	6.9	6.3	9.8
Daiwa vs Cons. EPS (%)	3.5	8.5	15.7
PER (x)	8.9	8.4	7.6
Dividend yield (%)	4.6	4.8	5.2
DPS	3.9	4.0	4.4
PBR (x)	1.3	1.2	1.1
EV/EBITDA (x)	4.1	3.3	2.6
ROE (%)	14.8	14.8	14.8

Source: FactSet, Daiwa forecasts

Financial summary

Key assumptions

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Consumer related sales growth (YoY%)	11.6	11.5	4.6	20.0	(16.2)	(11.9)	(16.0)	(8.4)
PC and networking related sales growth (YoY%)	48.0	(9.3)	(8.5)	6.0	(0.5)	(3.4)	1.1	3.4
iPhone shipment (mn units)	47.2	80.5	119.7	120.0	143.5	161.0	169.0	180.8
iPad shipment (mn units)	14.3	40.0	60.1	55.0	47.7	39.5	40.4	43.9

Profit and loss (TWDm)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
PC/NB/networking Revenues	1,551,076	1,505,953	1,312,868	1,283,682	1,241,810	1,190,969	1,195,626	1,229,781
Consumer electronics Revenues	420,625	468,801	490,474	588,543	493,263	434,447	365,017	334,227
Other Revenue	1,025,504	1,477,928	2,102,053	2,080,092	2,478,099	2,844,585	3,099,357	3,405,992
Total Revenue	2,997,205	3,452,681	3,905,395	3,952,318	4,213,172	4,470,000	4,660,000	4,970,000
Other income	0	0	0	0	0	0	0	0
COGS	(2,753,003)	(3,186,299)	(3,575,766)	(3,697,623)	(3,921,228)	(4,145,925)	(4,318,422)	(4,604,208)
SG&A	(119,265)	(142,691)	(175,552)	(98,800)	(99,899)	(100,530)	(101,472)	(105,960)
Other op.expenses	(38,791)	(40,847)	(45,627)	(46,580)	(48,854)	(54,132)	(54,639)	(57,056)
Operating profit	86,146	82,845	108,450	109,314	143,191	169,413	185,468	202,776
Net-interest inc./(exp.)	492	2,721	3,752	1,593	11,046	10,276	13,273	17,670
Assoc/forex/extraord./others	4,839	16,970	6,177	25,388	19,883	14,058	13,036	12,625
Pre-tax profit	91,477	102,536	118,379	136,296	174,120	193,747	211,777	233,071
Tax	(16,005)	(20,602)	(26,592)	(28,950)	(41,639)	(44,562)	(47,014)	(51,742)
Min. int./pref. div./others	1,682	(344)	2,975	(649)	(1,947)	(3,700)	(4,366)	(5,239)
Net profit (reported)	77,155	81,591	94,762	106,697	130,535	145,485	160,396	176,090
Net profit (adjusted)	77,155	81,591	94,762	106,697	130,535	145,485	160,396	176,090
EPS (reported)(TWD)	5.366	5.638	6.505	7.270	8.818	9.430	10.029	11.010
EPS (adjusted)(TWD)	5.366	5.638	6.505	7.270	8.818	9.430	10.029	11.010
EPS (adjusted fully-diluted)(TWD)	5.366	5.638	6.505	7.270	8.818	9.430	10.029	11.010
DPS (TWD)	0.672	1.108	1.219	1.610	3.889	3.910	4.012	4.404
EBIT	86,146	82,845	108,450	109,314	143,191	169,413	185,468	202,776
EBITDA	127,276	134,301	176,334	182,928	213,423	241,921	263,722	285,627

Cash flow (TWDm)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Profit before tax	91,477	102,536	118,379	136,296	174,120	193,747	211,777	233,071
Depreciation and amortisation	41,131	51,456	67,883	73,613	70,232	72,508	78,254	82,851
Tax paid	(16,005)	(20,602)	(26,592)	(28,950)	(41,639)	(44,562)	(47,014)	(51,742)
Change in working capital	(37,014)	(64,472)	90,647	(11,471)	(46,857)	(34,493)	(10,356)	(16,474)
Other operational CF items	(1,552)	(3,067)	1,016	(5,487)	(4,927)	(9,248)	(5,790)	(6,042)
Cash flow from operations	78,038	65,852	251,333	164,001	150,930	177,952	226,870	241,664
Capex	(68,959)	(87,171)	(64,051)	(35,289)	(26,558)	(50,000)	(40,000)	(40,000)
Net (acquisitions)/disposals	(52,600)	64,657	(12,350)	(3,016)	(50,896)	0	0	0
Other investing CF items	(9,952)	(56,878)	(44,325)	(32,904)	(16,211)	(1,466)	(1,500)	(1,536)
Cash flow from investing	(131,511)	(79,392)	(120,727)	(71,209)	(93,666)	(51,466)	(41,500)	(41,536)
Change in debt	166,043	73,134	71,362	85,635	(104,617)	24,233	25,444	26,717
Net share issues/(repurchases)	0	0	0	0	0	0	0	0
Dividends paid	(17,158)	(9,661)	(16,034)	(17,754)	(23,632)	(57,564)	(60,329)	(64,159)
Other financing CF items	(19,259)	25,309	(10,028)	29,195	58,658	12,000	0	0
Cash flow from financing	129,626	88,782	45,300	97,076	(69,590)	(21,331)	(34,884)	(37,442)
Forex effect/others	0	0	0	0	0	0	0	0
Change in cash	76,153	75,242	175,906	189,868	(12,326)	105,155	150,486	162,686
Free cash flow	9,079	(21,319)	187,282	128,712	124,372	127,952	186,870	201,664

Source: FactSet, Daiwa forecasts

Financial summary continued ...

Balance sheet (TWDm)

As at 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Cash & short-term investment	255,296	330,538	506,445	696,312	683,986	789,142	935,261	1,092,708
Inventory	259,384	380,522	349,883	312,785	369,197	391,125	407,398	434,359
Accounts receivable	409,819	476,050	633,049	747,710	772,381	857,260	893,699	953,151
Other current assets	40,049	96,558	53,582	51,774	106,857	113,371	118,190	126,053
Total current assets	964,548	1,283,668	1,542,957	1,808,581	1,932,421	2,150,898	2,354,548	2,606,270
Fixed assets	272,150	355,373	390,298	379,562	358,869	336,901	299,204	256,926
Goodwill & intangibles	0	0	0	0	0	0	0	0
Other non-current assets	143,835	91,270	111,148	124,318	171,425	177,898	184,632	191,637
Total assets	1,380,532	1,730,311	2,044,404	2,312,461	2,462,715	2,665,697	2,838,384	3,054,834
Short-term debt	230,455	271,512	355,790	400,442	254,774	266,810	280,150	294,157
Accounts payable	427,153	548,494	638,371	712,704	735,330	795,109	828,191	882,999
Other current liabilities	113,644	171,710	255,863	245,815	312,498	331,548	345,640	368,633
Total current liabilities	771,252	991,716	1,250,024	1,358,961	1,302,602	1,393,466	1,453,981	1,545,790
Long-term debt	87,955	115,979	105,688	132,164	161,791	170,583	179,112	188,068
Other non-current liabilities	40,732	44,785	42,159	56,667	68,091	71,496	75,070	78,824
Total liabilities	899,939	1,152,480	1,397,871	1,547,791	1,532,484	1,635,545	1,708,163	1,812,681
Share capital	96,612	106,891	118,359	131,287	147,934	159,934	159,934	159,934
Reserves/R.E./others	383,980	470,941	528,174	633,383	782,297	870,219	970,287	1,082,218
Shareholders' equity	480,593	577,832	646,532	764,670	930,231	1,030,153	1,130,221	1,242,152
Minority interests	0	0	0	0	0	0	0	0
Total equity & liabilities	1,380,532	1,730,311	2,044,404	2,312,461	2,462,715	2,665,697	2,838,384	3,054,834
EV	1,409,724	1,403,563	1,301,645	1,182,904	1,079,189	994,862	870,612	736,128
Net debt/(cash)	63,114	56,953	(44,966)	(163,707)	(267,422)	(351,749)	(475,999)	(610,483)
BVPS (TWD)	33.308	39.793	44.202	51.801	62.591	64.413	70.668	77.667

