

Semiconductor Manufacturing International Corp. (0981.HK / 981 HK)

Rating	OUTPERFORM* [V]
Price (07 Feb 13, HK\$)	0.47
Target price (HK\$)	0.57 ¹
Upside/downside (%)	21.3
Mkt cap (HK\$ mn)	15,045 (US\$ 1,940)
Enterprise value (US\$ mn)	2,571
Number of shares (mn)	32,011.04
Free float (%)	66.0
52-week price range	0.52 - 0.24
ADTO - 6M (US\$ mn)	4.4

*Stock ratings are relative to the coverage universe in each analyst's or each team's respective sector.

¹Target price is for 12 months.

[V] = Stock considered volatile (see Disclosure Appendix).

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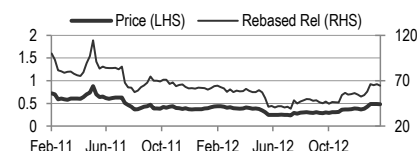
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EARNINGS

Technology and profitability strides continue

- Operational turnaround continues.** SMIC grew 29% YoY in 2012, double the rate of the foundry industry, on the ramp of emerging Chinese fabless customers (35% of sales), growth in mobile devices (60% of sales), and a few large US customers. Focus is now shifting to the need for more capacity over break-even utilization levels, as the company has stayed profitable over the past 3 quarters and is guiding another profitable quarter in 1Q13. We project operating margins ramping to high single digits by 2H13, allowing further upside to street estimates if the company executes on its 40nm design wins.
- Good start to the Chinese New Year.** SMIC topped 4Q12 guidance with +5% QoQ sales, GMs at the top-end of 18-20% guidance, and OpMs improving from 4% to 7%. 1Q13 sales was guided +1% to -2%, above our -1% and street -4% on mobile strength. GMs are projected to stay flat at 17.5-19.5%, allowing profitability through the seasonal low period.
- Making strides on technology and specialty processes.** SMIC grew 40nm to 3% of sales and targets over 10% in 4Q13, with 5-6 US and China customers taping out primarily for mobile. Management targets 28nm volume ramp in 2H14, back on a two-year cadence. The company also has over 15% of sales from specialty processes (CMOS sensor, power ICs) and is developing high-end BSI technology for image sensors for 1H14.
- Maintaining estimates above street.** We stay above street, with 2013/14 net profit at US\$110 mn/US\$125 mn vs. street's US\$24 mn/US\$46 mn. Maintain OUTPERFORM with HK\$0.57 target (1.0x BV) and implied 20% upside to factor in improving profitability, self-funding cash flows and above-industry growth. Catalysts would be in exposure to low-cost smartphone/tablet builds 40nm ramps, progress on specialty process, and further margin improvement.

Share price performance



The price relative chart measures performance against the MSCI CHINA F IDX which closed at 6502.23 on 07/02/13. On 07/02/13 the spot exchange rate was HK\$7.75/US\$1.

Performance Over	1M	3M	12M
Absolute (%)	8.0	30.6	6.8
Relative (%)	8.8	21.5	1.9

Financial and valuation metrics

Year	12/12A	12/13E	12/14E	12/15E
Revenue (US\$ mn)	1,701.6	2,117.6	2,319.5	—
EBITDA (US\$ mn)	581.2	698.5	830.9	—
EBIT (US\$ mn)	15.9	150.0	165.2	—
Net profit (US\$ mn)	16.8	110.4	124.6	—
EPS (CS adj.) (US\$)	0.00	0.00	0.00	—
Change from previous EPS (%)	n.a.	0.54	-0.22	—
Consensus EPS (US\$)	n.a.	0.001	0.003	0.006
EPS growth (%)	n.m.	516.6	12.8	n.a.
P/E (x)	108.3	17.6	15.6	—
Dividend yield (%)	0	0	0	—
EV/EBITDA (x)	4.3	3.7	3.3	—
P/B (x)	0.80	0.82	0.77	—
ROE (%)	0.7	4.8	5.1	—
Net debt/equity (%)	24.2	26.4	30.4	—

Source: Company data, Thomson Reuters, Credit Suisse estimates.

DISCLOSURE APPENDIX CONTAINS ANALYST CERTIFICATIONS AND THE STATUS OF NON US ANALYSTS. US Disclosure: Credit Suisse does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the Firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

Focus tables

Figure 1: SMIC's income statement summary

Summary Income Statement	1Q12	2Q12	3Q12	4Q12	1Q13	2Q13	3Q13	4Q13	2010	2011	2012F	2013F	2014F	2015F
Net Sales	333	422	461	486	484	518	555	560	1,555	1,319	1,702	2,118	2,320	2,548
Sequential Change	14.9%	26.8%	9.3%	5.4%	-0.3%	7.0%	7.0%	1.0%						
Y/Y Change	-10.2%	19.7%	50.3%	67.8%	45.6%	22.9%	20.3%	15.3%	45.3%	-15.1%	29.0%	24.4%	9.5%	9.9%
Cost of Goods Sold	293	320	334	389	394	409	418	420	1,245	1,218	1,336	1,640	1,792	1,905
Gross Profits	40	102	127	97	91	110	137	140	310	102	365	477	527	643
Gross Margin	12.0%	24.1%	27.5%	19.9%	18.7%	21.1%	24.7%	25.0%	19.9%	7.7%	21.5%	22.5%	22.7%	25.2%
Operating Exp. Promotion	7	8	8	9	9	9	9	9	29	33	31	36	38	41
% of Sales	2.1%	1.8%	1.8%	1.8%	1.8%	1.7%	1.7%	1.7%	1.9%	2.5%	1.9%	1.7%	1.7%	1.6%
Operating Exp. Administrative	24	29	25	29	31	32	32	32	42	57	107	127	135	143
% of Sales	7.2%	6.9%	5.4%	6.1%	6.4%	6.1%	5.8%	5.8%	2.7%	4.4%	6.3%	6.0%	5.8%	5.6%
Operating Expense R&D	59	51	73	27	36	40	44	45	181	191	210	164	189	204
% of Sales	17.8%	12.1%	15.8%	5.5%	7.4%	7.6%	7.9%	8.0%	11.7%	14.5%	12.3%	7.7%	8.1%	8.0%
Total Operating Exp	90	88	106	44	76	80	85	87	288	293	329	327	362	388
EBIT	(50)	14	20	53	15	29	52	53	22	(191)	37	150	165	255
% of Sales	-15.1%	3.3%	4.4%	10.9%	3.1%	5.7%	9.4%	9.5%	1.4%	-14.5%	2.1%	7.1%	7.1%	10.0%
Net Non-Operating Income	(4)	(8)	(8)	(2)	(8)	(7)	(7)	(7)	(13)	8	(23)	(30)	(30)	(30)
Pretax Income	(54)	5	13	50	7	22	45	46	9	(182)	14	120	135	225
% of Sales	-16.3%	1.3%	2.7%	10.4%	1.5%	4.2%	8.1%	8.2%	0.6%	-13.8%	0.8%	5.7%	5.8%	8.8%
Income Taxes Exp. /(Gains)	(11.4)	(1.5)	1.1	10.6	0.6	1.8	3.6	3.7	(4.8)	82.5	(1.2)	9.6	10.8	18.0
Tax Rate	21.0%	-27.0%	8.9%	21.1%	8.0%	8.0%	8.0%	8.0%	-54.1%	-45.3%	-8.2%	8.0%	8.0%	8.0%
Net Income pre-Extraordinaries	(43)	7	11	40	7	20	41	42	14	(265)	15	110	125	207
Extraordinaries	0.4	0.4	0.8	0.1	-	-	-	-	0.3	19.2	1.7	-	-	-
Net Income post-Extraordinaries	(43)	7.3	12.2	40	7	20	41	42	14	(246)	17	110	125	207
% of Sales	-12.8%	1.7%	2.7%	8.2%	1.4%	3.9%	7.4%	7.6%	0.9%	-18.6%	1.0%	5.2%	5.4%	8.1%
Net EPS	(0.00)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.001	(0.009)	0.001	0.003	0.004	0.006
EPS per ADR	(0.08)	0.01	0.02	0.06	0.01	0.03	0.06	0.07	0.03	(0.45)	0.03	0.17	0.19	0.32
Adjusted Share Count	27,504	28,830	31,993	31,993	31,993	31,993	31,993	31,993	24,606	27,436	30,080	31,993	31,993	31,993

