

TAIWAN

HannStar

29 October 2008

6116 TT **Outperform**

Stock price as of 28 Oct 08	NT\$	5.35
12-month target	NT\$	7.00
Upside/downside	%	+30.8
Valuation	NT\$	7.00
- Price To Book		

GICS sector	technology hardware & equipment
Market cap	NT\$m 29,533
30-day avg turnover	NT\$m 131.1
Market cap	US\$m 884
Foreign ownership	% 22.2
Number shares on issue	m 5,520

Investment fundamentals

Year end 31 Dec		2007A	2008E	2009E	2010E
Total revenue	m	77,895	64,829	64,097	57,776
Reported profit	m	14,379	-2,180	-2,558	1,743
Profit bonus exp	m	13,140	-2,180	-2,558	1,743
Bon exp/rep prof	%	8.6	0.0	0.0	0.0
EPS rep	NT\$	2.79	-0.41	-0.50	0.34
EPS bonus exp	NT\$	2.55	-0.41	-0.50	0.34
EPS bonus growth	%	0.0	0.0	-21.3	0.0
PE rep	x	1.9	nfm	nfm	15.7
PE bonus exp	x	2.1	0.0	0.0	15.7
Total DPS	NT\$	0.70	0.00	0.00	0.10
Total div yield	%	13.0	0.0	0.0	1.9
ROA	%	10.8	1.6	-0.7	3.5
ROE	%	23.6	-3.5	-4.8	3.3
EV/EBITDA	x	1.3	2.3	2.9	2.1
Net debt/equity	%	5.3	-1.4	-3.2	-21.8
Price/book	x	0.4	0.5	0.5	0.5

6116 TT rel Taiex performance, & rec history



Source: Datastream, Macquarie Research, October 2008 (all figures in NT\$ unless noted)

Analyst

Nicholas Teo, CFA
886 2 2734 7523 nicholas.teo@macquarie.com
Tammy Lai
886 2 2734 7532 tammy.lai@macquarie.com

3Q08 net loss of NT\$3.2bn

Event

- HannStar posted a 3Q08 net loss of NT\$3.2bn (vs net income of NT\$2.4bn in 2Q08), or a loss per share (LPS) of NT\$0.58. The results were below expectations.

Impact

- 3Q08 operating margin** dropped to -9.0% from +17.2% in 2Q08. The margin decline was more than that of larger peers. Monitor panel prices dropped the most vs other applications, and HannStar has high exposure to this segment. Sales were NT\$15bn (-26% QoQ, -36% YoY). Large panel unit shipments declined to 4.8m (-3% QoQ, -9% YoY), with the large panel blended ASP down to US\$96 (-26% QoQ, -34% YoY) from US\$130 in 2Q08.
- Inventory was still in good shape in 3Q08, rising slightly to 24 from 20 days in 2Q08. The utilisation rate was near 100% in 3Q08, according to management. HannStar is targeting to maintain its inventory level at less than 25 days.
- On the non-operating front, HannStar had an inventory provision of NT\$500m in non-operating taxes to cope with the adoption of new accounting rules starting in 1Q09. There was an additional provision for the valuation of deferred income tax assets of NT\$1.4bn at the tax level. Both of these are non-cash.
- For 4Q08**, HannStar expects its large panel unit shipments to decline by 25–30% QoQ from a reduction in utilisation rates and the migration to more small/medium panels. Blended ASPs may decline by 10–15% QoQ. We estimate a LPS of NT\$0.72, with the operating margin falling to -36%. Panel prices are falling to cash COGS for panel production. This should mark that a cycle bottom in the TFT-LCD industry is near.
- Capex is frozen for 2009** and after, as it has been for the past few years.

Earnings revision

- We cut our 2008/09E EPS from NT\$0.85/1.25 to LPS of NT\$0.41/0.50, using lower ASPs. We also reduce our 2010E EPS by 68%.

Price catalyst

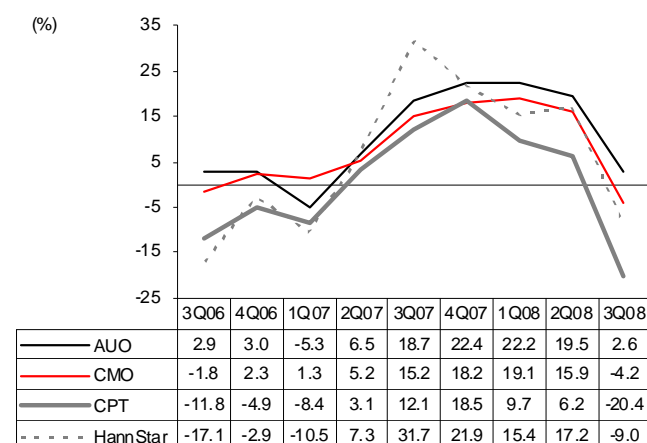
- 12-month price target: NT\$7.00 based on a Price to Book methodology.
- Catalyst: The demand response to lower retail prices for LCD products will be a key factor for panel price stability and the direction of the TFT-LCD cycle. We expect HannStar to return to profitability in 2H09.

Action and recommendation

- We maintain an Outperform rating, but lower our target price from NT\$13.3 to NT\$7.0 based on a 2009E P/BV of 0.7x. Our previous target price was based on 1.0x our preceding 2008 book value estimate. We lower our target multiple to reflect low demand visibility. HannStar should weather the current downturn well because it has one of the strongest balance sheets in the industry, with a net cash position. Management believes the stock is undervalued and is currently undertaking the second share buyback of this year.