Key ratios (%)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Sales (YoY)	53.0	15.2	13.1	1.2	6.6	6.1	4.3	6.7
EBITDA (YoY)	4.4	5.5	31.3	3.7	16.7	13.4	9.0	8.3
Operating profit (YoY)	3.2	(3.8)	30.9	0.8	31.0	18.3	9.5	9.3
Net profit (YoY)	1.9	5.8	16.1	12.6	22.3	11.5	10.2	9.8
Core EPS (fully-diluted) (YoY)	1.4	5.1	15.4	11.8	21.3	6.9	6.3	9.8
Gross-profit margin	8.1	7.7	8.4	6.4	6.9	7.3	7.3	7.4
EBITDA margin	4.2	3.9	4.5	4.6	5.1	5.4	5.7	5.7
Operating-profit margin	2.9	2.4	2.8	2.8	3.4	3.8	4.0	4.1
Net profit margin	2.6	2.4	2.4	2.7	3.1	3.3	3.4	3.5
ROAE	16.8	15.4	15.5	15.1	15.4	14.8	14.8	14.8
ROAA	6.4	5.2	5.0	4.9	5.5	5.7	5.8	6.0
ROCE	12.4	9.4	10.5	9.1	10.8	12.0	12.1	12.2
ROIC	14.9	11.2	13.6	14.3	17.2	19.5	21.7	24.5
Net debt to equity	13.1	9.9	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Effective tax rate	17.5	20.1	22.5	21.2	23.9	23.0	22.2	22.2
Accounts receivable (days)	43.7	46.8	51.8	63.8	65.8	66.5	68.6	67.8
Current ratio (x)	1.3	1.3	1.2	1.3	1.5	1.5	1.6	1.7
Net interest cover (x)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Net dividend payout	12.7	20.6	21.6	24.8	53.5	44.3	42.5	43.9
Free cash flow yield	0.7	n.a.	13.9	9.6	9.2	9.5	13.9	15.0

Source: FactSet, Daiwa forecasts

Company profile

Established in 1974, Hon Hai Precision Industry (Hon Hai) started out making plastic products, connector products and cable assemblies. It is now the largest electronics manufacturing service (EMS) provider globally in terms of design, manufacturing, global logistics and after-market service.

Hon Hai: quarterly and annual P&L statement

(TWDm)	2015E				2016E				2014A	2015E	2016E
	1Q	2Q	3Q	4QE	1QE	2QE	3QE	4QE			
Net sales	1,014,122	972,708	1,065,602	1,417,567	981,305	961,986	1,170,326	1,546,383	4,213,172	4,470,000	4,660,000
COGS	941,699	902,666	989,080	1,312,480	911,762	892,723	1,084,892	1,429,045	3,921,228	4,145,925	4,318,422
Gross profit	72,423	70,042	76,522	105,088	69,543	69,263	85,434	117,338	291,944	324,075	341,578
Operating costs	33,821	36,931	38,356	45,554	32,481	34,631	40,610	48,387	148,752	154,662	156,110
Operating profit	38,603	33,111	38,166	59,534	37,062	34,631	44,823	68,951	143,191	169,413	185,468
Pretax profit	40,248	40,538	47,834	65,128	42,324	41,209	51,401	76,844	174,120	193,747	211,777
Net profit	30,385	25,690	37,858	51,552	32,794	27,343	41,057	59,203	130,535	145,485	160,396
Net EPS (TWD)	1.97	1.67	2.45	3.34	2.05	1.71	2.57	3.70	8.82	9.43	10.03
Operating Ratios											
Gross margin	7.1%	7.2%	7.2%	7.4%	7.1%	7.2%	7.3%	7.6%	6.9%	7.3%	7.3%
Operating margin	3.8%	3.4%	3.6%	4.2%	3.8%	3.6%	3.8%	4.5%	3.4%	3.8%	4.0%
Pre-tax margin	4.0%	4.2%	4.5%	4.6%	4.3%	4.3%	4.4%	5.0%	4.1%	4.3%	4.5%
Net margin	3.0%	2.6%	3.6%	3.6%	3.3%	2.8%	3.5%	3.8%	3.1%	3.3%	3.4%
YoY (%)											
Net revenue	15%	11%	12%	-6%	-3%	-1%	10%	9%	7%	6%	4%
Gross profit	36%	13%	13%	-4%	-4%	-1%	12%	12%	15%	11%	5%
Operating income	85%	19%	22%	-5%	-4%	5%	17%	16%	31%	18%	10%
Pretax income	58%	25%	14%	-12%	5%	2%	7%	18%	28%	11%	9%
Net income	55%	27%	11%	-9%	8%	6%	8%	15%	22%	11%	10%
QoQ (%)											
Net revenue	-32%	-4%	10%	33%	-31%	-2%	22%	32%			
Gross profit	-34%	-3%	9%	37%	-34%	0%	23%	37%			
Operating income	-39%	-14%	15%	56%	-38%	-7%	29%	54%			
Pretax income	-46%	1%	18%	36%	-35%	-3%	25%	49%			
Net income	-46%	-15%	47%	36%	-36%	-17%	50%	44%			

Source: Company, Daiwa forecasts

iPhone: production volume by model

(m units)	1Q15	2Q15	3Q15	4Q15E	1Q16E
iPhone 4 & 4S	2.0	0.5	0.0	0.0	0.0
iPhone 5C	2.5	1.0	0.5	0.0	0.0
iPhone 5S	8.0	4.5	4.0	2.5	2.0
iPhone 6 & 6 Plus	45.5	47.0	19.5	13.5	8.0
iPhone 6S & 6S Plus	0.0	0.0	22.0	60.0	42.0
Total	58.0	53.0	46.0	76.0	52.0

Source: Daiwa estimates and forecasts

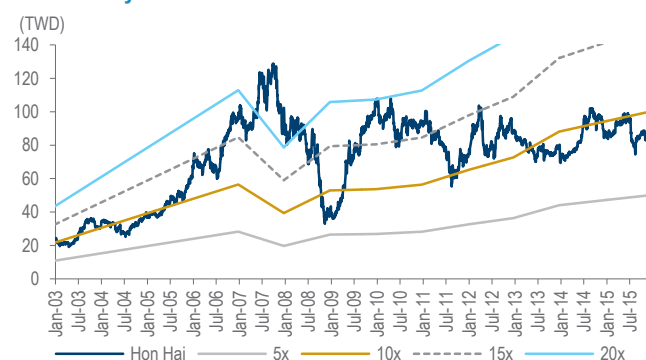
Note: This table represents Daiwa's iPhone production estimates and forecasts, which differ slightly from the iPhone sales figures reported by Apple

iPad: production volume by model

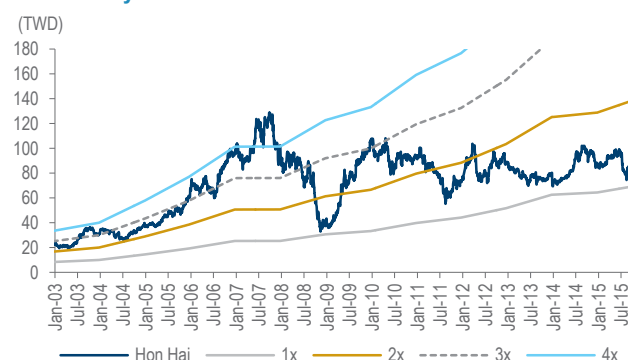
(m units)	1Q15	2Q15	3Q15	4Q15E	1Q16E
iPad Air	7.5	6.0	7.0	7.0	5.0
iPad mini	0.5	0.5	0.0	0.0	0.0
iPad mini Retina	4.0	3.5	4.0	5.0	4.0
iPad Pro	0.0	0.0	0.0	3.0	2.0
Total	12.0	10.0	11.0	15.0	11.0

Source: Daiwa estimates and forecasts

Note: This table represents Daiwa's iPad production estimates and forecasts, which differ slightly from the iPad sales figures reported by Apple

Hon Hai: 1-year-forward PER


Source: TEJ, Daiwa forecasts

Hon Hai: 1-year-forward PBR


Source: TEJ, Daiwa forecasts

Pegatron Corp (4938 TT)

 Target price: **TWD115.00** (from TWD115.00)

 Share price (4 Dec): **TWD85.70** | Up/downside: **+34.1%**


Our top pick in the PC OEM/ODM space

- 4Q15 revenue momentum on solid seasonal strength
- Share gains in key client's order allocations set to continue in 2016
- Reiterate Buy (1) with unchanged target price of TWD115

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What's new: Following its stellar 3Q15 results, Pegatron's revenue momentum remains strong in 4Q15 thanks to seasonal strength. We are positive on its business outlook and sustained market-share gains in the order allocations of 4.7" iPhones going forward.