Figure 2: SMIC's balance sheet

Summary Balance sheet	1Q12	2Q12	3Q12	4Q12	1Q13	2Q13	3Q13	4Q13	2009	2010	2011	2012	2013F	2014F	2015F
Cash & Equivalents	495	515	476	576	696	763	747	745	464	680	399	576	745	812	825
Inventories	211	240	262	296	299	311	317	319	194	213	207	296	319	357	370
Account receivables	197	264	289	278	277	297	317	321	204	207	165	278	321	345	381
Other current assets	118	95	106	124	124	132	142	143	45	79	126	124	143	154	170
Total Current Assets	1,021	1,114	1,133	1,274	1,396	1,503	1,523	1,528	907	1,179	897	1,274	1,528	1,668	1,746
LT investment	-	-	-	-	-	-	-	-	10	10	-	-	-	-	-
Fixed Assets	2,571	2,521	2,510	2,459	2,498	2,537	2,579	2,620	2,330	2,431	2,594	2,459	2,620	2,864	3,132
Intangible Assets	288	339	335	340	340	340	340	340	183	174	179	340	340	340	340
Other Assets	58	-	-	-	-	-	-	-	95	109	58	-	-	-	-
Total Non-Current Assets	2,917	2,861	2,846	2,799	2,837	2,876	2,919	2,960	2,617	2,724	2,831	2,799	2,960	3,204	3,472
Total Assets	3,938	3,975	3,979	4,073	4,233	4,379	4,442	4,488	3,524	3,903	3,728	4,073	4,488	4,872	5,218
Accounts payable	307	329	344	331	335	348	356	358	229	516	281	331	358	400	415
ST interest bearing Liabilities	688	658	690	597	597	597	597	597	571	735	825	597	597	597	597
Other current liabilities	142	146	164	186	186	199	213	215	231	149	142	186	215	231	255
Total Current Liabilities	1,138	1,133	1,197	1,115	1,118	1,144	1,166	1,170	1,032	1,399	1,248	1,115	1,170	1,229	1,268
LT liabilities	456	495	415	529	679	779	779	779	551	179	104	529	779	979	1,079
Other LT liabilities	136	129	134	156	156	156	156	156	111	116	127	156	156	156	156
Total non-Current Liabilities	592	624	550	684	834	934	934	934	661	295	231	684	934	1,134	1,234
Total Liabilities	1,730	1,757	1,747	1,799	1,953	2,079	2,100	2,104	1,693	1,694	1,479	1,799	2,104	2,363	2,502
Total Equity	2,204	2,213	2,227	2,269	2,275	2,295	2,337	2,379	1,796	2,170	2,245	2,269	2,379	2,504	2,711
Minority Interest	4	5	5	5	5	5	5	5	35	39	4	5	5	5	5
Total Liabilities & Equity	3,938	3,975	3,979	4,073	4,233	4,379	4,442	4,488	3,524	3,903	3,728	4,073	4,488	4,872	5,218

Profitability Ratios															
Return on Equity (ROE)	NM	0.3%	0.5%	1.8%	0.3%	0.9%	1.8%	1.8%	-53.6%	0.6%	-10.9%	0.7%	4.6%	5.0%	7.6%
Return on Assets (ROA)	NM	0.2%	0.3%	1.0%	0.2%	0.5%	0.9%	0.9%	-27.3%	0.4%	-6.6%	0.4%	2.5%	2.6%	4.0%
Return on Sales	NM	1.7%	2.7%	8.2%	1.4%	3.9%	7.4%	7.6%	-89.9%	0.9%	-18.6%	1.0%	5.2%	5.4%	8.1%

Efficiency Ratios															
Asset Turns (Annualized Sales / A	0.3	0.4	0.5	0.5	0.5	0.5	0.5	0.5	1.2	1.6	1.4	1.7	1.9	1.9	2.0
Days sales outstanding (DSO)	54.0	57.1	57.2	52.2	52.2	52.2	52.2	52.2	17.4	12.1	11.4	14.9	13.8	13.6	13.6
Days of inventory	65.9	68.4	71.6	69.3	69.3	69.3	69.3	69.3	14.9	15.6	15.5	20.2	17.8	18.2	17.7
Days of Payables	95.7	93.8	93.8	77.7	77.7	77.7	77.7	77.7	17.6	37.8	21.0	22.6	19.9	20.4	19.9
Cash conversion cycle	24.1	31.8	34.9	43.9	43.9	43.9	43.9	43.9	14.7	-10.0	5.9	12.5	11.7	11.4	11.5
(Increase)/Decrease in working ca	(139)	(78)	6	(123)	1	(14)	(15)	(2)	139	312	(150)	(333)	(30)	(14)	(26)

Per Share Values															
Book Value per common share	\$0.08	\$0.08	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.07	\$0.08	\$0.09	\$0.08	\$0.08	\$0.07	\$0.08	\$0.08
Cash per common share	\$0.02	\$0.02	\$0.01	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.03	\$0.01	\$0.02	\$0.02	\$0.03	\$0.03
Net Cash per common share	-\$0.02	-\$0.02	-\$0.02	-\$0.02	-\$0.02	-\$0.02	-\$0.02	-\$0.02	-\$0.03	-\$0.01	-\$0.02	-\$0.02	-\$0.02	-\$0.02	-\$0.03

