

# ACTION Sell

## Nanya PCB (8046.TW)

**Return Potential: (21%)**

### Intel/NGK/NanyaTech datapoints negative for Nanya PCB; to Sell

#### Source of opportunity

We downgrade Nanya PCB to Sell from Neutral for the following reasons: (1) the absence of NGK Spark Plug's restructuring plans implies no upside for incremental CPU flip chip (FC) outsourcing to Nanya; (2) upon Intel's 2<sup>nd</sup>-gen. Nehalem platform launch, we expect Nanya's Northbridge FC revenue to drain away and CPU FC business be capped by NGK; (3) Nanya PCB has been continuously loaning money to Nanya Tech, its DRAM affiliate in the group – the current balance of NT\$4.9bn is 14% of Nanya PCB's 3Q08 BV. Our new 12m target price of NT\$58 is based on 7X next-12m P/E, implying 1X 2008E P/B.

#### Catalyst

We see increasing risk for Nanya PCB's outlook from the below aspects:

**Intel's Nov-12 prewarning:** signifying fast weakening PC demand outlook;

**NGK's Nov-13 announcement:** implying no incremental CPU FC business outsourcing for Nanya PCB, despite more reliance on Nanya in the short-term;

**NGK's inability to effectively stop FC business loss and enhance yield:** implying increasing possibility for Intel to re-think its CPU FC supplier list;

**Intel's 2nd-gen. Nehalem platform launch in late '09/early '10:** implying likely Northbridge FC revenue drain for Nanya PCB afterwards, unless with major business relationship changes among Nanya PCB, NGK, and Intel;

**Nanya PCB's increasing loan to Nanya Tech:** As per Nanya PCB, its total loan to Nanya Tech has reached NT\$4.9bn, 14% of its 3Q08 BV.

#### Valuation

We adjust our '08/'09/'10 rev/eps estimates by 0% to -31% and cut our 12m TP to NT\$58 (from NT\$80), based on 7X next-12m P/E, implying 1X 2008E P/B.

#### Key risks

NGK to increase share or get meaningful Atom FC order volume at Intel.

#### INVESTMENT LIST MEMBERSHIP

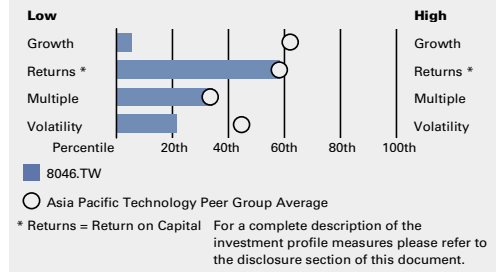
Asia Pacific Sell List

#### Coverage View: Neutral

Taiwan:  
Semiconductors

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#### Investment Profile: Nanya PCB



Key data	Current
Price (NT\$)	73.10
12 month price target (NT\$)	58.00
Market cap (NT\$ mn / US\$ mn)	45,186.4 / 1,369.8
Foreign ownership (%)	8.2

	12/07	12/08E	12/09E	12/10E
EPS (NT\$) New	13.94	11.29	8.43	7.83
EPS revision (%)	0.0	(2.9)	(19.7)	(31.1)
EPS growth (%)	(19.0)	(19.0)	(25.3)	(7.1)
EPS (dil) (NT\$) New	13.91	11.27	8.42	7.82
P/E (X)	5.2	6.5	8.7	9.3
P/B (X)	1.2	1.3	1.2	1.2
EV/EBITDA (X)	11.2	4.5	5.2	5.2
Dividend yield (%)	17.2	7.7	8.1	8.6
ROE (%)	21.6	18.7	14.1	12.6

#### Price performance chart



Share price performance (%)	3 month	6 month	12 month
Absolute	(51.9)	(54.9)	(63.0)
Rel. to Taiwan SE Weighted Index	(21.0)	(8.6)	(27.2)

Source: Company data, Goldman Sachs Research estimates, FactSet. Price as of 11/13/2008 close.