What's the impact: Near-term update. For 4Q15, Pegatron guides for 25-35% QoQ growth in non-PC revenue, and 20-25% growth in notebook shipments. We look for 4Q15 revenue to reach TWD398bn (+28% QoQ) and see upside potential, since Pegatron's October revenue (TWD175bn, up 6% MoM and 47% YoY, respectively) already achieved 44% of our 4Q15 forecast. As for profit margins, due to a likely higher revenue contribution from design and manufacturing services (DMS), we expect the 4Q15 profit margins to slide moderately QoQ, but remain generally solid.

2016 outlook. Pegatron is upbeat on its sustainable revenue growth in 2016 due to potential share gains in order allocations from a key client (mainly we believe for 4.7" iPhones). As its Shanghai site has run out of space for expansion, Pegatron is focusing on expanding its facilities in Kunshan. Management expects the additional capacity, with the number of employees there likely to quadruple in 2 years, to be able to support growing orders from both existing and new clients.

iPhone business the main growth driver. Strong iPhone shipments continue to boost Pegatron's revenue. We still expect Pegatron to assemble over 40% of the 4.7" iPhone 6 shipments this year, better than 30%+ in 2014, and believe Pegatron will continue to gain share. We forecast iPhone-related revenue to account for 53% of overall revenue in 2015 and 58% in 2016. A potential iPhone casing order win by Casetek (61%-owned by Pegatron) from 2016 also suggests a higher earnings contribution for Pegatron. This would also help Pegatron's consolidated operating margin as Casetek's operating margin is much higher (15-18% vs. 3-4% of Pegatron). As for other smartphone products, Asustek's Zenfone is another emerging revenue growth driver.

What we recommend: We reaffirm our Buy rating (1) and 12-month target price of TWD115, based on a 12x PER (near the midpoint of its past-3-year range of 6-15x) applied to our 1-year-forward EPS forecast (4Q15-3Q16). With its favourable operating leverage driven by smartphone-related revenue growth, as well as the undemanding valuation (8.5x 2016E PER), Pegatron remains the top pick in our PC OEM/ODM coverage universe. Key risk to our call: weaker-than-expected iPhone shipments.

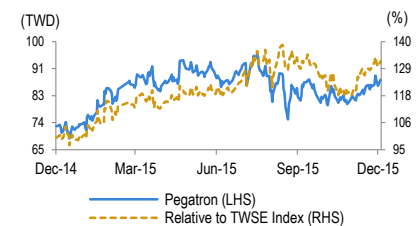
How we differ: We are more positive than the market on Pegatron's operating-margin trend over our forecast period.

Forecast revisions (%)

Year to 31 Dec	15E	16E	17E
Revenue change	-	-	-
Net profit change	-	-	-
Core EPS (FD) change	-	-	-

Source: Daiwa forecasts

Share price performance



12-month range	68.60-96.10
Market cap (USDbn)	6.82
3m avg daily turnover (USDm)	26.33
Shares outstanding (m)	2,603
Major shareholder	Asustek Computer Inc. (17.2%)

Financial summary (TWD)

Year to 31 Dec	15E	16E	17E
Revenue (m)	1,199,450	1,313,039	1,401,710
Operating profit (m)	40,207	44,886	48,630
Net profit (m)	24,769	26,156	28,378
Core EPS (fully-diluted)	9.514	10.047	10.901
EPS change (%)	63.3	5.6	8.5
Daiwa vs Cons. EPS (%)	3.9	4.1	2.1
PER (x)	9.0	8.5	7.9
Dividend yield (%)	4.8	6.7	7.0
DPS	4.1	5.7	6.0
PBR (x)	1.6	1.4	1.2
EV/EBITDA (x)	3.6	3.0	2.5
ROE (%)	18.0	17.3	16.8

Source: FactSet, Daiwa forecasts

Financial summary

Key assumptions

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Communication revenue YoY (%)	n.a.	118.3	98.5	10.2	74.4	61.1	16.9	12.1
Computing revenue YoY (%)	n.a.	3	23	(13)	(27)	(24)	(8)	(15)
Consumer electronic revenue YoY (%)	n.a.	47	102	79	(23)	(30)	(0)	4
Other revenue YoY (%)	n.a.	5	15	(20)	14	2	(2)	(2)

Profit and loss (TWDm)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Communication	57,621	125,790	249,704	275,240	480,102	773,350	904,159	1,013,899
Computing	294,770	303,953	374,977	326,444	237,533	181,462	166,610	141,452
Other Revenue	178,140	170,200	257,215	348,068	302,103	244,638	242,270	246,359
Total Revenue	530,531	599,943	881,895	949,752	1,019,739	1,199,450	1,313,039	1,401,710
Other income	0	0	0	0	0	0	0	0
COGS	(500,366)	(572,946)	(839,426)	(904,235)	(960,283)	(1,122,380)	(1,228,926)	(1,310,570)
SG&A	0	0	0	0	0	0	0	0
Other op.expenses	(21,471)	(26,084)	(31,309)	(29,940)	(31,135)	(36,864)	(39,227)	(42,510)
Operating profit	8,694	913	11,161	15,577	28,321	40,207	44,886	48,630
Net-interest inc./(exp.)	(42)	(59)	(311)	(421)	689	983	950	947
Assoc/forex/extraord./others	4,319	3,873	2,953	3,874	(2,747)	(504)	(167)	(93)
Pre-tax profit	12,970	4,727	13,803	19,030	26,262	40,686	45,669	49,484
Tax	(2,364)	(1,422)	(3,825)	(4,783)	(7,334)	(10,546)	(13,211)	(14,378)
Min. int./pref. div./others	(4,395)	(3,194)	(3,874)	(4,693)	(4,269)	(5,371)	(6,303)	(6,728)
Net profit (reported)	6,211	111	6,104	9,554	14,658	24,769	26,156	28,378
Net profit (adjusted)	6,211	111	6,104	9,554	14,658	24,769	26,156	28,378
EPS (reported)(TWD)	2.753	0.049	2.665	4.114	5.827	9.514	10.047	10.901
EPS (adjusted)(TWD)	2.753	0.049	2.665	4.114	5.827	9.514	10.047	10.901
EPS (adjusted fully-diluted)(TWD)	2.753	0.049	2.665	4.114	5.827	9.514	10.047	10.901
DPS (TWD)	1.773	1.450	0.000	1.479	2.583	4.100	5.709	6.028
EBIT	8,694	913	11,161	15,577	28,321	40,207	44,886	48,630
EBITDA	19,048	11,876	23,604	29,502	42,083	54,130	59,286	64,080

Cash flow (TWDm)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Profit before tax	12,970	4,727	13,803	19,030	26,262	40,686	45,669	49,484
Depreciation and amortisation	10,354	10,963	12,444	13,925	13,762	13,924	14,400	15,450
Tax paid	(2,364)	(1,422)	(3,825)	(4,783)	(7,334)	(10,546)	(13,211)	(14,378)
Change in working capital	2,778	(7,632)	1,113	(3,102)	16,876	(8,540)	(5,747)	(4,636)
Other operational CF items	0	0	720	0	0	0	0	(0)
Cash flow from operations	23,739	6,636	24,254	25,071	49,566	35,523	41,111	45,921
Capex	(10,729)	(15,922)	(20,261)	(13,315)	(10,400)	(11,395)	(10,504)	(10,513)
Net (acquisitions)/disposals	1,532	2,311	1,099	1,374	1,220	0	0	0
Other investing CF items	(3,096)	(4,196)	(1,770)	(1,033)	(137)	0	0	0
Cash flow from investing	(12,293)	(17,807)	(20,932)	(12,974)	(9,318)	(11,395)	(10,504)	(10,513)
Change in debt	5,897	26,308	(5,144)	6,589	(3,832)	8,431	(4,460)	0
Net share issues/(repurchases)	356	369	3,873	0	0	0	0	0
Dividends paid	(6,661)	(5,875)	(2,175)	(5,737)	(10,130)	(10,510)	(14,861)	(15,693)
Other financing CF items	884	(1,645)	10,199	1,299	4,392	0	0	0
Cash flow from financing	476	19,157	6,753	2,151	(9,570)	(2,078)	(19,322)	(15,693)
Forex effect/others	(1,336)	203	(371)	589	2,749	0	0	0
Change in cash	10,585	8,189	9,704	14,837	33,427	22,050	11,285	19,715
Free cash flow	13,010	(9,286)	3,993	11,756	39,166	24,128	30,607	35,408

Source: FactSet, Daiwa forecasts

Financial summary continued ...