Source of the above data: Company data, Credit Suisse estimates

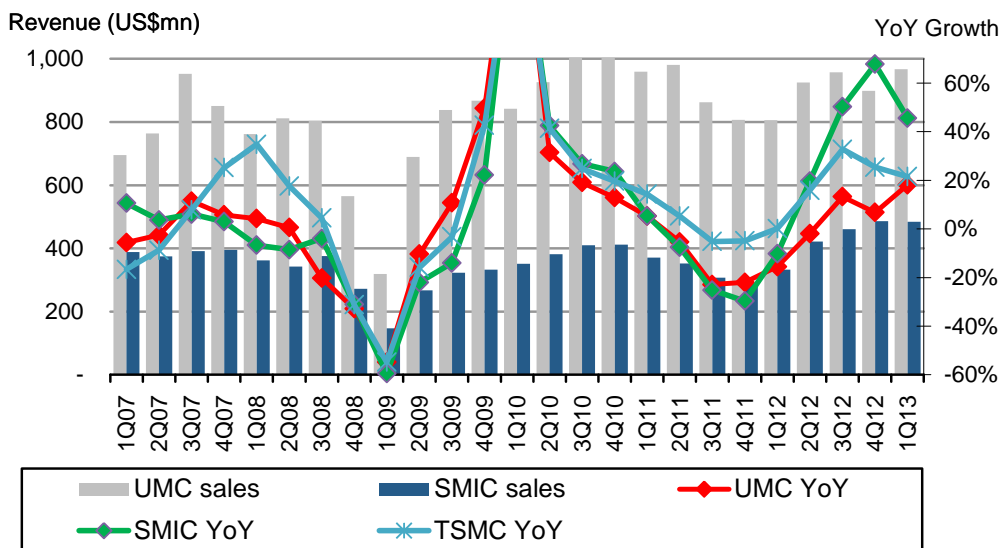
4Q12 results: Technology and profitability strides continue

SMIC's new management has delivered a strong year of improving growth, return to profitability, and self-sustaining cash flows. The company is now competing well in its area of competency, supplying a cost-effective source for emerging Chinese fabless and overseas customers using multiple foundries. The company is a complementary option for customers needing a lower-cost option on n-1 and n-2 process nodes to TSMC, particularly Chinese fabless receiving government R&D subsidies, but also requiring them to manufacture in a local foundry. The company's base in China is also of growing value to the local supply chain growing volumes in fast-growing, low-cost smartphones and tablets. The leverage to these mobile applications (now 60% of sales) has enabled the company to outgrow peers throughout 2012.

SMIC supplying a growing channel in low-cost mobile computing

We maintain our OUTPERFORM rating on the company with 20% implied upside to 1x P/B (HK\$0.57), as the company is showing above-industry growth, good leverage to faster-growing areas of tech in low-cost mobile devices, and improving execution on its targets. Further upside would come from additional strides on specialty and advanced technology.

Figure 3: SMIC outgrowing peers as it recovers from prior underperformance
in million, unless otherwise stated



Source: Company data, Credit Suisse estimates

4Q12 results and 1Q13 guidance better

The following are key highlights from 4Q12 results and 1Q13 guidance:

- 4Q12 sales in line.** SMIC reported US\$486 mn sales (+5% QoQ), with shipments flat and ASPs up 4% QoQ on firm pricing and initial 40nm volume. Revenue exceeded initial guidance for US\$439 mn-US\$447 mn due to continued growth of the communication and consumer sectors in China from the ramp of feature phones, smartphones, and tablets. The company has only 1% exposure to traditional computing versus peers at 20%, limiting its downside from this slow channel.
- Gross margins at the high-end of guidance.** Gross margins reached 19.9% — the high-end of guidance for 18-20%. The margins were down 760 bp from the prior quarter as the 12" Shanghai fab entered production, so production costs shifted from R&D into COGs.

SMIC continues to outgrow its peer group as it recovers from prior challenges

- Product mix roughly unchanged. Revenue mix stayed skewed toward communications at 47% of sales and consumer at 43% of sales. China customers also stayed at 35% of sales in the quarter.

Figure 4: SMIC 4Q12 results and 1Q13 guidance better than expected

in million, unless otherwise stated

(US\$ mn)	4Q12				1Q13			
	CS	CS(prior)	Street	Guidance	CS	CS(old)	Street	Guidance
Net sales	\$486	\$466	\$466	\$461-\$470mn	\$484	\$461	\$449	\$476-491mn
Change	5%	1%	1%	Flat to up 2%	0%	-1%	-4%	+1% to -2%
GM %	19.9%	18.3%	18.3%	18-20%	18.7%	16.8%		17.5-19.5%
R&D expense	27	46	46		36	47		
SG&A expense	17	26	26		40	27		
OpM %	10.9%	2.7%	2.7%	Opex \$70-	3.1%	0.8%	0.8%	Opex \$74-77mn
Net income	40	5	5		7	(2)	1	13 capex \$600mn
EPS (US\$)	\$0.001	\$0.000	\$0.000		\$0.000	\$0.000	\$0.000	

Source: Company data, Credit Suisse estimates

1Q13 holding up better than peers, capex funded from operations

- 1Q13 sales guided above peers. 1Q13 sales were guided to US\$476 mn-US\$491 mn, -2% to +1% QoQ, at the high-end of the company's peer group. Shipments are still being driven by mobile applications.
- GMs guided down slightly. GMs were guided to 17.5-19.5%, down 40-240 bp QoQ, as utilization will be slightly down as Shanghai ramps up and less inventory is built in 1Q13, following the build in 4Q12. At full utilization, management believes it can approach low-mid 20% GMs. Operating expenses are projected at US\$74 mn-US\$77 mn, assuming no subsidies (the company conservatively targets US\$20 mn-US\$25 mn in 2013 versus US\$30 mn in 2012). The company is stepping up investments to develop specialty and advanced 28nm, targeting raising R&D from 7% of sales to 8% of sales in the coming year.

1Q13 sales guided flattish, better than the normal seasonal decline

Figure 5: SMIC's operating metrics

	1Q12	2Q12	3Q12	4Q12	1Q13E	2Q13E	3Q13E	4Q13E	2010	2011	2012	2013E	2014E	2015E
Capacity (8" equivalent)	554	594	617	658	661	684	723	733	2,010	2,286	2,423	2,801	3,180	3,758
Sequential Change (%)	-5%	7%	4%	7%	1%	3%	6%	1%	5%	14%	6%	16%	14%	18%
Shipment (8" equivalent)	446	558	606	608	607	648	696	706	1,981	1,704	2,217	2,657	2,959	3,340
Sequential Change (%)	19%	25%	9%	0%	0%	7%	7%	1%	44%	-14%	30%	20%	11%	13%
Utilization (Shipments/Capacity)	80%	94%	98%	92%	92%	95%	96%	96%	99%	75%	92%	95%	93%	89%
Logic ASP	\$705	\$714	\$723	\$751	\$750	\$752	\$749	\$746	\$744	\$714	\$725	\$749	\$737	\$717
Sequential Change (%)	-2%	1%	1%	4%	0%	0%	0%	0%	-4%	-4%	1%	3%	-2%	-3%
Simple ASP (Revenue/Shipments)	\$747	\$756	\$762	\$799	\$798	\$800	\$797	\$794	\$725	\$714	\$725	\$749	\$737	\$717
Sequential Change (%)	-4%	1%	1%	5%	0%	0%	0%	0%	1%	-2%	1%	3%	-2%	-3%
Revenue % of 90nm&below	31%	42%	44%	43%	44%	46%	47%	47%	23%	28%	22%	22%	37%	39%
Capex (US\$m) (Management)	\$183	\$84	\$130	\$102	\$150	\$150	\$150	\$150	\$775	\$765	\$499	\$600	\$800	\$900
Capex (US\$m) (Cash Flows)	\$116	\$82	\$117	\$101	\$150	\$150	\$150	\$150	\$491	\$950	\$417	\$600	\$800	\$900
Capex/revenue (%)	37%	21%	27%	22%	33%	31%	29%	28%	34%	78%	26%	30%	37%	38%
Revenue	\$333	\$422	\$461	\$486	\$484	\$518	\$555	\$560	\$1,555	\$1,319	\$1,702	\$2,118	\$2,320	\$2,548
EPS	-\$0.08	\$0.01	\$0.02	\$0.06	\$0.01	\$0.03	\$0.06	\$0.07	-\$0.02	-\$0.45	\$0.02	\$0.17	\$0.19	\$0.32
Gross Margin (%)	12%	24%	27%	20%	19%	21%	25%	25%	20%	8%	21%	23%	23%	25%
Operating Margin (%)	-15%	3%	4%	11%	3%	6%	9%	10%	1%	-14%	2%	7%	7%	10%