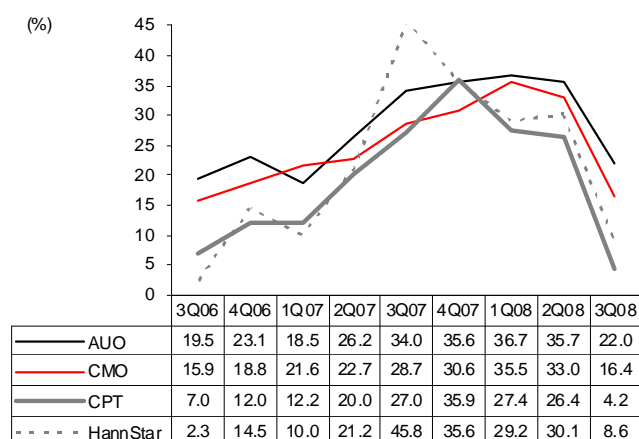
Please refer to the important disclosures and analyst certification on inside back cover of this document, or on our website www.macquarie.com.au/research/disclosures.

Fig 1 Operating margin comparison



Source: Macquarie Research, Company data, October2008

Fig 2 EBITDA margin comparison



Source: Macquarie Research, Company data, October2008

Fig 3 Key comparisons

	AUO	CMO	LGD	SEC	CPT	HannStar
Stock code	2409 TT	3009 TT	034220 KS	005930 KS	2475 TT	6116 TT
Currency	NT\$	NT\$	Won	Won	NT\$	NT\$
Stock price	22.8	12.8	19,550	463,500	3.2	5.4
Target price	40.0	20.4	25,000	370,000	4.2	7.0
Rating	Outperform	Outperform	Neutral	Neutral	Outperform	Outperform
P/BV (x)						
2008	0.7	0.4	0.7	1.3	0.4	0.5
2009	0.6	0.4	0.7	1.3	0.4	0.5
ROE (%)						
2008	12	5	22	10	-12	-4
2009	9	4	10	7	-15	-5
Blended ASP						
3Q08 (US\$/panel)	137	143	992(US\$/sq m)	n/a	93	96
% ch QoQ	-18	-11	-22	n/a	-29	-26
4Q08 outlook (% ch QoQ)	Down by 12-15% for both IT and TV panels	TV down 11-12%. IT down 5-10%	Down 5-10%	TV relatively strong. IT could be down	n/a	Down by 10-15% for large panels. Small/medium up 10%
Panel shipment outlook, 4Q08 (% ch QoQ)	Large panel down by 5-10%, with TV down by 15% and IT down by 0-5%	TV down 15%. IT down 10-15%	Up 10-15% in area, with TV up by high teens, IT up by low teens	Up by 6.8% QoQ, with TV up by 10.9% and IT up by 5.3%	Down by 16-17% for both large and small panels	Down 25-30% for large
Inventory (days)						
3Q08	40	50	almost 3 weeks	n/a	49	24
2Q08	40	50	> 3 weeks	n/a	47	20
Capex						
2008	Lowered to NT\$100bn from NT\$130-140bn	Maintained at NT\$100bn	Down to Won4.1tr from Won4.5tr	Maintained at Won4.5tr	Maintained at NT\$15.9bn, but some may be deferred to 2009	Maintained at NT\$2.5bn
2009	Around NT\$100bn (incl. NT\$30-40bn push-out from 2008)	Down >50% to below NT\$50bn	Won1.5-2tr	Lower than in 2008	Very minor. No major expansion plans	Very minor. No major expansion plans
Sales mix (%)						
TVs	48	57	51		8	
Monitors	17	28	22		66	
Notebooks	20	10	22		26	
Others	15	5	5			

Share prices as of 28 October 2008. Sales mix for SEC based on area. Product mix for CPT based on large panel shipments.

Source: Macquarie Research, Company data, October 2008

Fig 4 Income statement, reported, quarterly

Year end 31 Dec (NT\$m)	1Q08A	2Q08A	3Q08A	4Q08E	1Q09E	2Q09E	3Q09E	4Q09E
Large panel shipments (units, 000)	4,621	4,913	4,751	3,400	3,600	4,400	5,000	5,200
% ch YoY/QoQ	-6	6	-3	-28	6	22	14	4
Large panel blended ASP (US\$)	132	137	102	90	92	98	106	114
% ch YoY/QoQ	-7	3	-26	-11	2	7	8	8
Net sales	19,251	20,425	15,055	10,098	11,261	14,661	18,020	20,155
Gross profit	3,928	4,434	-436	-2,600	-2,110	-506	1,820	4,118
Operating expenses	971	930	925	971	874	918	1,010	1,161
Operating income	2,958	3,505	-1,361	-3,571	-2,985	-1,423	810	2,957
Net non-operating income	-21	-287	-397	-110	-600	-100	-100	-100
Pre-tax income	2,937	3,218	-1,758	-3,681	-3,585	-1,523	710	2,857
Income tax (credit)	579	865	1,452	0	0	305	142	571
Extraordinary items	0	0	0	0	0	0	0	0
Minority interest	0	0	0	0	0	0	0	0
Net income	2,358	2,353	-3,210	-3,681	-3,585	-1,828	568	2,286
Shares, wgt avg, adj (m)	5,468	5,474	5,518	5,127	5,127	5,127	5,127	5,127
EPS, adj (NT\$)	0.43	0.43	-0.58	-0.72	-0.70	-0.36	0.11	0.45
% ch QoQ								
Sales		6	-26	-33	12	30	23	12
Gross profit		13	nmf	nmf	nmf	nmf	nmf	126
Operating income		18	nmf	nmf	nmf	nmf	nmf	265
Net income		0	nmf	nmf	nmf	nmf	nmf	302
EBITDA		10	-79	nmf	nmf	nmf	190	63
EPS		0	nmf	nmf	nmf	nmf	nmf	302
Margins (%)								
Gross	20.4	21.7	-2.9	-25.7	-18.7	-3.4	10.1	20.4
Operating	15.4	17.2	-9.0	-35.4	-26.5	-9.7	4.5	14.7
Net	12.2	11.5	-21.3	-36.5	-31.8	-12.5	3.2	11.3
EBITDA	29.2	30.1	8.6	-9.6	-3.4	8.0	18.9	27.6

As per ROC GAAP reporting, financials from and including 2008 include bonus expenses.