Balance sheet (TWDm)

As at 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Cash & short-term investment	42,264	50,453	60,157	74,261	107,689	129,739	141,024	160,738
Inventory	42,068	65,716	92,678	103,599	95,630	116,430	127,482	135,951
Accounts receivable	52,920	84,246	122,608	104,037	129,863	137,561	150,588	160,757
Other current assets	12,686	15,478	30,706	45,037	36,421	29,204	29,204	29,204
Total current assets	149,938	215,894	306,150	326,935	369,603	412,933	448,298	486,651
Fixed assets	53,103	70,458	71,813	73,917	72,898	72,042	68,146	63,209
Goodwill & intangibles	0	0	0	0	0	0	0	0
Other non-current assets	12,963	13,224	13,478	15,044	14,592	13,664	13,497	13,324
Total assets	216,004	299,576	391,441	415,896	457,093	498,639	529,941	563,184
Short-term debt	14,809	23,907	28,564	32,114	36,732	45,765	41,305	41,305
Accounts payable	55,069	100,015	172,381	158,674	174,768	194,863	213,361	227,536
Other current liabilities	17,226	27,569	33,032	48,486	53,497	58,336	58,336	58,336
Total current liabilities	87,104	151,491	233,977	239,273	264,997	298,965	313,003	327,177
Long-term debt	11,517	28,758	27,392	28,708	13,949	13,348	13,348	13,348
Other non-current liabilities	765	1,130	2,045	3,859	3,275	3,676	3,676	3,676
Total liabilities	99,386	181,379	263,413	271,840	282,222	315,989	330,027	344,201
Share capital	22,564	22,564	22,903	23,212	25,157	26,033	26,033	26,033
Reserves/R.E./others	68,278	69,021	73,176	84,092	108,514	116,256	133,520	152,588
Shareholders' equity	90,841	91,584	96,079	107,304	133,671	142,289	159,553	178,621
Minority interests	25,776	26,613	31,948	36,751	41,200	40,361	40,361	40,361
Total equity & liabilities	216,004	299,576	391,441	415,896	457,093	498,639	529,941	563,184
EV	232,943	251,929	250,851	246,417	207,298	192,841	177,095	157,381
Net debt/(cash)	(15,938)	2,212	(4,202)	(13,439)	(57,007)	(70,626)	(86,371)	(106,086)
BVPS (TWD)	40.260	40.589	41.950	46.207	53.135	54.657	61.288	68.613

Key ratios (%)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Sales (YoY)	n.a.	13.1	47.0	7.7	7.4	17.6	9.5	6.8
EBITDA (YoY)	n.a.	(37.7)	98.8	25.0	42.6	28.6	9.5	8.1
Operating profit (YoY)	n.a.	(89.5)	1,122.3	39.6	81.8	42.0	11.6	8.3
Net profit (YoY)	n.a.	(98.2)	5,380.9	56.5	53.4	69.0	5.6	8.5
Core EPS (fully-diluted) (YoY)	n.a.	(98.2)	5,299.7	54.4	41.6	63.3	5.6	8.5
Gross-profit margin	5.7	4.5	4.8	4.8	5.8	6.4	6.4	6.5
EBITDA margin	3.6	2.0	2.7	3.1	4.1	4.5	4.5	4.6
Operating-profit margin	1.6	0.2	1.3	1.6	2.8	3.4	3.4	3.5
Net profit margin	1.2	0.0	0.7	1.0	1.4	2.1	2.0	2.0
ROAE	13.7	0.1	6.5	9.4	12.2	18.0	17.3	16.8
ROAA	5.8	0.0	1.8	2.4	3.4	5.2	5.1	5.2
ROCE	12.2	0.6	6.3	8.0	13.2	17.2	18.1	18.4
ROIC	7.1	0.6	6.6	9.2	16.4	25.9	28.3	30.5
Net debt to equity	n.a.	2.4	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Effective tax rate	18.2	30.1	27.7	25.1	27.9	25.9	28.9	29.1
Accounts receivable (days)	18.2	41.7	42.8	43.6	41.9	40.7	40.0	40.5
Current ratio (x)	1.7	1.4	1.3	1.4	1.4	1.4	1.4	1.5
Net interest cover (x)	206.2	15.4	35.9	37.0	n.a.	n.a.	n.a.	n.a.
Net dividend payout	n.a.	52.7	0.0	55.5	62.8	70.4	60.0	60.0
Free cash flow yield	5.8	n.a.	1.8	5.3	17.6	10.8	13.7	15.9

Source: FactSet, Daiwa forecasts

Company profile

Founded in January 2008, Pegatron is a subsidiary of Asustek and an electronic and computing DMS (design and manufacturing service) company with extensive experience in product development. It also has vertically integrated capabilities. Pegatron's product line includes motherboards, desktop PCs, notebooks, smartphones, tablets, broadband, wireless systems, game consoles, networking equipment, set-top boxes, multimedia, and LCD TVs.

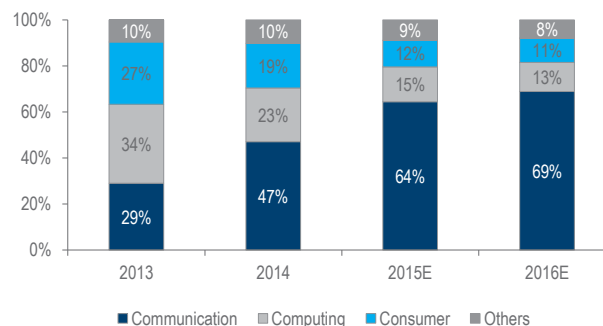
Pegatron: quarterly and annual P&L statement

(TWDm)	2015E				2016E				2014	2015E	2016E
	1Q	2Q	3Q	4QE	1QE	2QE	3QE	4QE			
Net sales	274,263	217,929	309,538	397,721	297,527	272,331	325,294	417,888	1,019,739	1,199,450	1,313,039
COGS	(257,187)	(204,024)	(288,668)	(372,500)	(278,781)	(254,823)	(303,912)	(391,411)	(960,283)	(1,122,380)	(1,228,926)
Gross profit	17,075	13,904	20,870	25,221	18,746	17,508	21,382	26,477	59,455	77,070	84,113
Operating expense	(8,184)	(8,166)	(9,052)	(11,462)	(9,133)	(9,220)	(9,312)	(11,561)	(31,135)	(36,864)	(39,227)
Operating profit	8,891	5,738	11,818	13,759	9,613	8,288	12,069	14,916	28,321	40,207	44,886
Non-operating profit	446	1,535	(1,187)	(315)	211	189	190	194	(2,058)	479	783
Pre-tax profit	9,337	7,273	10,631	13,445	9,824	8,476	12,259	15,110	26,262	40,686	45,669
Tax	(2,120)	(1,543)	(3,119)	(3,764)	(2,751)	(2,797)	(3,433)	(4,231)	(7,334)	(10,546)	(13,211)
Net profit	6,328	4,656	6,014	7,771	5,645	4,372	7,265	8,873	14,658	24,769	26,156
Net EPS (TWD)	2.47	1.82	2.31	2.99	2.17	1.68	2.79	3.41	5.83	9.51	10.05
Operating Ratios											
Gross margin	6.2%	6.4%	6.7%	6.3%	6.3%	6.4%	6.6%	6.3%	5.8%	6.4%	6.4%
Operating margin	3.2%	2.6%	3.8%	3.5%	3.2%	3.0%	3.7%	3.6%	2.8%	3.4%	3.4%
Pre-tax margin	3.4%	3.3%	3.4%	3.4%	3.3%	3.1%	3.8%	3.6%	2.6%	3.4%	3.5%
Net margin	2.3%	2.1%	1.9%	2.0%	1.9%	1.6%	2.2%	2.1%	1.4%	2.1%	2.0%
YoY%											
Net revenues	25%	3%	31%	13%	8%	25%	5%	5%	7%	18%	9%
Gross profit	51%	7%	37%	27%	10%	26%	2%	5%	31%	30%	9%
Operating income	75%	1%	67%	31%	8%	44%	2%	8%	82%	42%	12%
Pretax income	109%	98%	32%	33%	5%	17%	15%	12%	38%	55%	12%
Net income	132%	211%	27%	37%	-11%	-6%	21%	14%	53%	69%	6%
QoQ%											
Net revenues	-22%	-21%	42%	28%	-25%	-8%	19%	28%			
Gross profit	-14%	-19%	50%	21%	-26%	-7%	22%	24%			
Operating income	-15%	-35%	106%	16%	-30%	-14%	46%	24%			
Pretax income	-8%	-22%	46%	26%	-27%	-14%	45%	23%			
Net income	11%	-26%	29%	29%	-27%	-23%	66%	22%			