Source: Company data, Credit Suisse estimates

- Capex timing swings, but absolute spending unchanged. SMIC originally targeted US\$550 mn in 2012/2013, but due to the timing of US\$50 mn payments, 2012 capex fell short at US\$499 mn and 2013 capex is now targeted at US\$600 mn. The company remains committed to filling existing capacity and improving mix before investing. The company targets staying disciplined and adding capacity in line with demand, and currently projects similar capex next year. The incremental capacity would allow about 16% capacity growth in 2013, allowing it to support a

near similar increase in shipments. Key fab expansions include: (1) Shanghai 300mm fab from 6k to 12k WPM, (2) Fab 7 in Tianjin from 37k to 40k, (3) Fab 4 in Beijing from 35k to 37k, and (4) Fab 1 in Shanghai from 90k to 94k.

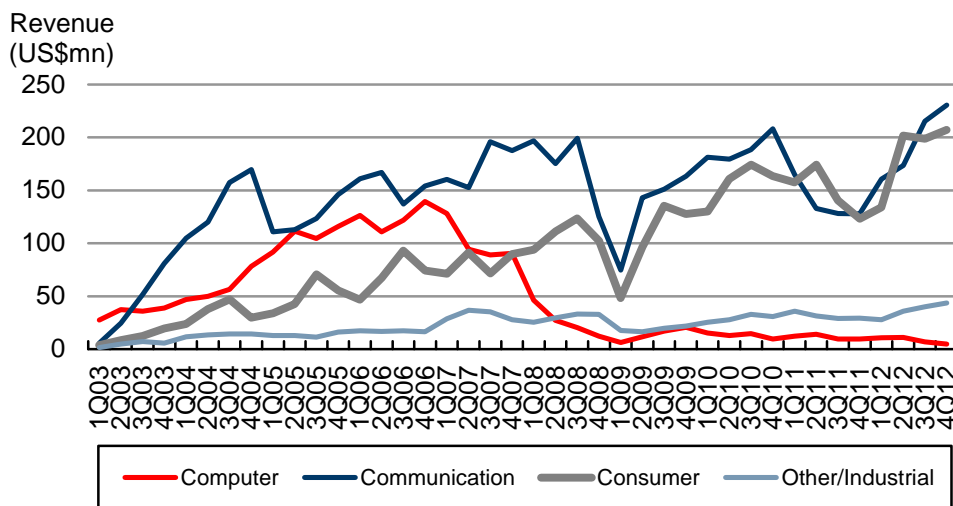
End markets: Handsets and tablets driving sales

SMIC is finished with a tough transition in 2H10/1H11 where it lost some key IDM business on the back of Nokia and TI's declining legacy business and a delayed ramp of 65nm. The company is now seeing a recovery in communications and consumers as it benefits from the need for low-cost capacity in the fast-expanding, low-cost smartphone and tablet market.

Communications and consumer the key revenue drivers

Figure 6: SMIC driven by communications and consumer

In millions, unless otherwise stated



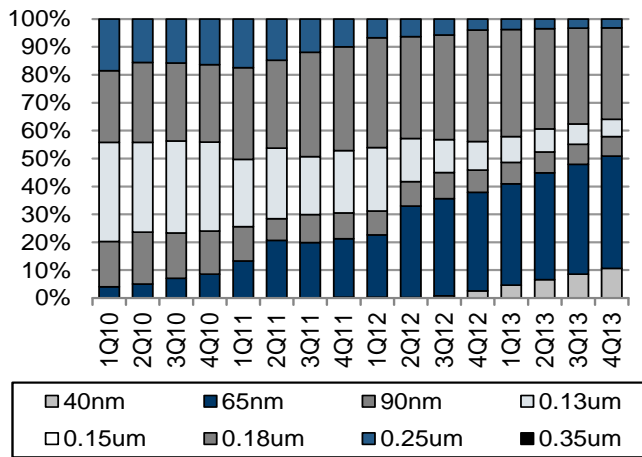
Source: Company data, Credit Suisse estimates

Benefiting from the rising China fabless industry

SMIC and its domestic competitor Shanghai Hua Hong NEC Electronics (HHNEC) have provided better support to Chinese fabless companies. With better local support, the availability of advanced technologies (40nm) versus TSMC/UMC capped at 110nm in China, and lower costs, we are likely to see Chinese foundries increasing market share as Chinese fabless switch over from foreign foundries, thereby benefiting SMIC.

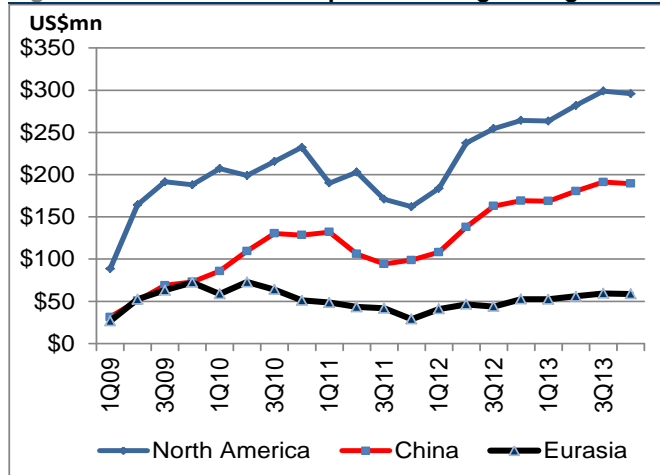
SMIC is a key beneficiary as more China fabless switch over from foreign foundries

Figure 7: 40nm/65m rising towards 50% of sales in 4Q13E



Source: Company data, Credit Suisse estimates

Figure 8: China fabless companies driving SMIC growth



Source: Company data, Credit Suisse estimates

SMIC achieved its +29% YoY growth in 2012 partly from this Chinese fabless (35% of sales) customer base supplying into low-cost smartphones and tablets. The company is now benefitting from Chinese fabless who are now starting 40nm for low-cost computing at disruptive prices.