Source: Macquarie Research, TEJ, Company data, October 2008

Fig 5 Income statement, reported, annual

Year end 31 Dec (NT\$m)	2003A	2004A	2005A	2006A	2007A	2008E	2009E	2010E
Large panel shipments (units, 000)		5,691	11,528	14,266	19,308	17,685	18,200	18,400
% ch YoY/QoQ			103	24	35	-8	3	1
Large panel blended ASP (US\$)		204	168	140	134	116	104	95
% ch YoY/QoQ			-17	-17	-4	-13	-11	-8
Net sales	32,952	38,758	62,370	64,816	77,895	64,829	64,097	57,776
Gross profit	4,550	6,001	-4,055	-858	13,880	5,327	3,322	7,460
Operating expenses	3,596	3,375	3,081	3,819	3,189	3,797	3,963	4,406
Operating income	954	2,626	-7,137	-4,677	10,691	1,530	-640	3,053
Net non-operating income	-102	-125	-2,506	-200	-1,661	-815	-900	-400
Pre-tax income	852	2,500	-9,642	-4,877	9,030	716	-1,540	2,653
Income tax (credit)	0	0	0	0	92	2,896	1,018	911
Extraordinary items	0	0	0	9	5,442	0	0	0
Minority interest	0	0	0	0	0	0	0	0
Net income	852	2,500	-9,642	-4,867	14,379	-2,180	-2,558	1,743
Shares, wgt avg, adj (m)	3,245	4,569	5,364	5,388	5,156	5,397	5,127	5,127
EPS, adj (NT\$)	0.26	0.55	-1.80	-0.90	2.79	-0.40	-0.50	0.34
% ch YoY								
Sales	9	18	61	4	20	-17	-1	-10
Gross profit	26	32	nmf	nmf	nmf	-62	-38	125
Operating income	2	175	nmf	nmf	nmf	-86	nmf	nmf
Net income	-4	193	nmf	nmf	nmf	nmf	nmf	nmf
EBITDA	5	25	-38	42	186	-46	-19	38
EPS	-26	108	nmf	nmf	nmf	nmf	nmf	nmf
Margins (%)								
Gross	13.8	15.5	-6.5	-1.3	17.8	8.2	5.2	12.9
Operating	2.9	6.8	-11.4	-7.2	13.7	2.4	-1.0	5.3
Net	2.6	6.5	-15.5	-7.5	18.5	-3.4	-4.0	3.0
EBITDA	21.6	23.0	8.9	12.2	29.0	18.7	15.2	23.3

As per ROC GAAP reporting, financials from and including 2008 include bonus expenses, while financials before 2008 exclude bonus expenses.

Source: Macquarie Research, TEJ, Company data, October 2008

Fig 6 Income statement, bonus adjusted

Year end 31 Dec (NT\$m)	2003A	2004A	2005A	2006A	2007A	2008E	2009E	2010E
Net sales	32,952	38,758	62,370	64,816	77,895	64,829	64,097	57,776
Gross profit	4,550	6,001	-4,055	-858	13,880	5,327	3,322	7,460
Operating expenses	3,596	3,799	3,155	3,807	4,428	3,797	3,963	4,406
Non-bonus expenses	3,596	3,375	3,081	3,819	3,189	3,797	3,963	4,213
Bonus at market value	0	424	73	-12	1,239	0	0	194
Operating income	954	2,202	-7,210	-4,665	9,452	1,530	-640	3,053
Net non-operating income	-102	-125	-2,506	-200	-1,661	-815	-900	-400
Pre-tax income	852	2,076	-9,715	-4,864	7,791	716	-1,540	2,653
Income tax (credit)	0	0	0	0	92	2,896	1,018	911
Extraordinary items	0	0	0	9	5,442	0	0	0
Minority interest	0	0	0	0	0	0	0	0
Net income	852	2,076	-9,715	-4,855	13,140	-2,180	-2,558	1,743
Shares, wgt avg, adj (m)	3,245	4,569	5,364	5,388	5,156	5,397	5,127	5,127
EPS (NT\$)	0.26	0.45	-1.81	-0.90	2.55	-0.40	-0.50	0.34
Net income before bonus	852	2,500	-9,642	-4,867	14,379	-2,180	-2,558	1,936
Bonus at market value as % of								
Net income before bonus	0	17	-1	0	9	0	0	10
Net income	0	20	-1	0	9	0	0	11
Pre-tax income before bonus	0	17	-1	0	14	0	0	7
Pre-tax income	0	20	-1	0	16	0	0	7
Operating income before bonus	0	16	-1	0	12	0	0	6
Operating income	0	19	-1	0	13	0	0	6
Gross profit	0	7	-2	1	9	0	0	3
Sales	0	1	0	0	2	0	0	0
% ch YoY								
Sales	9	18	61	4	20	-17	-1	-10
Gross profit	26	32	nmf	nmf	nmf	-62	-38	125
Operating expenses	35	6	-17	21	16	-14	4	11
Operating income	2	131	nmf	nmf	nmf	-84	nmf	nmf
Net income	-4	144	nmf	nmf	nmf	nmf	nmf	nmf
EBITDA	5	19	-36	45	170	-43	-19	38
EPS	-26	73	nmf	nmf	nmf	nmf	nmf	nmf
Margins (%)								
Gross	13.8	15.5	-6.5	-1.3	17.8	8.2	5.2	12.9
Operating	2.9	5.7	-11.6	-7.2	12.1	2.4	-1.0	5.3
Net	2.6	5.4	-15.6	-7.5	16.9	-3.4	-4.0	3.0
EBITDA	21.6	21.9	8.8	12.2	27.4	18.7	15.2	23.3
Returns (%)								
ROE	2.2	4.1	-16.8	-8.8	22.0	-3.6	-5.0	3.4
ROIC	2.6	3.4	-10.3	-5.2	20.0	-2.6	-4.0	5.2
ROCE	2.1	3.0	-10.2	-5.0	11.5	1.8	-1.6	5.2
ROA	1.8	2.4	-7.7	-3.8	8.7	1.4	-1.1	3.7