Source: Company, Daiwa forecasts

Pegatron: 1-year-forward PER


Source: TEJ, Daiwa forecasts

Pegatron: revenue breakdown by product


Source: Company, Daiwa forecasts

Murata Manufacturing (6981 JP)

 Target price: **JPY24,500** (as of 2 Nov)

 Share price (4 Dec): **JPY18,860** | Up/downside: **+29.9%**
Outperform
 (not reviewed)

Sales per handset/vehicle on an uptrend

- World's leading maker of passive components
- Components per smartphone/vehicle on meaningful growth trend
- Firm positioned for growth even if volume uptrend in end products

Takumi Sado

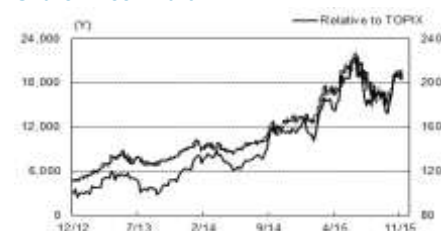
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Outlook: Murata Manufacturing is the world's leading maker of passive components, boasting high market shares in multilayer ceramic capacitors (MLCCs), surface acoustic wave (SAW) filters, and ultra-miniature inductors, as well as for modules that incorporate these components. Although unit sales of high-tech products are slowing, the value of Murata's components used per end product is on the rise. Looking at the 2HFY15E earnings of the Japanese electronic components makers, we think that a number of firms are likely to show YoY profit declines due to diminished boosts from Yen depreciation, as well as slowing sales-volume growth for end products. However, Murata looks poised to achieve operating profit growth of around 20% YoY. Regarding smartphones — the biggest source of demand for Murata components — we note that the number of SAW filters and other high-frequency components used per handset is growing due to the advance of technologies, such as LTE and carrier aggregation, that make high-speed telecommunications possible. In addition, with application processor (AP) processing speeds increasing every year, some high-end handsets now require capacitor volume (electricity storage capacity) equivalent to that of a PC. However, given size constraints, only ultra-small, high-volume capacitors, in which Murata excels, are showing robust growth.

In the automotive area, MLCCs and sensors supplied by Murata continue to show annual sales growth of at least 10%. We estimate that the value of MLCCs used per vehicle expanded to roughly JPY1,200 in 2014, up from only about JPY500 in 2003. With the shift to LTE ongoing, the telecoms industry is planning more advanced carrier aggregation (increasing band combinations). In the autos industry, the growing use of electronics will probably shift into an even higher gear with an eye on autonomous driving.

What we recommend: We rate Murata as Outperform (2) with a 12-month target price of JPY24,500. Our target PER of 21x incorporates a 4-5 point premium to the sector average PER of 16-17x, based on our FY16E earnings. A risk would be if sales of flagship smartphone models were to slow in the short term. However, we would not view this as demand peaking, but rather as a temporary lull.

Share Price Chart



Source: Compiled by Daiwa.

Market Data

12-month range (Y)	12,430-22,220
Market cap (Y mn; 4 Dec)	3,992,730
Shares outstanding (000; 12/15)	211,704
Foreign ownership (%; 3/15)	43.7

Investment Indicators

	3/15	3/16 E	3/17 E
P/E (X)	23.8	17.7	16.0
EV/EBITDA (X)	12.2	8.9	7.6
P/B (X)	3.56	3.07	2.65
Dividend yield (%)	0.95	1.06	1.06
ROE (%)	16.1	18.7	17.7
Net debt/equity (X)	-0.3	-0.3	-0.4

Income Summary

(SEC; Y mn)	3/15	3/16 E	3/17 E
Sales	1,043,542	1,265,000	1,387,000
Op profit	214,535	305,000	337,000
Pretax income	238,400	311,000	341,000
Net income	167,711	226,000	249,000
EPS (Y)	792.2	1,067.5	1,176.2
DPS (Y)	180.00	200.00	200.00

See end of report for notes concerning indicators.

Murata Manufacturing (6981): Income Summary (SEC; JPYm; YoY %)

Year to	Sales		Op profit		Pretax income		Net income		EPS (Y)		DPS (Y)	
3/13	681,021	(16)	58,636	(30)	59,534	(17)	42,386	(38)	200.8		100.0	
3/14	846,716	(24)	125,891	(115)	132,336	(122)	93,191	(120)	440.6		130.0	
3/15	1,043,542	(23)	214,535	(70)	238,400	(80)	167,711	(80)	792.2		180.0	
3/16 E	1,265,000	(21)	305,000	(42)	311,000	(30)	226,000	(35)	1,067.5		200.0	
3/17 E	1,387,000	(10)	337,000	(10)	341,000	(10)	249,000	(10)	1,176.2		200.0	
3/16 CP	1,200,000	(15)	272,000	(27)	276,000	(16)	202,000	(20)	954.2		200.0	

E: Daiwa estimates. CP: Company projections.

Murata Manufacturing: Earnings by product (JPYm)

	FY14			15 CP			15 E			16 E		
	1H	2H	(y/y %)	2H (h/h)	(y/y)	(y/y %)	1H	2H E	(y/y %)	1H	2H	(y/y %)
Sales by product												
Capacitors	153,139	181,133	334,272 (20.9)	2%*	12%		184,596	190,904	375,500 (12.3)	197,000	204,000	401,000 (6.8)
Piezoelectric components	59,198	62,681	121,879 (26.6)	-17%*	20%		80,117	81,383	161,500 (32.5)	91,000	92,000	183,000 (13.3)
Other components	103,095	119,835	222,930 (42.4)	Flat	8%		120,441	129,559	250,000 (12.1)	132,000	138,000	270,000 (8.0)
Components	315,432	363,649	679,081 (28.3)				385,154	401,846	787,000 (15.9)	420,000	434,000	854,000 (8.5)
Communication modules	132,542	175,416	307,958 (18.5)	-9%*	22%		195,965	224,735	420,700 (36.6)	215,500	260,500	476,000 (13.1)
Other modules	26,910	26,042	52,952 (-2.5)	19%*	10%		26,725	27,075	53,800 (1.6)	27,000	27,000	54,000 (0.4)
Modules	159,452	201,458	360,910 (14.8)				222,690	251,810	474,500 (31.5)	242,500	287,500	530,000 (11.7)
Sales by application												
AV	25,663	24,381	50,044 (12.3)	1%*	3%		25,680	25,020	50,700 (1.3)	26,000	25,000	51,000 (0.6)
Communications	240,314	322,297	562,611 (30.9)	-9%	24%		365,414	401,986	767,400 (36.4)	409,000	458,000	867,000 (13.0)
Computers & peripherals	82,771	88,938	171,709 (14.0)	Flat	-2%		84,400	90,000	174,400 (1.6)	88,000	91,000	179,000 (2.6)
Automotive electronics	69,403	74,852	144,255 (20.0)	11%*	10%		75,248	80,952	156,200 (8.3)	82,000	91,000	173,000 (10.8)
Home appliances/other	56,733	54,639	111,372 (13.2)	3%*	4%		57,102	55,698	112,800 (1.3)	57,500	56,500	114,000 (1.1)
Operating profit by product												
Components	88,256	117,718	205,974 (63.4)				140,105	-	-	-	-	-
Modules	17,756	24,929	42,685 (21.1)				29,224	-	-	-	-	-
Other	1,951	2,830	4,781 (53.3)				2,888	-	-	-	-	-
Eliminations/unallocated	-18,813	-20,092	-38,905 (-)				-20,077	-	-	-	-	-
Earnings												
Sales	476,585	566,957	1,043,542 (23.2)	590,191	1,200,000 (15.0)		609,809	655,191	1,265,000 (21.2)	664,000	723,000	1,387,000 (9.6)
Operating profit	89,150	125,385	214,535 (70.4)	119,860	272,000 (26.8)		152,140	152,860	305,000 (42.2)	164,000	173,000	337,000 (10.5)
Pretax income	95,325	143,075	238,400 (80.1)	119,687	276,000 (15.8)		156,313	154,687	311,000 (30.5)	166,000	175,000	341,000 (9.6)
Net income	68,515	99,196	167,711 (80.0)	86,634	202,000 (20.4)		115,366	110,634	226,000 (34.8)	121,200	127,800	249,000 (10.2)
EPS (Y)			792.19		954.16				1,067.53			1,176.17
Inventories	178,458	-	186,299				219,856	-	-	-	-	-
Capex	44,658	56,526	101,184 (48.4)	61,575	150,000 (48.2)		88,425	61,575	150,000 (48.2)	60,000	70,000	130,000 (-13.3)
Depreciation	38,081	46,854	84,935 (10.5)	55,662	100,000 (17.7)		44,338	55,662	100,000 (17.7)	52,000	63,000	115,000 (15.0)
R&D	29,580	35,410	64,990 (18.9)	36,001	74,000 (13.9)		37,999	36,001	74,000 (13.9)	38,000	39,000	77,000 (4.1)
Cash flow (depreciation + net income)	106,596	146,050	252,646 (48.5)	142,296	302,000 (19.5)		159,704	166,296	326,000 (29.0)	173,200	190,800	364,000 (11.7)
Free cash flow (cash flow - capex)	61,938	89,524	151,462 (48.7)	80,721	152,000 (0.4)		71,279	104,721	176,000 (16.2)	113,200	120,800	234,000 (33.0)
EBITDA (depreciation + op profit)	127,231	172,239	299,470 (47.7)	175,522	372,000 (24.2)		196,478	208,522	405,000 (35.2)	216,000	236,000	452,000 (11.6)