The company now serves a broad base of Chinese fabless companies that supply into low-cost smartphones and tablets, including baseband (Spreadtrum, Hisilicon), wireless connectivity (RDA Microelectronics), CMOS image sensors (GalaxyCore), applications processor (Rockchip, Allwinner, AMLogic), NOR flash (Giga Device), and smart card ICs (Huada, Fudan). Key customers of SMIC and designs in this segment that are noteworthy include:

SMIC supplies an emerging group of local Chinese fabless customers

- **Spreadtrum** – It is one of the first 40nm customers (SC8810/6820 at 1.2GHz for EDGE and TD-SCDMA smartphones).
- **RDA** – RDA produced its 55nm Wifi combination chipset at SMIC’s Beijing fab in collaboration with SMIC on the integrated passive device (IPD). The company has produced DVB-S tuners there and is now taping out its 40nm low cost EDGE smartphone IC for 2H13 volumes.
- **Hisilicon** – 65nm baseband chipset for data dongles; also porting some 65/55/40nm design to SMIC for cost-down chipsets.
- **Rockchip** – 65nm apps processor for low-cost tablets (based on SMIC 65 LL process)
- **AMLogic** – 65nm apps processor for low-cost tablets (65LL, ARM Cortex A9)
- **Brite Semi** – 1.4GHz ARM Cortex A9 on SMIC 40LL process. Brite Semi has announced 10 tape-outs in support of SMIC, with project work for Hi Silicon, Leadcore, and Spreadtrum.

Figure 9: SMIC serving most of the major Chinese fabless semiconductor companies (Revenue in US\$ mn)

2010 rank	2011 rank	Companies	2010 revenue	2011 revenue	YoY growth	Major product	SMIC customer
1	1	Shenzhen HiSilicon Technologies	453	704	55%	Comm. ASIC	Yes
2	2	Spreadtrum Communications	346	674	95%	Wireless ASSP	Yes
3	3	RDA Microelectronics	191	289	51%	Wireless ASSP	Yes
4	4	GalaxyCore	124	185	49%	Image Sensor	Yes
5	5	Leadcore Technology	117	135	15%	Wireless ASSP	Yes
12	6	CEC Huada Electronic Design (HED)	74	128	73%	Smart card	Yes
7	7	Shanghai Huahong	101	114	13%	Smart card	No
9	8	Beijing Tongfang Microelectronics (TMC)	80	106	33%	Smart card	No
14	9	Fuzhou Rockchip Electronics	58	98	69%	Consumer ASSP	Yes
6	10	Nationz Technologies	102	88	-14%	Smart card	No
10	11	Shanghai Fudan Microelectronics Group	75	88	17%	Smart card	Yes
10	12	Datang Microelectronics Technology (DMT)	74	86	16%	Smart card	Yes
8	13	Vimicro	91	74	-19%	Compute ASSP	No
13	14	Shenzhen State Microelectronics	61	73	20%	ASIC	Yes
15	15	Actions Semiconductor	38	47	24%	Consumer ASSP	No
16	16	Ingenic Semiconductor	32	26	-19%	Consumer ASSP	No
Total			2,017	2,915	45%		

Source: Gartner

Specialty platforms help avoid commoditisation

About 50% of SMIC's capacity is in mature process technologies (90nm and above), allowing it to target more cost-sensitive applications that do not require the most advanced high-performance nodes and also mixed signal and RF on legacy nodes. The majority of Chinese fabless companies are still using mature technology nodes (greater than 110nm) for analog and mixed signal products. This keeps a sizable long-term revenue for SMIC's legacy 6" and 8" wafer fabs as long as the company has high-quality specialty processes for the Chinese market. The mix of n-1 and n-2 projects and specialty platform on mature process allows the company to target customers for their more cost-sensitive applications for the emerging market supply chain. Existing specialty process technologies SMIC offers and its key customers for each are listed in the following table.

Figure 10: SMIC avoiding mature process commoditisation with specialty platforms

Specialty process	Process node focus	Key customers
CMOS Image Sensor (CIS)	130nm-180nm	GalaxyCore
NOR Flash	65nm-180nm	GigaDevice
Micro-controller Unit (MCU)	65nm-180nm	Various
Power MOSFET	180nm-300nm	Various
BCD Technology	180nm-350nm	Various
Power Management IC (PMIC)	130nm	Qualcomm
Smart Card IC	110nm-130nm	HED, Datang, Fudan

Source: Company data

SMIC is ramping up a number of specialty customer programs:

- Smart card ICs.** SMIC's key customer is Huada Electronic Design (HED). SMIC offers a specialty platform on its mature process (110nm-250nm) by enabling non-volatile memory on smart card ICs. HED is one of the subsidiaries of the state-owned China Electronics Corporation (CEC). The main applications of HED products are citizen ID cards, social security cards, SIM cards, and electronics payment. HED has the largest market share of the Chinese citizen ID card and social security card. It has also developed Near Field Communication (NFC) solutions and was the first to be certified for China Union Pay mobile payment in 2011.
- Power management.** SMIC is shipping 35,000 wafers per month for PMIC. Our checks indicate that Qualcomm's separate PMIC is manufactured at SMIC and supplies into a number of high-end Tier-1 smartphones.
- CMOS image sensors.** SMIC's key customer — GalaxyCore — shipped around 600 mn units in 2011, an increase of 70% from 350 mn units in 2010. The majority of GalaxyCore's CIS has resolution under 2Mpixels and it mainly serves the China feature phone market. The company is preparing for higher-pixel products for the booming smartphone market. SMIC noted it will have the back-side illumination (BSI) technology needed for higher megapixel advanced sensors for 1H14 volumes.
- Nor Flash.** SMIC's key customer — GigaDevice — provides a wide range of NOR Flash in the embedded consumer and mobile device market. GigaDevice has experienced similar growth in the mobile handset flash market to Spreadtrum in baseband, RDA in RF, and GalaxyCore in CIS. GigaDevice's 2011 revenue is about US\$60 mn, a 150% growth from 2010. The strong partnership with SMIC has given GigaDevice competitiveness against IDM competitors — Macronix and Winbond. It adopted the 12-inch wafer with upgraded process technology for mass production, which gave it competitive manufacturing costs and flexible capacity.