For income statement data, financials from and including 2008 are reported, while financials before 2008 are pro forma. For return ratios, all data are pro forma.

Source: Macquarie Research, TEJ, Company data, October 2008

HannStar Display Corp (6116 TT, Outperform, Target price: NT\$7.00)

Quarterly Results		1Q/08A	2Q/08A	3Q/08A	4Q/08E	Profit & Loss		2007A	2008E	2009E	2010E
Revenue	m	19,251	20,425	15,055	10,098	Revenue	m	77,895	64,829	64,097	57,776
Gross Profit	m	3,928	4,434	-436	-2,600	Gross Profit	m	13,880	5,327	3,322	7,460
Operating Expenses	m	-971	-930	-925	-971	Operating Expenses	m	-3,189	-3,797	-3,963	-4,406
Operating Income	m	2,958	3,505	-1,361	-3,571	Operating Income	m	10,691	1,530	-640	3,053
Net Non-operating income	m	-21	-287	-397	-110	Net Non-operating income	m	-1,661	-815	-900	-400
Pre-Tax Income	m	2,937	3,218	-1,758	-3,681	Pre-Tax Income	m	9,030	716	-1,540	2,653
Tax Expense	m	-579	-865	-1,452	0	Tax Expense	m	-92	-2,896	-1,018	-911
Exceptionals	m	0	0	0	0	Exceptionals	m	-5,442	0	0	0
Minority Interests	m	0	0	0	0	Minority Interests	m	0	0	0	0
Reported Earnings	m	2,358	2,353	-3,210	-3,681	Reported Earnings	m	14,379	-2,180	-2,558	1,743
Reported Earnings (bonus exp)	m	2,358	2,353	-3,210	-3,681	Reported Earnings (bonus exp)	m	13,140	-2,180	-2,558	1,743
Bonus exp / Reported Earnings	%	0.0	0.0	0.0	0.0	Bonus exp / Reported Earnings	%	8.6	0.0	0.0	0.0
Adjusted Earnings	m	2,358	2,353	-3,210	-3,681	Adjusted Earnings	m	14,379	-2,180	-2,558	1,743
EBITDA	m	5,613	6,155	1,297	-971	EBITDA	m	22,564	12,094	9,760	13,453
EPS (rep)	NT\$	0.43	0.46	-0.58	-0.72	EPS (rep)	NT\$	2.79	-0.41	-0.50	0.34
EPS pcg growth (rep)	%	nfm	72.7	nfm	nfm	EPS growth (rep)	%	nfm	nfm	-21.3	nfm
EPS (rep bonus exp)	NT\$	0.43	0.46	-0.58	-0.72	EPS (rep bonus exp)	NT\$	2.55	-0.41	-0.50	0.34
EPS pcg growth (rep bonus exp)	%	nfm	89.0	nfm	nfm	EPS growth (rep bonus exp)	%	nfm	nfm	-21.3	nfm
Revenue pcg growth	%	20.1	-3.4	-23.1	-52.3	PE (rep)	x	1.9	nfm	nfm	15.7
Operating Income pcg growth	%	nfm	126.5	nfm	nfm	PE (rep bonus adj)	x	2.1	nfm	nfm	15.7
Reported Earnings pcg growth	%	nfm	63.2	nfm	nfm	PE (adj)	x	1.8	nfm	nfm	15.7
Gross Profit Margin	%	20.4	21.7	-2.9	-25.7	Total DPS	NT\$	0.70	0.00	0.00	0.10
Operating Income Margin	%	15.4	17.2	-9.0	-35.4	Total Div Yield	%	13.0	0.0	0.0	1.9
Reported Earnings Margin	%	12.2	11.5	-21.3	-36.5	Weighted Average Shares	m	5,156	5,301	5,127	5,127
EBITDA Margin	%	29.2	30.1	8.6	-9.6	Period End Shares	m	5,388	5,127	5,127	5,127
Profit and Loss Ratios		2007A	2008E	2009E	2010E	Cashflow Analysis		2007A	2008E	2009E	2010E
Revenue Growth	%	20.2	-16.8	-1.1	-9.9	Reported Earnings	m	14,379	-2,180	-2,558	1,743
Gross Profit Growth	%	nfm	-61.6	-37.6	124.5	Depreciation & Amortisation	m	11,873	10,564	10,400	10,400
Operating Income Growth	%	nfm	-85.7	nfm	nfm	Chgs in Working Cap	m	-6,670	5,767	-4,932	-86
Reported Earnings Growth	%	nfm	nfm	-17.3	nfm	Other	m	-10,873	-3,862	0	0
EBITDA Growth	%	186.4	-46.4	-19.3	37.8	Operating Cashflow	m	8,709	10,288	2,910	12,057
Gross Profit Margin	%	17.8	8.2	5.2	12.9	Acquisitions	m	0	0	0	0
Operating Income Margin	%	13.7	2.4	-1.0	5.3	Capex	m	-3,460	-2,510	-2,000	-2,000
Reported Earnings Margin	%	18.5	-3.4	-4.0	3.0	Asset Sales	m	5,431	3,533	0	0
EBITDA Margin	%	29.0	18.7	15.2	23.3	Other	m	94	443	0	0
Payout Ratio	%	24.0	nfm	nfm	29.4	Investing Cashflow	m	2,065	1,466	-2,000	-2,000
EV/EBITDA	x	1.3	2.3	2.9	2.1	Dividend (Ordinary)	m	0	-4,138	0	0
EV/EBIT	x	2.9	19.1	-44.2	9.3	Equity Raised	m	0	419	0	0
Balance Sheet Ratios						Debt Movements	m	-8,223	-728	0	0
ROE	%	23.6	-3.5	-4.8	3.3	Other	m	1,718	-3,645	0	0
ROA	%	10.8	1.6	-0.7	3.5	Financing Cashflow	m	-6,506	-8,092	0	0
ROIC	%	15.2	-6.5	-2.0	4.0	Net Chg in Cash/Debt	m	4,269	3,662	910	10,057
Net Debt/Equity	%	5.3	-1.4	-3.2	-21.8	Free Cashflow	m	5,249	7,778	910	10,057
Interest Cover	x	17.3	4.9	-2.0	9.5	FCF per Share	NT\$	1.02	1.47	0.18	1.96
Price/Book	x	0.4	0.5	0.5	0.5	P/FCF	x	5.3	3.6	30.2	2.7
Book Value per Share	NT\$	12.7	10.6	10.2	10.5	Balance Sheet		2007A	2008E	2009E	2010E
						Cash	m	8,880	12,542	13,451	23,508
						Receivables	m	21,803	10,881	19,821	17,463
						Inventories	m	3,632	4,233	3,564	2,866
						Investments	m	6,782	6,893	6,893	6,893
						Fixed Assets	m	50,534	42,941	34,541	26,141
						Intangibles	m	0	0	0	0
						Other Assets	m	11,805	10,490	10,490	10,490
						Total Assets	m	103,435	87,979	88,760	87,362
						Payables	m	20,931	20,328	23,667	20,526
						Short Term Debt	m	4,298	4,298	4,298	4,298
						Long Term Debt	m	8,194	7,466	7,466	7,466
						Provisions	m	0	0	0	0
						Other Liabilities	m	1,415	1,284	1,284	1,284
						Total Liabilities	m	34,838	33,376	36,715	33,574
						Total S/H Equity	m	68,597	54,603	52,045	53,787
						Total Liab & S/H Funds	m	103,435	87,979	88,760	87,362