Source: Company materials; compiled by Daiwa.

* Figures approximate.

E: Daiwa estimates. CP: Company projections.

Financial Statements

(Y mn)	3/13	3/14	3/15	3/16 E	3/17 E
Income statement					
Sales / Revenue	681,021	846,716	1,043,542	1,265,000	1,387,000
Operating profit	58,636	125,891	214,535	305,000	337,000
EBITDA	130,959	202,775	299,470	405,000	452,000
Pretax income	59,534	132,336	238,400	311,000	341,000
Net income	42,386	93,191	167,711	226,000	249,000
Balance sheet					
Liquidity on hand	184,717	282,401	358,297	418,095	569,023
Fixed assets / Non-current assets	549,046	570,706	615,454	665,454	680,454
Total assets	1,087,144	1,243,687	1,431,303	1,617,586	1,830,833
Interest-bearing debt	54,504	54,197	20,806	20,806	20,806
Total liabilities	226,181	272,055	292,372	301,801	308,389
Total net assets / Total equity	860,963	971,632	1,138,931	1,315,785	1,522,444
Shareholders' equity	860,963	955,760	1,123,090	1,299,944	1,506,603
Cash flow statement					
Cash flows from operating activities	88,537	185,751	259,936	252,139	323,269
Net income	42,386	93,191	167,711	226,000	249,000
Depreciation and amortization	72,323	76,884	84,935	100,000	115,000
Cash flows from investing activities	-56,173	-117,150	-91,379	-150,000	-130,000
Free cash flow	32,364	68,601	168,557	102,139	193,269
Cash flows from financing activities	-9,655	-40,899	-66,966	-42,341	-42,341
Increase (decrease) in cash and cash equivalents	24,766	28,816	94,052	59,798	150,928
Accounting standards	SEC	SEC	SEC	SEC	SEC
Financial indicators					
Growth					
Sales / Revenue (y/y %)	16.5	24.3	23.2	21.2	9.6
Operating profit (y/y %)	30.4	114.7	70.4	42.2	10.5
Profitability					
Operating profit margin (%)	8.6	14.9	20.6	24.1	24.3
EBITDA margin (%)	19.2	23.9	28.7	32.0	32.6
ROE (%)	5.1	10.3	16.1	18.7	17.7
ROA (%)	4.1	8.0	12.5	14.8	14.4
Financial leverage/dividend policy					
Net debt-to-equity ratio (X)	-0.2	-0.2	-0.3	-0.3	-0.4
Equity-to-assets ratio (%)	79.2	76.8	78.5	80.4	82.3
Total dividends / shareholders' equity (%)	2.5	2.9	3.4	3.3	2.8
Dividend payout ratio (%)	49.8	29.5	22.7	18.7	17.0
Per-share data					
EPS (Y)	200.8	440.6	792.2	1,067.5	1,176.2
DPS (Y)	100.00	130.00	180.00	200.00	200.00
Book value per share (Y)	4,078.9	4,514.5	5,305.0	6,140.4	7,116.6
Valuations Share price: Y18,860; market cap: Y3,992,730mn (4 Dec 2015)					
P/E (X)	93.9	42.8	23.8	17.7	16.0
EV/EBITDA (X)	29.5	18.6	12.2	8.9	7.6
P/B (X)	4.62	4.18	3.56	3.07	2.65
Dividend yield (%)	0.53	0.69	0.95	1.06	1.06

Source: Company materials; compiled by Daiwa.
 E: Daiwa estimates.

Company Outline

Murata Manufacturing is the world's leading manufacturer of passive components. Its main products include capacitors, high-frequency components, and noise suppression products. More than half of its products are for use in smartphones/tablets, but the firm also has a large share in the automotive field. The firm is promoting the use of module technologies as a means to increase market share. It is also focusing on sensor operations.

Daiwa

Capital Markets

Delta Electronics (2308 TT)

 Target price: **TWD185.00** (from TWD185.00)

 Share price (4 Dec): **TWD160.00** | Up/downside: **+15.6%**

 5 4 3 **2** 1
Outperform
 (unchanged)

2016: higher earnings growth on margin improvement

- 2016 earnings drivers: rising end demand and cost restructuring
- M&A could be a revenue-growth driver
- Margin improvement on track; reiterate Outperform (2)

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What's new: Delta Electronics (Delta) is on track to expand its customer base via acquisitions and margin improvement, on a better product mix and cost restructuring. For 2016, while we see stable revenue growth for Delta's energy and components businesses (driven by a cyclical end-demand recovery), we are more optimistic about its total data-centre solutions and telecoms power businesses, as we expect them to benefit from the proliferation of IoT devices and 4G migration. We are also positive on its IA business as it is expanding its client base by offering varied product applications.

What's the impact: 4Q15: low-single-digit QoQ revenue decline. We expect Delta's 4Q15 revenue to fall by 2% QoQ, after reaching a peak for PC-related product sales in September. We expect its cooling fans, passive components and networking products to continue to outperform its other businesses in 4Q15.

2016 outlook: margin improvement on track. We expect Delta's operating margin to expand to 11.0% in 2016 and 11.6% in 2017 (from 10.2% in 2015) due to: 1) a rising gross margin on a better product mix, as Eltek's revenue contribution will be full-year vs. 7 months in 2015, and Eltek's gross margin is above Delta's average, 2) a better end-demand outlook, which would ease concerns on pricing pressure, and 3) Delta's cost-restructuring efforts for Eltek. Delta is gradually transferring some of Eltek's high-cost material sources and manufacturing from EMEA to Asia, and believes this will help reduce costs.

M&A to be a revenue-growth driver. After the acquisition of Eltek and the 19.5% investment in Swissray, Delta plans to engage in more M&A if it sees good opportunities. Delta says the targets should provide synergies to its developing businesses (such as IA) or enlarge its client base.

We expect Delta's data-centre business to deliver double-digit YoY revenue growth in 2016-17. Specifically, the main driver should be demand for its solutions business in Greater China.

What we recommend: We maintain our 12-month target price of TWD185, based on a PER of 21x on our 2016E EPS, 0.5 SD above Delta's past-5-year average. We reiterate our Outperform (2) rating, as we believe Delta's margin-recovery trend is intact, and its share price has a high positive correlation with its operating margin. The main risks to our call would be weaker-than-expected end-demand and higher-than-expected opex.

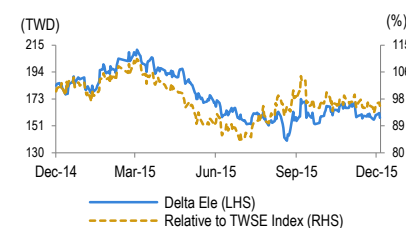
How we differ: Our 2015-17E EPS are 1-5 % below consensus, due to our lower gross-margin forecasts, as we expect higher pricing competition, especially for its networking and PC-related products.