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# Nanya PCB: Summary financials

Profit model (NT\$ mn)	12/07	12/08E	12/09E	12/10E	Balance sheet (NT\$ mn)	12/07	12/08E	12/09E	12/10E
<b>Total revenue</b>	<b>38,703.9</b>	<b>38,966.0</b>	<b>34,438.0</b>	<b>30,621.6</b>	Cash & equivalents	5,107.1	1,843.3	3,394.6	6,918.3
Cost of goods sold	(29,355.9)	(30,784.6)	(27,914.9)	(25,073.3)	Accounts receivable	9,407.6	8,531.7	8,726.2	8,453.4
SG&A	(1,410.0)	(1,331.4)	(1,239.4)	(1,036.2)	Inventory	2,871.7	3,236.3	3,115.1	3,086.4
R&D	0.0	0.0	0.0	0.0	Other current assets	8,352.3	9,760.9	11,010.6	9,195.4
Other operating profit/(expense)	0.0	0.0	0.0	0.0	<b>Total current assets</b>	<b>25,738.6</b>	<b>23,372.1</b>	<b>26,246.6</b>	<b>27,653.6</b>
ES0 expense	0.0	(2.3)	(5.2)	(4.8)	Net PP&E	9,735.8	9,008.8	7,264.5	5,700.0
<b>EBITDA</b>	<b>10,693.6</b>	<b>9,535.8</b>	<b>8,061.2</b>	<b>7,301.5</b>	Net intangibles	24.6	78.5	78.5	78.5
Depreciation & amortization	(2,755.6)	(2,685.7)	(2,777.5)	(2,789.3)	Total investments	0.0	0.0	0.0	0.0
<b>EBIT</b>	<b>7,938.1</b>	<b>6,850.1</b>	<b>5,283.7</b>	<b>4,512.1</b>	Other long-term assets	1.7	1.7	1.7	1.7
Interest income	407.2	326.1	339.6	369.5	<b>Total assets</b>	<b>44,677.2</b>	<b>41,481.7</b>	<b>43,226.3</b>	<b>44,052.6</b>
Interest expense	(102.6)	(2.6)	(4.0)	(4.0)	Accounts payable	2,520.3	2,371.4	2,244.0	2,138.8
Income/(loss) from uncons. subs.	1,301.0	978.9	614.5	983.7	Short-term debt	0.0	0.0	0.0	0.0
Others	511.9	360.0	160.0	150.0	Other current liabilities	2,409.0	1,558.5	1,707.0	1,444.7
<b>Pretax profits</b>	<b>10,055.6</b>	<b>8,512.5</b>	<b>6,393.8</b>	<b>6,011.4</b>	<b>Total current liabilities</b>	<b>4,929.3</b>	<b>3,929.9</b>	<b>3,951.0</b>	<b>3,583.5</b>
Income tax	(1,521.1)	(1,534.1)	(1,181.2)	(1,168.8)	Long-term debt	0.0	0.0	0.0	0.0
Minorities	0.0	0.0	0.0	0.0	Other long-term liabilities	1,238.4	1,427.7	1,427.7	1,427.7
<b>Net income pre-preferred dividends</b>	<b>8,534.5</b>	<b>6,978.4</b>	<b>5,212.6</b>	<b>4,842.6</b>	Total long-term liabilities	1,238.4	1,427.7	1,427.7	1,427.7
Preferred dividends	0.0	0.0	0.0	0.0	<b>Total liabilities</b>	<b>6,167.7</b>	<b>5,357.6</b>	<b>5,378.8</b>	<b>5,011.3</b>
<b>Net income (pre-exceptionals)</b>	<b>8,534.5</b>	<b>6,978.4</b>	<b>5,212.6</b>	<b>4,842.6</b>	<b>Preferred shares</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
Post-tax exceptionals	0.0	0.0	0.0	0.0	<b>Total common equity</b>	<b>38,509.5</b>	<b>36,124.1</b>	<b>37,847.6</b>	<b>39,041.3</b>
<b>Net income</b>	<b>8,534.5</b>	<b>6,978.4</b>	<b>5,212.6</b>	<b>4,842.6</b>	Minority interest	0.0	0.0	0.0	0.0
EPS (basic, pre-except) (NT\$)	13.94	11.29	8.43	7.83	<b>Total liabilities &amp; equity</b>	<b>44,677.2</b>	<b>41,481.7</b>	<b>43,226.3</b>	<b>44,052.6</b>