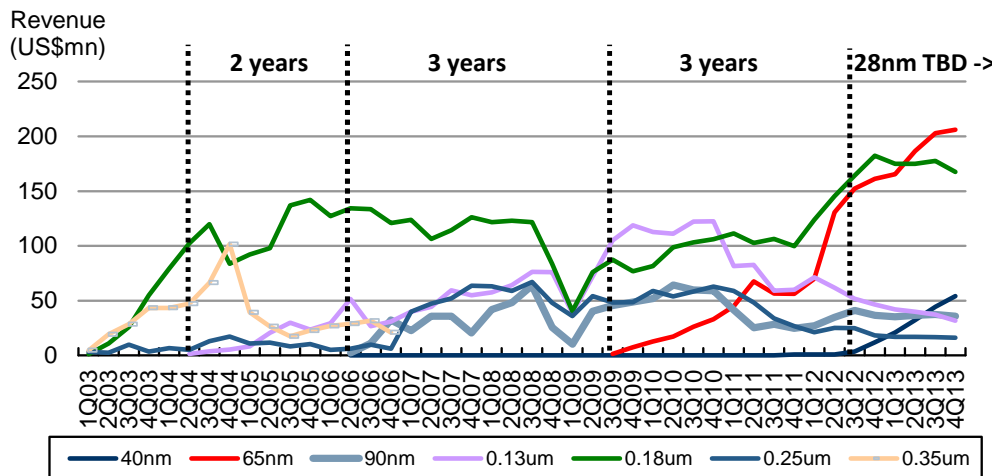
Specialty applications
keeping the legacy nodes
profitable

Advanced technology on 40nm starting to ramp up

SMIC is still committed to maintain some technology pace to avoid too much commoditisation and capture customers migrating connectivity and application processors on 40nm to support low-cost smartphones and tablets. SMIC tripled 40nm sales in 4Q12 and targets low-teens percentage of sales by 2H13, enough to approach corporate GMs and break-even profitability. 28nm is still in the development stage and would see qualifications in 1H14 for 2H14 mass production. If on time, the 28nm ramp would put SMIC back on a two-year technology cadence after spending three years for the start of both 65nm and 40nm. 65nm at least has now emerged as a strong technology node for the company after a late start and we still see 40nm offering a viable platform for connectivity and cost-effective mobile products in addition to the need for the high-end graphics/processors at TSMC on 28nm.

40nm ramping up to low-teens percentage of sales and break-even by 2H13

Figure 11: SMIC technology pace slow, but 65nm joining 180nm as a large node



Source: Company data, Credit Suisse estimates

Estimate revisions

We remain optimistic on the company's leverage to the high growth emerging market smartphones/tablets and improving execution and stay above street with 2013/2014 net profit at US\$110 mn/\$125 mn versus street's US\$24 mn/US\$46 mn. Our 2013 net income estimates translate to US\$0.17/US\$0.19 per ADR and HK\$0.027/\$0.030 per local Hong Kong share (16x 2014 P/E at current levels).

Maintaining 2012-2014 estimates

Figure 12: Earnings estimate revisions

in million, unless otherwise stated

(US\$ mn)	2012				2013				2014			
	CS	CS(old)	Diff	Street	CS	CS(old)	Diff	Street	CS	CS(old)	Diff	Street
Net sales	\$1,702	\$1,681	1%	\$1,681	\$2,118	\$2,043	4%	\$1,887	\$2,320	\$2,244	3%	\$2,000
Change	29%	27%		27%	24%	21%		12%	10%	10%		6%
GM %	21.5%	21.0%			22.5%	22.4%			22.7%	22.8%		
R&D expense	210	229	-8%		164	194	-16%		189	210	-10%	
SG&A expense	119	128	-7%		163	112	46%		173	120	45%	
OpM %	2.1%	-0.2%		0.0%	7.1%	7.4%		2.2%	7.1%	8.0%		4.0%
Net income	17	(18)		(12)	110	110		24	125	125		46
EPS (US\$)	\$0.001	-\$0.001		\$0.000	\$0.003	\$0.003		\$0.001	\$0.004	\$0.004		\$0.002
ADR EPS	\$0.03	-\$0.03		-\$0.02	\$0.17	\$0.17		\$0.05	\$0.19	\$0.20		\$0.10
HK EPS (HK\$)	\$0.004	-\$0.005		-\$0.003	\$0.027	\$0.027		\$0.008	\$0.030	\$0.030		\$0.016

Source: Company data, Credit Suisse estimates

Balance sheet remains leveraged

The following are the key takeaways from the balance sheet:

- **Net debt position.** SMIC ended 4Q12 with US\$550 mn of net debt, improving from US\$629 mn in the prior quarter on better profitability and a US\$50mn push-out on the timing of capex payments from 2012 to 2013.
- **Cash conversion slightly higher.** Cash conversion cycle pushed up slightly from 35 days to 44 days, above the long-term 33-day average as the company pulled in receivables from 94 days to 78 days.
- **Book value roughly unchanged.** Shareholders' equity did not change much, up slightly from US\$2,227 mn to US\$2,269 mn. The stock is now at 0.8x P/B.

SMIC lowered net debt modestly to US\$550 mn

Figure 13: Balance sheet summary for SMIC

Balance Sheet (US\$ mn)	4Q12(A)	3Q12	Diff	7 year Ave.	+/- Ave
Cash and Investments	\$576	\$476	\$100	\$526	\$50
Total Debt	\$1,126	\$1,105	\$20	\$1,105	\$21
Net Cash	-\$550	-\$629	\$80	-\$579	\$29
Net Cash/Share	-\$0.02	-\$0.02	\$0.00	-\$0.03	\$0.01
A/R	278	289	-\$11	233	\$45
DSO	52	57	-5	62	-9
Inventory	296	262	\$33	215	\$81
Inventory Days	69	72	-2	61	8
Accounts Payable Days	78	94	-16	90	-12
Cash Conversion Cycle	44	35	9	33	10
SH Equity	2,269	2,227	\$42	2,571	-\$303
Book Value / Share	\$0.07	\$0.07	\$0.00	\$0.12	-\$0.05

Source: Company data, Credit Suisse estimates

Cash flows becoming more sustainable

SMIC's cash flows are improving to a more sustainable level as management focuses on using existing capacity and improving efficiency of the fab operations. The company is targeting US\$600 mn capex in 2013, allowing it to be FCF-positive based on our estimate for US\$629 operating cash flow. The company is targeting a JV project with the Beijing government in 2014 in which we expect to see some shared funding, which would ease some of the financial burden of the company.

Free cash flow may stay slightly positive

Figure 14: Cash flow summary for SMIC, 2006-12A, 2013-15E

Annual (NT\$mn)	CY06	CY07	CY08	CY09	CY10	CY11	CY12	CY13E	CY14E	CY15E	02-12 Avg
Revenue	1,465	1,550	1,354	1,070	1,555	1,319	1,702	2,118	2,320	2,548	1,351
Capital spending	880	717	665	217	491	950	417	600	800	900	783
Capex/revenue (%)	60%	46%	49%	20%	32%	72%	24%	28%	34%	35%	1
Dep and amort	965	754	806	793	622	550	565	549	666	741	707
Depr/revenue (%)	66%	49%	60%	74%	40%	42%	33%	26%	29%	29%	1
Operating cash flow	770	671	565	284	694	395	454	629	776	922	556
Free cash flow	-111	-46	-100	66	203	-555	37	29	-24	22	-227
FCF / share (HK\$)	-0.05	-0.02	-0.04	0.02	0.06	-0.16	0.01	0.01	-0.01	0.01	-0.11
FCF Yield (%)	-9.3%	-3.8%	-8.3%	4.6%	12.8%	-31.4%	1.9%	1.4%	-1.2%	1.1%	-22%