Forecast revisions (%)

Year to 31 Dec	15E	16E	17E
Revenue change	-	-	-
Net profit change	-	-	-
Core EPS (FD) change	-	-	-

Source: Daiwa forecasts

Share price performance



12-month range	139.58-211.36
Market cap (USDbn)	11.93
3m avg daily turnover (USDm)	24.88
Shares outstanding (m)	2,438
Major shareholder	Hsiang Ta International (10.4%)

Financial summary (TWD)

Year to 31 Dec	15E	16E	17E
Revenue (m)	202,464	214,294	228,563
Operating profit (m)	20,740	23,676	26,549
Net profit (m)	18,575	21,124	23,561
Core EPS (fully-diluted)	7.621	8.666	9.666
EPS change (%)	(10.3)	13.7	11.5
Daiwa vs Cons. EPS (%)	(1.2)	(1.7)	(4.8)
PER (x)	21.0	18.5	16.6
Dividend yield (%)	4.2	3.8	4.3
DPS	6.7	6.0	6.8
PBR (x)	4.1	3.7	3.5
EV/EBITDA (x)	13.0	11.5	10.3
ROE (%)	18.8	21.1	21.8

Source: FactSet, Daiwa forecasts

Financial summary

Key assumptions

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Worldwide PC shipment (m units)	358	364	353	316	309	290	288	286
Worldwide power supply market (USDbn) YoY %	8	7	7	2	5	5	5	3
China AC motor drive (CNYbn) YoY%	32	7	7	10	15	10	15	15

Profit and loss (TWDm)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Power electronics	75,752	107,086	106,525	102,933	114,481	109,506	110,386	114,481
Energy management	25,955	35,430	35,732	32,778	35,732	52,482	61,243	68,398
Other Revenue	69,595	29,540	33,567	41,343	40,422	40,477	42,665	45,684
Total Revenue	171,302	172,056	175,824	177,053	190,635	202,464	214,294	228,563
Other income	0	0	0	0	0	0	0	0
COGS	(134,699)	(139,274)	(134,470)	(132,033)	(139,141)	(147,348)	(155,536)	(165,472)
SG&A	(10,434)	(12,478)	(14,170)	(14,237)	(16,236)	(20,034)	(20,528)	(21,250)
Other op.expenses	(8,901)	(9,986)	(11,233)	(11,274)	(12,441)	(14,343)	(14,555)	(15,292)
Operating profit	17,269	10,318	15,950	19,508	22,817	20,740	23,676	26,549
Net-interest inc./(exp.)	349	508	494	548	785	219	193	192
Assoc/forex/extraord./others	2,528	3,758	4,660	2,440	2,913	3,658	3,460	3,664
Pre-tax profit	20,146	14,585	21,104	22,497	26,515	24,618	27,329	30,405
Tax	(2,271)	(2,826)	(3,226)	(3,582)	(4,201)	(4,780)	(5,343)	(5,934)
Min. int./pref. div./others	2,128	0	(1,768)	(1,258)	(1,614)	(1,263)	(861)	(911)
Net profit (reported)	20,003	11,759	16,110	17,657	20,699	18,575	21,124	23,561
Net profit (adjusted)	20,003	11,759	16,110	17,657	20,699	18,575	21,124	23,561
EPS (reported)(TWD)	8.353	4.893	6.654	7.244	8.492	7.621	8.666	9.666
EPS (adjusted)(TWD)	8.353	4.893	6.654	7.244	8.492	7.621	8.666	9.666
EPS (adjusted fully-diluted)(TWD)	8.353	4.893	6.654	7.244	8.492	7.621	8.666	9.666
DPS (TWD)	4.436	6.175	3.674	5.305	5.800	6.700	6.013	6.838
EBIT	17,269	10,318	15,950	19,508	22,817	20,740	23,676	26,549
EBITDA	22,660	16,829	23,979	27,850	30,453	28,581	32,108	35,608

Cash flow (TWDm)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Profit before tax	20,146	14,585	21,104	22,497	26,515	24,618	27,329	30,405
Depreciation and amortisation	5,391	6,511	8,029	8,342	7,636	7,841	8,433	9,059
Tax paid	(2,271)	(2,826)	(3,226)	(3,582)	(4,201)	(4,780)	(5,343)	(5,934)
Change in working capital	(6,273)	(6,683)	(353)	(3,022)	(5,044)	466	(2,031)	(2,443)
Other operational CF items	5,087	6,280	(1,922)	1,877	2,930	(3,014)	(3,021)	(3,020)
Cash flow from operations	22,080	17,867	23,632	26,112	27,835	25,130	25,366	28,067
Capex	(8,860)	(14,130)	(10,996)	(8,824)	(5,532)	(6,074)	(6,429)	(6,857)
Net (acquisitions)/disposals	731	(2,548)	(275)	1	(350)	0	0	0
Other investing CF items	(874)	1,371	(630)	361	(882)	(1,026)	(984)	(1,004)
Cash flow from investing	(9,003)	(15,307)	(11,901)	(8,461)	(6,764)	(7,100)	(7,413)	(7,861)
Change in debt	4,781	23,791	(21,718)	1,868	8,852	(620)	310	(155)
Net share issues/(repurchases)	0	1	257	0	0	0	0	0
Dividends paid	(10,013)	(14,789)	(8,831)	(12,843)	(14,138)	(16,331)	(14,656)	(16,667)
Other financing CF items	662	(1,927)	6,380	(222)	(2,172)	(1,279)	(1,247)	(1,355)
Cash flow from financing	(4,569)	7,077	(23,911)	(11,197)	(7,458)	(18,230)	(15,593)	(18,177)
Forex effect/others	(5,312)	2,447	(2,600)	2,770	3,469	0	0	0
Change in cash	3,197	12,084	(14,781)	9,223	17,082	(200)	2,360	2,029
Free cash flow	13,221	3,737	12,635	17,288	22,303	19,056	18,937	21,210

Source: FactSet, Daiwa forecasts

Financial summary continued ...

Balance sheet (TWDm)

As at 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Cash & short-term investment	61,408	68,424	52,470	59,806	74,188	57,753	59,238	60,363
Inventory	14,789	19,126	15,461	18,042	21,572	20,975	22,141	23,555
Accounts receivable	34,970	38,938	38,192	44,305	46,696	48,324	51,148	54,553
Other current assets	2,076	3,520	15,767	4,349	5,376	10,011	10,012	10,013
Total current assets	113,243	130,008	121,890	126,503	147,832	137,063	142,538	148,484
Fixed assets	26,901	36,918	34,908	37,195	36,815	38,541	36,057	41,061
Goodwill & intangibles	0	0	0	0	0	0	0	0
Other non-current assets	21,595	26,269	25,090	33,631	35,806	48,331	49,554	50,776
Total assets	161,738	193,194	181,889	197,329	220,452	223,935	228,149	240,322
Short-term debt	9,878	17,599	5,037	4,562	5,801	5,182	5,491	5,336
Accounts payable	39,355	41,659	38,436	32,816	33,749	35,246	37,205	39,581
Other current liabilities	9,003	9,495	15,222	21,990	25,074	41,466	33,244	37,355
Total current liabilities	58,235	68,753	58,695	59,368	64,624	81,893	75,940	82,272
Long-term debt	9,540	24,862	16,492	18,828	26,468	20,468	20,468	20,468
Other non-current liabilities	6,571	7,093	7,298	11,248	13,721	13,721	13,721	13,721
Total liabilities	74,346	100,708	82,485	89,443	104,813	116,082	110,129	116,461
Share capital	23,948	24,034	24,212	24,375	24,375	24,375	24,375	24,375
Reserves/R.E./others	51,883	53,787	59,454	69,272	78,509	70,723	80,890	86,731
Shareholders' equity	75,831	77,821	83,666	93,648	102,885	95,099	105,265	111,106
Minority interests	11,561	14,665	15,738	14,238	12,754	12,754	12,754	12,754
Total equity & liabilities	161,738	193,194	181,889	197,329	220,452	223,935	228,148	240,322
EV	359,577	378,710	374,804	367,828	360,843	370,658	369,482	368,202
Net debt/(cash)	(41,990)	(25,962)	(30,941)	(36,417)	(41,918)	(32,103)	(33,279)	(34,559)
BVPS (TWD)	31.665	32.379	34.556	38.419	42.208	39.014	43.185	45.581

Key ratios (%)