EPS (basic, post-except) (NT\$)	13.94	11.29	8.43	7.83	<b>BVPS (NT\$)</b>	<b>62.88</b>	<b>58.44</b>	<b>61.23</b>	<b>63.16</b>
EPS (diluted, post-except) (NT\$)	13.91	11.27	8.42	7.82					
<b>EPS excl. ESO expense (basic) (NT\$)</b>	<b>13.94</b>	<b>11.29</b>	<b>8.44</b>	<b>7.84</b>					
<b>EPS excl. ESO expense (dil.) (NT\$)</b>	<b>13.91</b>	<b>11.28</b>	<b>8.43</b>	<b>7.83</b>					
DPS (NT\$)	12.54	5.64	5.90	6.27					
Dividend payout ratio (%)	90.0	50.0	70.0	80.0					
Free cash flow yield (%)	5.0	10.7	11.9	16.7					
					<b>Ratios</b>	<b>12/07</b>	<b>12/08E</b>	<b>12/09E</b>	<b>12/10E</b>
<b>Growth &amp; margins (%)</b>	<b>12/07</b>	<b>12/08E</b>	<b>12/09E</b>	<b>12/10E</b>	ROE (%)	21.6	18.7	14.1	12.6
Sales growth	6.2	0.7	(11.6)	(11.1)	ROA (%)	18.5	16.2	12.3	11.1
EBITDA growth	(18.5)	(10.8)	(15.5)	(9.4)	ROACE (%)	25.1	19.7	14.2	13.4
EBIT growth	(24.9)	(13.7)	(22.9)	(14.6)	Inventory days	33.6	36.2	41.5	45.1
Net income growth	(16.7)	(18.2)	(25.3)	(7.1)	Receivables days	81.0	84.0	91.5	102.4
EPS growth	(19.0)	(19.0)	(25.3)	(7.1)	Payable days	34.2	29.0	30.2	31.9
Gross margin	24.2	21.0	18.9	18.1	Net debt/equity (%)	(16.3)	(5.7)	(9.5)	(18.3)
EBITDA margin	27.6	24.5	23.4	23.8	Interest cover - EBIT (X)	NM	NM	NM	NM
EBIT margin	20.5	17.6	15.3	14.7					
					<b>Valuation</b>	<b>12/07</b>	<b>12/08E</b>	<b>12/09E</b>	<b>12/10E</b>
<b>Cash flow statement (NT\$ mn)</b>	<b>12/07</b>	<b>12/08E</b>	<b>12/09E</b>	<b>12/10E</b>	P/E (analyst) (X)	5.2	6.5	8.7	9.3
Net income pre-preferred dividends	8,534.5	6,978.4	5,212.6	4,842.6	P/B (X)	1.2	1.3	1.2	1.2
D&A add-back	2,755.6	2,685.7	2,777.5	2,789.3	EV/EBITDA (X)	11.2	4.5	5.2	5.2
Minorities interests add-back	0.0	0.0	0.0	0.0	Dividend yield (%)	17.2	7.7	8.1	8.6
Net (inc)/dec working capital	(2,433.4)	362.4	(200.8)	196.3					
Other operating cash flow	(689.8)	(3,586.3)	(1,715.7)	569.2					
<b>Cash flow from operations</b>	<b>8,141.1</b>	<b>6,421.4</b>	<b>6,073.6</b>	<b>8,397.4</b>					
Capital expenditures	(2,107.6)	(1,910.8)	(1,033.1)	(1,224.9)					
Acquisitions	(217.4)	(805.2)	0.0	0.0					
Divestitures	0.0	0.0	0.0	0.0					
Others	171.3	(249.2)	0.0	0.0					
<b>Cash flow from investments</b>	<b>224.3</b>	<b>(2,005.2)</b>	<b>(1,033.1)</b>	<b>(1,224.9)</b>					
Dividends paid (common & pref)	(9,045.8)	(7,672.3)	(3,489.2)	(3,648.8)					
Inc/(dec) in debt	(1,088.0)	0.0	0.0	0.0					
Common stock issuance (repurchase)	0.0	0.0	0.0	0.0					
Other financing cash flows	(16.3)	(18.4)	0.0	0.0					
<b>Cash flow from financing</b>	<b>(11,387.7)</b>	<b>(7,690.7)</b>	<b>(3,489.2)</b>	<b>(3,648.8)</b>					
<b>Total cash flow</b>	<b>(3,015.5)</b>	<b>(3,263.8)</b>	<b>1,551.3</b>	<b>3,523.7</b>					