All figures in NT\$ unless noted.

Source: Macquarie Research, TEJ, Company data, October 2008

Important disclosures:

Recommendation definitions	Volatility index definition*	Financial definitions
<p>Macquarie - Australia/New Zealand Outperform – return >5% in excess of benchmark return (>2.5% in excess for listed property trusts) Neutral – return within 5% of benchmark return (within 2.5% for listed property trusts) Underperform – return >5% below benchmark return (>2.5% below for listed property trusts)</p> <p>Macquarie – Asia/Europe Outperform – expected return >+10% Neutral – expected return from -10% to +10% Underperform – expected return <-10%</p> <p>Macquarie First South - South Africa Outperform – expected return >+10% Neutral – expected return from -10% to +10% Underperform – expected return <-10%</p> <p>Macquarie - Canada Outperform – return >5% in excess of benchmark return Neutral within 5% of benchmark return Underperform – return >5% below benchmark return</p> <p>Macquarie - USA Outperform (Buy) – return >5% in excess of benchmark return Neutral (Hold) – return within 5% of benchmark return Underperform (Sell) – return >5% below benchmark return</p> <p>Recommendations – 12 months</p> <p>Note: Quant recommendations may differ from Fundamental Analyst recommendations</p>	<p>This is calculated from the volatility of historical price movements.</p> <p>Very high–highest risk – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.</p> <p>High – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.</p> <p>Medium – stock should be expected to move up or down at least 30–40% in a year.</p> <p>Low–medium – stock should be expected to move up or down at least 25–30% in a year.</p> <p>Low – stock should be expected to move up or down at least 15–25% in a year.</p> <p>* Applicable to Australian/NZ/Canada stocks only</p>	<p>All "Adjusted" data items have had the following adjustments made: Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests</p> <p>EPS = adjusted net profit / epowa* ROA = adjusted ebit / average total assets ROA Banks/Insurance = adjusted net profit / average total assets ROE = adjusted net profit / average shareholders funds Gross cashflow = adjusted net profit + depreciation *equivalent fully paid ordinary weighted average number of shares</p> <p>All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).</p>

Recommendation proportions – For quarter ending 30 September 2008

	AU/NZ	Asia	RSA	USA	CA	EUR
Outperform	43.17%	61.57%	63.08%	53.60%	71.54%	43.00%
Neutral	41.37%	16.43%	30.77%	37.60%	24.61%	48.00%
Underperform	15.47%	22.00%	6.15%	8.80%	3.85%	9.00%

Analyst Certification: The views expressed in this research accurately reflect the personal views of the analyst(s) about the subject securities or issuers and no part of the compensation of the analyst(s) was, is, or will be directly or indirectly related to the inclusion of specific recommendations or views in this research. The analyst principally responsible for the preparation of this research receives compensation based on overall revenues of Macquarie Group Ltd ABN 94 122 169 279 (AFSL No. 318062)(MGL) and its related entities (the Macquarie Group) and has taken reasonable care to achieve and maintain independence and objectivity in making any recommendations.