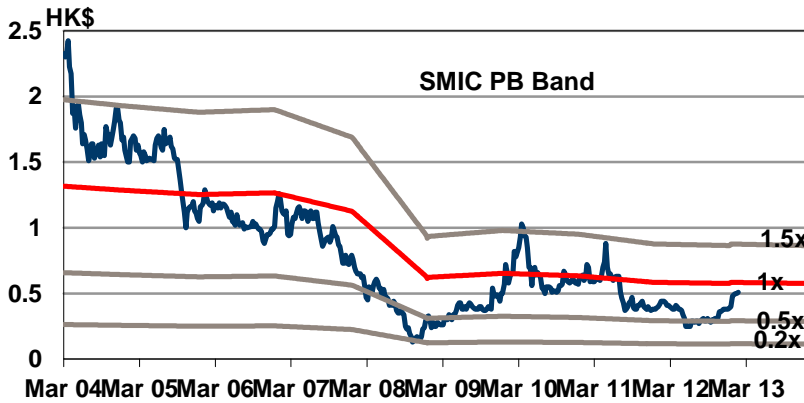
Source: Company data, Credit Suisse estimates

Maintain OUTPERFORM

We maintain our OUTPERFORM rating on SMIC at HK\$0.57 target price, representing 1x P/B as the company outgrows the group and self-funds its capex. SMIC now targets 5% ROE by 2H13 as it ramps 40nm to 10-15% of sales, improves yield on 55/65nm, and brings up its Shanghai 300mm line to scale, offering potential for the stock to move towards 1x P/B. The company has created a more sustainable business that should outgrow the industry as it targets its growing Chinese fabless customer base and draws in more multi-source business from its overseas customers.

Maintain our target price at 1x P/B

Figure 15: SMIC could keep re-rating back to 1x P/B (HK\$0.57 / US\$3.65 per ADS)



Source: Company data, Credit Suisse estimates

Semiconductor Manufacturing International Corp. 0981.HK / 981 HK

Price (07 Feb 13): HK\$0.47, Rating: **OUTPERFORM [V]**, Target Price: HK\$0.57, Analyst: Randy Abrams

Target price scenario				
Scenario	TP	%Up/Dwn	Assumptions	
Upside	0.71	51.60	0.9x 2012 BVPS	
Central Case	0.57	21.28	0.7x 2012 BVPS	
Downside	0.46	(2.98)	0.5x 2012 BVPS	

Income statement (US\$ mn)	12/12A	12/13E	12/14E	12/15E
Sales revenue	1,702	2,118	2,320	—
Cost of goods sold	1,336	1,640	1,792	—
SG&A	138.8	163.4	173.3	—
Other operating exp./(inc.)	(354.9)	(384.4)	(477.0)	—
EBITDA	581.2	698.5	830.9	—
Depreciation & amortisation	565.4	548.5	665.7	—
EBIT	15.9	150.0	165.2	—
Net interest expense/(inc.)	—	—	—	—
Non-operating inc./(exp.)	(1.9)	(30.0)	(29.8)	—
Associates/JV	—	—	—	—
Recurring PBT	14.0	120.0	135.4	—
Exceptionals/extraordinaries	—	—	—	—
Taxes	(1.2)	9.6	10.8	—
Profit after tax	15.1	110.4	124.6	—
Other after tax income	1.7	—	—	—
Minority interests	—	—	—	—
Preferred dividends	—	—	—	—
Reported net profit	16.8	110.4	124.6	—
Analyst adjustments	—	—	—	—
Net profit (Credit Suisse)	16.8	110.4	124.6	—

Cash flow (US\$ mn)	12/12A	12/13E	12/14E	12/15E
EBIT	15.9	150.0	165.2	—
Net interest	—	—	—	—
Tax paid	—	—	—	—
Working capital	(126.4)	(30.2)	(14.2)	—
Other cash & non-cash items	564.6	508.9	625.1	—
Operating cash flow	454.1	628.8	776.1	—
Capex	(416.7)	(600.0)	(800.0)	—
Free cash flow to the firm	37.3	28.8	(23.9)	—
Disposals of fixed assets	—	—	—	—
Acquisitions	—	—	—	—
Divestments	—	—	—	—
Associate investments	—	—	—	—
Other investment/(outflows)	(124.4)	—	—	—
Investing cash flow	(541.2)	(600.0)	(800.0)	—
Equity raised	(11.2)	—	—	—
Dividends paid	—	—	—	—
Net borrowings	195.3	250.0	200.0	—
Other financing cash flow	—	—	—	—
Financing cash flow	184.1	250.0	200.0	—
Total cash flow	97.0	278.8	176.1	—
Adjustments	(0.11)	—	—	—
Net change in cash	96.9	278.8	176.1	—

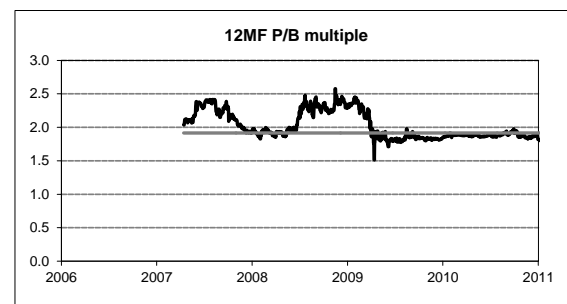
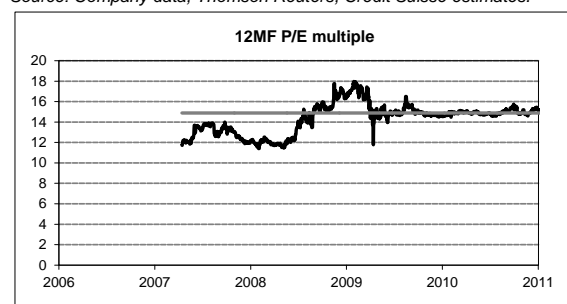
Balance sheet (US\$ mn)	12/12A	12/13E	12/14E	12/15E
Cash & cash equivalents	576.1	745.5	812.1	—
Current receivables	278.1	320.6	344.9	—
Inventories	295.7	319.3	357.4	—
Other current assets	124.1	143.1	153.9	—
Current assets	1,274	1,528	1,668	—
Property, plant & equip.	2,459	2,620	2,864	—
Investments	—	—	—	—
Intangibles	339.7	339.7	339.7	—
Other non-current assets	—	—	—	—
Total assets	4,073	4,488	4,872	—
Accounts payable	331.4	357.8	400.5	—
Short-term debt	597.2	597.2	597.2	—
Current provisions	—	—	—	—
Other current liabilities	186.4	214.9	231.2	—
Current liabilities	1,115	1,170	1,229	—
Long-term debt	528.6	778.6	978.6	—
Non-current provisions	—	—	—	—
Other non-current liab.	155.8	155.8	155.8	—
Total liabilities	1,799	2,104	2,363	—
Shareholders' equity	2,269	2,379	2,504	—
Minority interests	5.2	5.2	5.2	—
Total liabilities & equity	4,073	4,488	4,872	—

Key earnings drivers	12/12A	12/13E	12/14E	12/15E
Computer	33.4	21.2	23.2	—
Communication	780	1,025	1,123	—
Consumer	741.1	880.9	964.9	—
Others	147.3	190.6	208.8	—