Note: Last actual year may include reported and estimated data.  
Source: Company data, Goldman Sachs Research estimates.

## Analyst Contributors

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## Short-to-mid term: NGK's announcement implies no upside; Intel's guidance cut suggests overall volume drop

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### **The absence of NGK's restructuring plan – no upside for Nanya PCB**

NGK Spark Plug (5334.T) held a result debriefing meeting on 11/13. While we previously expected (see our 11/12 Taiwan IC substrate sector note "*IC substrate: More downside from here; not yet for bottom fishing*") NGK to announce restructuring measures to reduce loss in its IC substrate line (including plant closures or increase outsourcing to Nanya PCB), NGK announced to move its new No. 14 line at the Komaki fab to focus on Intel's next-generation products and products under development (effectively, suspending operation), with commercial production focused on the existing No. 12 line. In other words, we believe the company has no apparent plans for now to shutter factories or to rethink its relationship with Nanya PCB.

In our view, though Nanya PCB's CPU FC order from NGK may still be resilient in the Dec-08 quarter as NGK adjusts its production lines, we see more downside than upside for the mid-term for Nanya PCB's CPU FC business if NGK gets to improve its production yield at its old fab (No. 12 line) and thus reduce outsourcing to Nanya. Furthermore, if NGK still fails to improve its production yield and instead tries to reopen price negotiations with customers in order to improve its own profitability (see our Japan tech analyst Daiki Takayama's 11/13 NGK Spark Plug comment note "*Restructuring looks tepid; negative for NGK, positive for big two*"), we believe the possibility for Intel to rely more on other suppliers (i.e. Ibiden, Shinko, or SEMCO) would increase, which could in turn negatively impact Nanya PCB's CPU FC business.

### **Intel's guidance cut on fast deteriorating PC demand outlook**

On 11/12, Intel significantly lowered its 4Q08 revenue and margin guidance citing weak demand across all segments and geographies. As stated in our 11/12 IC substrate sector note that our latest supply chain checks suggest fast weakening PC demand outlook, we expect the sector-wide PC FC substrate order volume to come down largely in 4Q08 and 1Q09. Although we believe Nanya PCB's FC line may outperform the industry average in 4Q08 (due mainly to NGK's production transition), we expect a greater drop in 1Q09 after NGK completes its transition. We are forecasting Nanya PCB's revenue to drop by 10% qoq in 4Q08 and another 21% sequential decline in 1Q09. Meanwhile, upon the overall weaker PC demand outlook and Nanya's absence of exposure in the Atom (netbook) CPU substrate business, we now expect Nanya's top-line to decline by 12% in 2009.

## Mid-to-long term: possible revenue drain upon Intel's 2<sup>nd</sup>-gen Nehalem platform launch from late 2009/early 2010

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### **Nanya PCB may see Northbridge FC revenue drain post Intel's 2<sup>nd</sup>-gen. Nehalem platform launch**

Under Intel's 2<sup>nd</sup>-generation Nehalem architecture, graphics and memory controller will move into the microprocessor while display logic will move into the so-called "Ibex Peak-M" chip. In other words, Intel's next-gen. microprocessors will integrate the existing-gen. CPU and certain part of the Northbridge functions, while the Ibex-Peak chip will take over the Southbridge and the rest of the existing-gen. Northbridge functions. As Nanya PCB and NGK's alliance agreement requires Nanya to produce Intel's microprocessor FC substrates only through NGK's outsourcing, we believe Intel's platform migration implies likely drain of Nanya's Northbridge FC revenue, while its CPU FC business is still controlled by NGK.

According to our estimates, the Northbridge FC business represents about half of Nanya's total FC revenue and about 20%-30% of total firmwide top-line. Unless there is major business relationship change among Nanya, NGK, and Intel in the next 12 months, we expect to see the revenue drain to start from late 2009 or early 2010, when Intel launches the new platform.

**Possible yearly sales decline for two consecutive years for Nanya PCB; current market expectation still too high**

While we expect Nanya PCB's revenue to drop in 2009 due to weak end demand and declining PC semiconductor shipment growth outlooks, we believe Nanya PCB will see another year of revenue decline in 2010 due to the possible Northbridge FC revenue drain. We now forecast Nanya PCB's sales to fall 12% in 2009E and another 11% in 2010E. We note that our '09E/'10E sales forecasts are 20%/22% lower than current market (Reuters) consensus (our earnings estimates are 36%/32% lower), respectively, and we expect downside risk to street estimates.

## **Concerns over Nanya PCB's loan to Nanya Tech**

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According to Nanya PCB's recent announcements, the company has been more frequently loaning capital to its group affiliates, including to Nanya Tech (2408.TW). Based on Nanya PCB's latest announcement (11/13), its total loan to Nanya Tech has reached NT\$4.9bn, 14% of its 3Q08 book value and 93% of our expected Nanya PCB 2009E net profits. Meanwhile, the balance of its loan to all group affiliates has reached 28% of its 3Q08 book value.