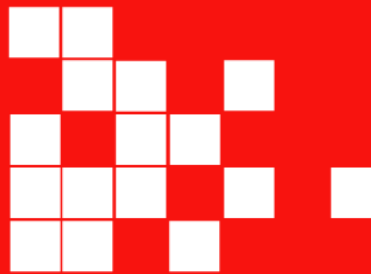
Disclaimers: Macquarie Securities (Australia) Ltd; Macquarie Capital (Europe) Ltd; Macquarie Capital Markets Canada Ltd; Macquarie Capital Markets North America Ltd; Macquarie Capital (USA) Inc; Macquarie Capital Securities Ltd; Macquarie Capital Securities (Singapore) Pte Ltd; Macquarie Securities (NZ) Ltd; and Macquarie First South Securities (Pty) Limited are not authorised deposit-taking institutions for the purposes of the Banking Act 1959 (Commonwealth of Australia), and their obligations do not represent deposits or other liabilities of Macquarie Bank Limited ABN 46 008 583 542 (MBL) or MGL. MBL does not guarantee or otherwise provide assurance in respect of the obligations of any of the above mentioned entities. MGL provides a guarantee to the Monetary Authority of Singapore in respect of the obligations and liabilities of Macquarie Capital Securities (Singapore) Pte Ltd for up to SGD 35 million. This research has been prepared for the general use of the wholesale clients of the Macquarie Group and must not be copied, either in whole or in part, or distributed to any other person. If you are not the intended recipient you must not use or disclose the information in this research in any way. Nothing in this research shall be construed as a solicitation to buy or sell any security or product, or to engage in or refrain from engaging in any transaction. In preparing this research, we did not take into account the investment objectives, financial situation and particular needs of the reader. Before making an investment decision on the basis of this research, the reader needs to consider, with or without the assistance of an adviser, whether the advice is appropriate in light of their particular investment needs, objectives and financial circumstances. There are risks involved in securities trading. The price of securities can and does fluctuate, and an individual security may even become valueless. International investors are reminded of the additional risks inherent in international investments, such as currency fluctuations and international stock market or economic conditions, which may adversely affect the value of the investment. This research is based on information obtained from sources believed to be reliable but we do not make any representation or warranty that it is accurate, complete or up to date. We accept no obligation to correct or update the information or opinions in it. Opinions expressed are subject to change without notice. No member of the Macquarie Group accepts any liability whatsoever for any direct, indirect, consequential or other loss arising from any use of this research and/or further communication in relation to this research.

Other Disclaimers: In Canada, securities research is prepared, approved and distributed by Macquarie Capital Markets Canada Ltd, a participating organisation of the Toronto Stock Exchange, TSX Venture Exchange & Montréal Exchange. Macquarie Capital Markets North America Ltd., which is a registered broker-dealer and member of FINRA, accepts responsibility for the contents of reports issued by Macquarie Capital Markets Canada Ltd in the United States and to US persons and any person wishing to effect transactions in the securities described in the reports issued by Macquarie Capital Markets Canada Ltd should do so with Macquarie Capital Markets North America Ltd. Securities research is issued and distributed by Macquarie Securities (Australia) Ltd (AFSL No. 238947) in Australia, a participating organisation of the Australian Securities Exchange; Macquarie Securities (NZ) Ltd in New Zealand, a licensed sharebroker and New Zealand Exchange Firm; Macquarie Capital (Europe) Ltd in the United Kingdom, which is authorised and regulated by the Financial Services Authority (No. 193905); Macquarie Capital Securities Ltd in Hong Kong, which is licensed and regulated by the Securities and Futures Commission; Macquarie Capital Securities (Japan) Limited in Japan, a member of the Tokyo Stock Exchange, Inc., Osaka Securities Exchange Co. Ltd, and Jasadq Securities Exchange, Inc. (Financial Instruments Bureau (kin-sho) No. 231, a member of Japan securities Dealers Association and Financial Futures Association of Japan); Macquarie First South Securities (Pty) Limited in South Africa, a member of the JSE Limited and in Singapore, Macquarie Capital Securities (Singapore) Pte Ltd (Company Registration Number: 198702912C), a Capital Markets Services licence holder under the Securities and Futures Act to deal in securities and provide custodial services in Singapore. Pursuant to the Financial Advisers (Amendment) Regulations 2005, Macquarie Capital Securities (Singapore) Pte Ltd is exempt from complying with sections 25, 27 and 36 of the Financial Advisers Act. Clients should contact analysts at, and execute transactions through, a Macquarie Group entity in their home jurisdiction unless governing law permits otherwise. Macquarie Capital (USA) Inc., which is a registered broker-dealer and member of FINRA, accepts responsibility for the content of each research report prepared by one of its non-US affiliates when the research report is distributed in the United States by Macquarie Capital (USA) Inc. Macquarie Capital (USA) Inc. affiliate research reports and affiliate employees are not subject to the disclosure requirements of FINRA rules. Any persons receiving this report directly from Macquarie Capital (USA) Inc. and wishing

to effect a transaction in any security described herein should do so with Macquarie Capital (USA) Inc. The information contained in this document is confidential. If you are not the intended recipient, you must not disclose or use the information in this document in any way. If you received it in error, please tell us immediately by return e-mail and delete the document. We do not guarantee the integrity of any e-mails or attached files and are not responsible for any changes made to them by any other person. MGL has established and implemented a conflicts policy at group level (which may be revised and updated from time to time) (the "Conflicts Policy") pursuant to regulatory requirements (including the FSA Rules) which sets out how we must seek to identify and manage all material conflicts of interest. Disclosures with respect to the issuers, if any, mentioned in this research are available at www.macquarie.com/research/disclosures. © Macquarie Group