Per share data	12/12A	12/13E	12/14E	12/15E
Shares (wtd avq.) (mn)	30,080	31,993	31,993	—
EPS (Credit Suisse)	0.001	0.003	0.004	—
DPS (US\$)	—	—	—	—
BVPS (US\$)	0.08	0.07	0.08	—
Operating CFPS (US\$)	0.02	0.02	0.02	—

Key ratios and valuation	12/12A	12/13E	12/14E	12/15E
Growth(%)				
Sales revenue	29.0	24.4	9.5	—
EBIT	108	846	10	—
Net profit	107	556	13	(100)
EPS	106	517	13	—
Margins (%)				
EBITDA	34.2	33.0	35.8	—
EBIT	0.93	7.08	7.12	—
Pre-tax profit	0.82	5.67	5.84	—
Net profit	0.99	5.21	5.37	—
Valuation metrics (x)				
P/E	108	18	16	—
P/B	0.80	0.82	0.77	—
Dividend yield (%)	—	—	—	—
P/CF	4.02	3.08	2.50	—
EV/sales	1.46	1.21	1.17	—
EV/EBITDA	4.28	3.68	3.25	—
EV/EBIT	157	17	16	—
ROE analysis (%)				
ROE	0.75	4.75	5.10	—
ROIC	0.61	4.73	4.84	—
Asset turnover (x)	0.42	0.47	0.48	—
Interest burden (x)	0.88	0.80	0.82	—
Tax burden (x)	1.08	0.92	0.92	—
Financial leverage (x)	1.79	1.88	1.94	—
Credit ratios				
Net debt/equity (%)	24.2	26.4	30.4	—
Net debt/EBITDA (x)	0.95	0.90	0.92	—
Interest cover (x)	—	—	—	—

Source: Company data, Thomson Reuters, Credit Suisse estimates.



Source: IBES

Companies Mentioned (Price as of 07-Feb-2013)

Semiconductor Manufacturing International Corp. (0981.HK, HK\$0.47, OUTPERFORM[V], TP HK\$0.57)
United Microelectronics (2303.TW, NT\$11.35)
Taiwan Semiconductor Manufacturing (2330.TW, NT\$105.0)
Nationz Tech (300077.SZ, Rmb14.96)
NEC (6701.T, ¥257)
Nokia (NOK1V.HE, €2.964)
QUALCOMM Inc. (QCOM.OQ, \$67.18)
RDA Microelectronics (RDA.OQ, \$12.2)
Spreadtrum Communication (SPRD.OQ, \$16.27)
Texas Instruments Inc. (TXN.OQ, \$33.56)
Vimicro (VIMC.OQ, \$1.78)

Note: SMIC priced post market close in Hong Kong, February 7.

Disclosure Appendix

Important Global Disclosures

Randy Abrams, CFA and Yan Taw Boon, each certify, with respect to the companies or securities that the individual analyzes, that (1) the views expressed in this report accurately reflect his or her personal views about all of the subject companies and securities and (2) no part of his or her compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this report.

Price and Rating History for Semiconductor Manufacturing International Corp. (0981.HK)

0981.HK	Closing Price	Target Price	
Date	(HK\$)	(HK\$)	Rating
11-Aug-11	0.38	0.35	N
09-Feb-12	0.44	0.41	
07-Jan-13	0.42	0.57	O

* Asterisk signifies initiation or assumption of coverage.



The analyst(s) responsible for preparing this research report received Compensation that is based upon various factors including Credit Suisse's total revenues, a portion of which are generated by Credit Suisse's investment banking activities

As of December 10, 2012 Analysts' stock rating are defined as follows:

Outperform (O) : The stock's total return is expected to outperform the relevant benchmark* over the next 12 months.

Neutral (N) : The stock's total return is expected to be in line with the relevant benchmark* over the next 12 months.

Underperform (U) : The stock's total return is expected to underperform the relevant benchmark* over the next 12 months.

**Relevant benchmark by region: As of 10th December 2012, Japanese ratings are based on a stock's total return relative to the analyst's coverage universe which consists of all companies covered by the analyst within the relevant sector, with Outperforms representing the most attractive, Neutrals the less attractive, and Underperforms the least attractive investment opportunities. As of 2nd October 2012, U.S. and Canadian as well as European ratings are based on a stock's total return relative to the analyst's coverage universe which consists of all companies covered by the analyst within the relevant sector, with Outperforms representing the most attractive, Neutrals the less attractive, and Underperforms the least attractive investment opportunities. For Latin American and non-Japan Asia stocks, ratings are based on a stock's total return relative to the average total return of the relevant country or regional benchmark; Australia, New Zealand are, and prior to 2nd October 2012 U.S. and Canadian ratings were based on (1) a stock's absolute total return potential to its current share price and (2) the relative attractiveness of a stock's total return potential within an analyst's coverage universe. For Australian and New Zealand stocks, 12-month rolling yield is incorporated in the absolute total return calculation and a 15% and a 7.5% threshold replace the 10-15% level in the Outperform and Underperform stock rating definitions, respectively. The 15% and 7.5% thresholds replace the +10-15% and -10-15% levels in the Neutral stock rating definition, respectively. Prior to 10th December 2012, Japanese ratings were based on a stock's total return relative to the average total return of the relevant country or regional benchmark.*

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Overweight : The analyst's expectation for the sector's fundamentals and/or valuation is favorable over the next 12 months.

Market Weight : The analyst's expectation for the sector's fundamentals and/or valuation is neutral over the next 12 months.

Underweight : The analyst's expectation for the sector's fundamentals and/or valuation is cautious over the next 12 months.

**An analyst's coverage sector consists of all companies covered by the analyst within the relevant sector. An analyst may cover multiple sectors.*

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Global Ratings Distribution

Rating	Versus universe (%)	Of which banking clients (%)
Outperform/Buy*	42%	(53% banking clients)
Neutral/Hold*	38%	(46% banking clients)
Underperform/Sell*	16%	(41% banking clients)
Restricted	3%	

**For purposes of the NYSE and NASD ratings distribution disclosure requirements, our stock ratings of Outperform, Neutral, and Underperform most closely correspond to Buy, Hold, and Sell, respectively; however, the meanings are not the same, as our stock ratings are determined on a relative basis. (Please refer to definitions above.) An investor's decision to buy or sell a security should be based on investment objectives, current holdings, and other individual factors.*

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Price Target: (12 months) for Semiconductor Manufacturing International Corp. (0981.HK)

Method: Our HK\$0.57 target price for SMIC is based on 1.0x 2013 book value per share, in-line with average of 1.1x between 2009-2011.

Risk: The risks that may impede achievement of our HK\$0.57 target price are: (1) the 2012 global semiconductor up-cycle is not as strong as market expected, being an upstream company, SMIC tends to be more cyclical than other tech plays. (2) Price competition from peers are more severe than expected. (3) SMIC, like its peers will be affected by unexpected slow down of global economy. (4) The advanced technology products do not come out as the company scheduled to.

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See the Companies Mentioned section for full company names

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