**Exhibit 1: Forecast revisions**

<b>Parent-only financials (NT\$ mn)</b>	<b>Revised 2008E</b>	<b>Original 2008E</b>	<b>Difference</b>
Revenue	38,966	38,841	0.3%
Gross profits	8,181	8,238	-0.7%
Operating profits	6,850	6,883	-0.5%
Pretax earnings	8,513	8,721	-2.4%
Net earnings	6,978	7,190	-2.9%
Basic EPS (NT\$)	11.29	11.63	-2.9%
Gross margin	21.0%	21.2%	
Operating margin	17.6%	17.7%	
Net margin	17.9%	18.5%	
<b>Parent-only financials (NT\$ mn)</b>	<b>Revised 2009E</b>	<b>Original 2009E</b>	<b>Difference</b>
Revenue	34,438	36,257	-5.0%
Gross profits	6,523	7,765	-16.0%
Operating profits	5,284	6,484	-18.5%
Pretax earnings	6,394	7,961	-19.7%
Net earnings	5,213	6,491	-19.7%
Basic EPS (NT\$)	8.43	10.50	-19.7%
Gross margin	18.9%	21.4%	
Operating margin	15.3%	17.9%	
Net margin	15.1%	17.9%	
<b>Parent-only financials (NT\$ mn)</b>	<b>Revised 2010E</b>	<b>Original 2010E</b>	<b>Difference</b>
Revenue	30,622	38,495	-20.5%
Gross profits	5,548	8,458	-34.4%
Operating profits	4,512	7,166	-37.0%
Pretax earnings	6,011	8,732	-31.2%
Net earnings	4,843	7,033	-31.1%
Basic EPS (NT\$)	7.83	11.38	-31.1%
Gross margin	18.1%	22.0%	
Operating margin	14.7%	18.6%	
Net margin	15.8%	18.3%	

Source: Goldman Sachs Research estimates.

## Reg AC

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**Growth** is a composite of next year's estimate over current year's estimate, e.g. EPS, EBITDA, Revenue. **Return** is a year one prospective aggregate of various return on capital measures, e.g. CROCI, ROACE, and ROE. **Multiple** is a composite of one-year forward valuation ratios, e.g. P/E, dividend yield, EV/FCF, EV/EBITDA, EV/DACF, Price/Book. **Volatility** is measured as trailing twelve-month volatility adjusted for dividends.

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Matthew Chuang: Asia Pacific Technology.

Asia Pacific Technology: AAC Acoustic, Acer, ASUSTeK Computer, Atheros Communications, Inc., AU Optronics, BYD Electronic, Catcher Technology, Cheng Uei Precision (Foxlink), Chi Mei Optoelectronics, Compal Communications, Compal Electronics, D-Link Corp., Epistar, Everlight Electronics, Foxconn Int'l Holdings, Foxconn Technology, Gemtek Technology, Giga-Byte Technology, Global Mixed-mode Technology, Hon Hai Precision, HTC Corp., Innolux Display Corp., Inventec Appliances, ITEQ, Kinsus Interconnect Technology, Largan Precision, Mediatek, Merry Electronics, MiTAC International, Nanya PCB, Phison Electronics, Phoenix Precision Technology, Quanta Computer, Realtek Semiconductor, Richtek Technology, Silitech Technology, Sunplus Technology, Sunplus Technology (GDR), TPV Technology, Tripod, TXC Corp, Unimicron, VIA Technologies, Wistron, Wistron NeWeb, ZyXEL Communications Corp..

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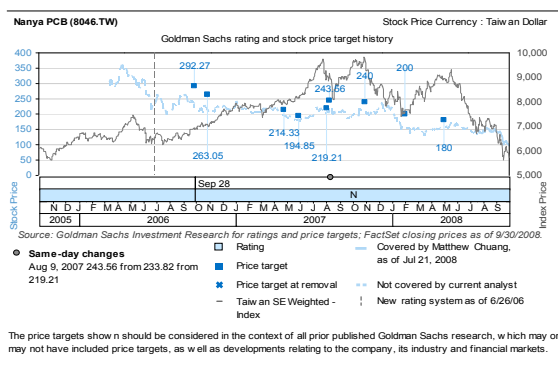
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## Price target and rating history chart(s)



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