Year to 31 Dec	2010	2011	2012	2013	2014	2015E	2016E	2017E
Sales (YoY)	36.5	0.4	2.2	0.7	7.7	6.2	5.8	6.7
EBITDA (YoY)	36.8	(25.7)	42.5	16.1	9.3	(6.1)	12.3	10.9
Operating profit (YoY)	46.8	(40.3)	54.6	22.3	17.0	(9.1)	14.2	12.1
Net profit (YoY)	71.6	(41.2)	37.0	9.6	17.2	(10.3)	13.7	11.5
Core EPS (fully-diluted) (YoY)	61.7	(41.4)	36.0	8.9	17.2	(10.3)	13.7	11.5
Gross-profit margin	21.4	19.1	23.5	25.4	27.0	27.2	27.4	27.6
EBITDA margin	13.2	9.8	13.6	15.7	16.0	14.1	15.0	15.6
Operating-profit margin	10.1	6.0	9.1	11.0	12.0	10.2	11.0	11.6
Net profit margin	11.7	6.8	9.2	10.0	10.9	9.2	9.9	10.3
ROAE	28.8	15.3	20.0	19.9	21.1	18.8	21.1	21.8
ROAA	13.5	6.6	8.6	9.3	9.9	8.4	9.3	10.1
ROCE	17.5	8.5	12.5	15.5	16.3	14.7	17.1	18.1
ROIC	39.5	14.9	20.0	23.4	26.5	22.4	23.7	24.6
Net debt to equity	net cash	net cash	net cash	net cash	net cash	net cash	net cash	net cash
Effective tax rate	11.3	19.4	15.3	15.9	15.8	19.4	19.6	19.5
Accounts receivable (days)	68.8	78.4	80.1	85.0	87.1	85.7	84.7	84.4
Current ratio (x)	1.9	1.9	2.1	2.1	2.3	1.7	1.9	1.8
Net interest cover (x)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Net dividend payout	85.9	73.9	75.1	79.7	80.1	78.9	78.9	78.9
Free cash flow yield	3.4	1.0	3.2	4.4	5.7	4.9	4.9	5.4

Source: FactSet, Daiwa forecasts

Company profile

Delta Electronics is the global leader in switching power supply products. Its products include switching power supply products, brushless fans, transformers, projector systems and industrial automation systems. Delta is expanding into green-energy related products including solar products, LEDs, electric vehicle motors and E-paper.

Delta: P&L

(TWDm)	2014				2015E				2016E				2014	2015E	2016E
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4QE	1QE	2QE	3QE	4QE			
Net sales	43,036	47,616	50,455	49,528	43,203	48,732	55,908	54,621	48,325	52,923	56,779	56,268	190,635	202,464	214,294
COGS	(31,598)	(34,553)	(36,689)	(36,300)	(31,971)	(35,578)	(40,155)	(39,644)	(35,211)	(38,414)	(41,044)	(40,868)	(139,141)	(147,348)	(155,536)
Gross profit	11,437	13,063	13,766	13,229	11,232	13,154	15,753	14,977	13,114	14,509	15,735	15,401	51,495	55,117	58,758
Operating costs	(6,332)	(7,080)	(7,510)	(7,756)	(6,963)	(8,411)	(9,608)	(9,395)	(8,215)	(8,626)	(8,914)	(9,326)	(28,678)	(34,376)	(35,082)
Operating profit	5,105	5,983	6,256	5,473	4,269	4,743	6,145	5,582	4,899	5,883	6,820	6,074	22,817	20,740	23,676
Non-operating profit	807	994	1,094	803	814	763	1,470	830	810	849	1,097	897	3,698	3,878	3,653
Pretax profit	5,913	6,977	7,350	6,275	5,083	5,506	7,616	6,413	5,709	6,732	7,918	6,971	26,515	24,618	27,329
Taxes	(987)	(1,218)	(1,120)	(876)	(825)	(1,293)	(1,488)	(1,174)	(1,107)	(1,358)	(1,532)	(1,346)	(4,201)	(4,780)	(5,343)
Net profit	4,570	5,265	5,838	5,025	3,866	3,795	5,896	5,019	4,402	5,153	6,160	5,409	20,699	18,575	21,124
Pretax EPS (TWD)	2.43	2.86	3.02	2.57	2.09	2.26	3.12	2.63	2.34	2.76	3.25	2.86	10.88	10.10	11.21
Net EPS (TWD)	1.87	2.16	2.40	2.06	1.59	1.56	2.42	2.06	1.81	2.11	2.53	2.22	8.49	7.62	8.67
Outstanding shares (mn)	2,438	2,438	2,438	2,438	2,438	2,438	2,438	2,438	2,438	2,438	2,438	2,438	2,438	2,438	2,438
Operating Ratios															
Gross margins	26.6%	27.4%	27.3%	26.7%	26.0%	27.0%	28.2%	27.4%	27.1%	27.4%	27.7%	27.4%	27.0%	27.2%	27.4%
Operating margin	11.9%	12.6%	12.4%	11.0%	9.9%	9.7%	11.0%	10.2%	10.1%	11.1%	12.0%	10.8%	12.0%	10.2%	11.0%
Pre-tax margin	13.7%	14.7%	14.6%	12.7%	11.8%	11.3%	13.6%	11.7%	11.8%	12.7%	13.9%	12.4%	13.9%	12.2%	12.8%
Net margin	10.6%	11.1%	11.6%	10.1%	8.9%	7.8%	10.5%	9.2%	9.1%	9.7%	10.8%	9.6%	10.9%	9.2%	9.9%
YoY%															
Net revenues	11%	10%	9%	2%	0%	2%	11%	10%	12%	9%	2%	3%	8%	6%	6%
Gross profit	9%	6%	6%	1%	1%	3%	9%	9%	10%	8%	2%	3%	14%	7%	7%
Operating income	15%	19%	20%	4%	-2%	1%	14%	13%	17%	10%	0%	3%	17%	-9%	14%
Pretax income	19%	33%	26%	-3%	-14%	-21%	4%	2%	12%	22%	4%	9%	18%	-7%	11%
Net income	11%	24%	29%	6%	-15%	-28%	1%	0%	14%	36%	4%	8%	17%	-10%	14%
QoQ%															
Net revenues	-12%	11%	6%	-2%	-13%	13%	15%	-2%	-12%	10%	7%	-1%			
Gross profit	-10%	14%	5%	-4%	-15%	17%	20%	-5%	-12%	11%	8%	-2%			
Operating income	-11%	17%	5%	-13%	-22%	11%	30%	-9%	-12%	20%	16%	-11%			
Pretax income	-8%	18%	5%	-15%	-19%	8%	38%	-16%	-11%	18%	18%	-12%			
Net income	-3%	15%	11%	-14%	-23%	-2%	55%	-15%	-12%	17%	20%	-12%			

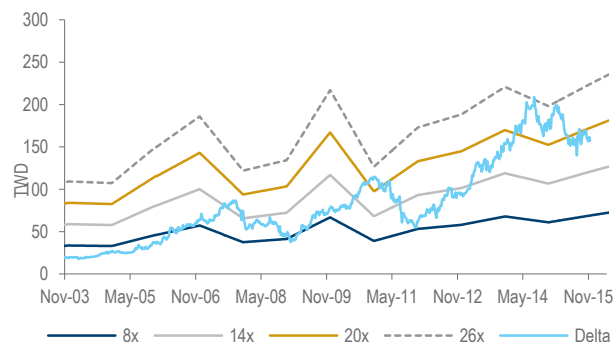
Source: Company, Daiwa forecasts

Delta: earnings revision table for 2015-17

(TWDm)	2015E			2016E			2017E		
	Previous	New	Consensus	Previous	New	Consensus	Previous	New	Consensus
Revenue	202,464	202,464	203,509	214,294	214,294	219,747	228,563	228,563	234,573
Diff (%)		0.0%	-0.5%		0.0%	-2.5%		0.0%	-2.6%
Gross Margin (%)	27.2%	27.2%	27.3%	27.4%	27.4%	27.8%	27.6%	27.6%	28.6%
Operating profit	20,740	20,740	20,913	23,676	23,676	23,961	26,549	26,549	27,930
Op Margin (%)	10.2%	10.2%	10.3%	11.0%	11.0%	10.9%	11.6%	11.6%	11.9%
Net profit	18,576	18,575	18,805	21,127	21,124	21,489	23,564	23,561	24,745
EPS	7.62	7.62	7.71	8.67	8.67	8.82	9.67	9.67	10.15
Diff (%)		0.0%	-1.2%		0.0%	-1.7%		0.0%	-4.8%

Source: Company, Bloomberg, Daiwa forecasts

Delta: one-year-forward PER bands



Source: Company, Daiwa forecasts

Delta: QFII holdings



Source: TEJ

Daiwa's Asia Pacific Research Directory

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Samsung Electronics: share price and Daiwa recommendation trend

Date	Target price	Rating	Date	Target price	Rating	Date	Target price	Rating
05/07/13	1,800,000	Buy	29/07/15	0				
07/01/14	1,700,000	Buy	16/10/15	1,470,000	Buy			



Source: Daiwa

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