Auckland Tel: (649) 377 6433	Bangkok Tel: (662) 694 7999	Calgary Tel: (1 403) 218 6650	Hong Kong Tel: (852) 2823 3588	Jakarta Tel: (62 21) 515 1818	Johannesburg Tel: (2711) 583 2000	Kuala Lumpur Tel: (60 3) 2059 8833
London Tel: (44 20) 3037 4400	Manila Tel: (63 2) 857 0888	Melbourne Tel: (613) 9635 8139	Montreal Tel: (1 514) 925 2850	Mumbai Tel: (91 22) 6653 3000	Perth Tel: (618) 9224 0888	Seoul Tel: (82 2) 3705 8500
Shanghai Tel: (86 21) 6841 3355	Singapore Tel: (65) 6231 1111	Sydney Tel: (612) 8232 9555	Taipei Tel: (886 2) 2734 7500	Tokyo Tel: (81 3) 3512 7900	Toronto Tel: (1 416) 848 3500	New York Tel: (1 212) 231 2500

Available to clients on the world wide web at www.macquarie.com/research and through Thomson Financial, FactSet, Reuters and Bloomberg.



Asia Research

Head of Equity Research

Stephen O'Sullivan (852) 2823 3566

Automobiles/Auto Parts

Deepak Jain (India) (9122) 6653 3157
Kenneth Yap (Indonesia) (6221) 515 7343
Dan Lucas (Japan) (813) 3512 6050
Eunsook Kwak (Korea) (822) 3705 8644
Linda Huang (Taiwan) (8862) 2734 7521

Banks and Non-Bank Financials

Ismael Pili (Asia) (65) 6231 2840
Nick Lord (Asia, China, Hong Kong) (852) 2823 4774
Sarah Wu (China) (8621) 2412 9035
Seshadri Sen (India) (9122) 6653 3053
Ferry Wong (Indonesia) (6221) 515 7335
Chin Seng Tay (Malaysia, S'pore) (65) 6231 2837
Nadine Javellana (Philippines) (632) 857 0890
Matthew Smith (Taiwan) (8862) 2734 7514
Alastair Macdonald (Thailand) (662) 694 7741

Chemicals/Textiles

Scott Weaver (Taiwan) (8862) 2734 7512
Jal Irani (India) (9122) 6653 3040
Christina Lee (Korea) (822) 3705 8670
Sunaina Dhanuka (Malaysia) (603) 2059 8993

Conglomerates

Gary Pinge (Asia) (852) 2823 3557
Leah Jiang (China) (8621) 2412 9020
Kenneth Yap (Indonesia) (6221) 515 7343
Ashwin Sanketh (Singapore) (65) 6231 2830

Consumer

Mohan Singh (Asia) (852) 3901 1111
Jessie Qian (China, Hong Kong) (852) 2823 3568
Charles Yan (China) (8621) 2412 9033
Unmesh Sharma (India) (9122) 6653 3042
Sarina Lesmina (Indonesia) (6221) 515 7339
Duane Sandberg (Japan) (813) 3512 7867
Toby Williams (Japan) (813) 3512 7392
Heather Kang (Korea) (822) 3705 8677
HongSuk Na (Korea) (822) 3705 8678
Edward Ong (Malaysia) (603) 2059 8982
Alex Pomento (Philippines) (632) 857 0899
Linda Huang (Taiwan) (8862) 2734 7521

Emerging Leaders

Jake Lynch (Asia) (8621) 2412 9007
Hiu-Lui Ko (China) (852) 2823 4704
Minoru Tayama (Japan) (813) 3512 6058
Robert Burghart (Japan) (813) 3512 7853
Heather Kang (Korea) (822) 3705 8677
Scott Weaver (Taiwan) (8862) 2734 7512

Industrials

Bin Liu (China) (8621) 2412 9006
Inderjeetsingh Bhatia (India) (9122) 6653 3166
Christopher Cintavey (Japan) (813) 3512 7432
Janet Lewis (Japan) (813) 3512 7475
Michael Na (Korea) (822) 2095 7222
Sunaina Dhanuka (Malaysia) (603) 2059 8993
David Gambrill (Thailand) (662) 694 7753

Sales

Regional Heads of Sales

Peter Slater (Boston) (1 617) 217 2103
Michelle Paisley (China, Hong Kong) (852) 2823 3516
Ulrike Pollak-Tsutsumi (Frankfurt) (49) 69 7593 8747
Thomas Renz (Geneva) (41) 22 818 7712
Ajay Bhatia (India) (9122) 6653 3200
Stuart Smythe (India) (9122) 6653 3200
Chris Gray (Indonesia) (6221) 515 7304
K.Y. Nam (Korea) (822) 3705 8607
Lena Yong (Malaysia) (603) 2059 8888
Gino C Rojas (Philippines) (632) 857 0761
Greg Norton-Kidd (New York) (1 212) 231 2527
Luke Sullivan (New York) (1 212) 231 2507

Insurance

Mark Kellock (Asia) (852) 2823 3567
Seshadri Sen (Asia, India) (9122) 6653 3053
Makarim Salman (Japan) (813) 3512 7421

Media

Jessie Qian (China, Hong Kong) (852) 2823 3568
Shubham Majumder (India) (9122) 6653 3049
Prem Jearajasingam (Malaysia) (603) 2059 8989
Alex Pomento (Philippines) (632) 857 0899

Oil and Gas

David Johnson (Asia, China) (852) 2823 4691
Scott Weaver (Taiwan) (8862) 2734 7512
Jal Irani (India) (9122) 6653 3040
Christina Lee (Korea) (822) 3705 8670
Edward Ong (Malaysia) (603) 2059 8982
Sunaina Dhanuka (Malaysia) (603) 2059 8993
Ashwin Sanketh (Singapore) (65) 6231 2830
Trevor Buchinski (Thailand) (662) 694 7728

Pharmaceuticals

Abhishek Singhal (India) (9122) 6653 3052
Naomi Kumagai (Japan) (813) 3512 7474
Christina Lee (Korea) (822) 3705 8670

Property

Matt Nacard (Asia) (852) 2823 4731
Eva Lee (China, Hong Kong) (852) 2823 3573
Tata Goeyardi (Hong Kong) (852) 2823 4077
Unmesh Sharma (India) (9122) 6653 3042
Chang Han Joo (Japan) (813) 3512 7885
Hiroshi Okubo (Japan) (813) 3512 7433
Tuck Yin Soong (Singapore) (65) 6231 2838
Elaine Cheong (Singapore) (65) 6231 2839
Corinne Jian (Taiwan) (8862) 2734 7522
Patti Tomaitrichitr (Thailand) (662) 694 7727

Resources / Metals and Mining

Andrew Dale (Asia) (852) 2823 3587
YeeMan Chin (China) (852) 2823 3562
Rakesh Arora (India) (9122) 6653 3054
Adam Worthington (Indonesia) (6221) 515 7338
Polina Diyachkina (Japan) (813) 3512 7886
Christina Lee (Korea) (822) 3705 8670
Scott Weaver (Taiwan) (8862) 2734 7512

Technology

Warren Lau (Asia) (852) 2823 3592
Kishore Belai (India) (9122) 6653 3046
Damian Thong (Japan) (813) 3512 7877
David Gibson (Japan) (813) 3512 7880
George Chang (Japan) (813) 3512 7854
Yoshihiro Shimada (Japan) (813) 3512 7862
Yukihiro Goto (Japan) (813) 3512 5984
Do Hoon Lee (Korea) (822) 3705 8641
Michael Bang (Korea) (822) 3705 8659
Patrick Yau (Singapore) (65) 6231 2835
Andy Kung (Taiwan) (8862) 2734 7534
Chia-Lin Lu (Taiwan) (8862) 2734 7526
Daniel Chang (Taiwan) (8862) 2734 7516
James Chiu (Taiwan) (8862) 2734 7517
Nicholas Teo (Taiwan) (8862) 2734 7523

Telecoms

Tim Smart (Asia, China) (852) 2823 3565
Shubham Majumder (India) (9122) 6653 3049
Kenneth Yap (Indonesia) (6221) 515 7343
Nathan Ramler (Japan) (813) 3512 7875
Prem Jearajasingam (Malaysia) (603) 2059 8989
Ramakrishna Maruvada (Philippines, Singapore, Thailand) (65) 6231 2842

Regional Heads of Sales cont'd

Scot Mackie (New York) (1 212) 231 2848
Sheila Schroeder (San Francisco) (1 415) 835 1235
Giles Heyring (Singapore) (65) 6231 2888
Mark Duncan (Taiwan) (8862) 2734 7510
Angus Kent (Thailand) (662) 694 7601
Michael Newman (Tokyo) (813) 3512 7920
Charles Nelson (UK/Europe) (44) 20 7065 2032
Rob Fabbro (UK/Europe) (44) 20 7065 2031

Sales Trading

Adam Zaki (North Asia) (852) 2823 3528
Duncan Rutherford (ASEAN, India) (65) 6231 2888
Mona Lee (Hong Kong) (852) 2823 3519

Transport & Infrastructure

Anderson Chow (Asia, China) (852) 2823 4773
Jonathan Windham (Asia, China) (852) 2823 5417
Tim Bacchus (Asia, China) (852) 2823 3586
Wei Sim (China, Hong Kong) (852) 2823 3598
Eunsook Kwak (Korea) (822) 3705 8644
Sunaina Dhanuka (Malaysia) (603) 2059 8993

Utilities

Carol Cao (China, Hong Kong) (852) 2823 4075
Deepak Jain (India) (9122) 6653 3157
Adam Worthington (Indonesia) (6221) 515 7338
Prem Jearajasingam (Malaysia) (603) 2059 8989
Alex Pomento (Philippines) (632) 857 0899

Commodities

Jim Lennon (4420) 7065 2014
Adam Rowley (4420) 7065 2013
Jonathan Butcher (4420) 7065 5938
Max Layton (4420) 7065 2000
Bonnie Liu (8621) 2412 9008
Henry Liu (8621) 2412 9005
Rakesh Arora (9122) 6653 3054

Data Services

Andrea Clohessy (Asia) (852) 2823 4076

Economics

Bill Belchere (Asia) (852) 2823 4636
Rajeev Malik (ASEAN, India) (65) 6231 2841
Richard Gibbs (Australia) (612) 8232 3935
Paul Cavey (China) (852) 2823 3570
Richard Jerram (Japan) (813) 3512 7855

Quantitative

Martin Emery (Asia) (852) 2823 3582
Viking Kwok (Asia) (852) 2823 4735
George Platt (Australia) (612) 8232 6539
Raelene de Souza (Australia) (612) 8232 8388
Tsumugi Akiba (Japan) (813) 3512 7560

Strategy/Country

Tim Rocks (Asia) (852) 2823 3585
Daniel McCormack (Asia) (852) 2823 4073
Desh Peramunetilleke (Asia) (852) 2823 3564
Mahesh Kedia (Asia) (852) 2823 3576
Stewart Ferns (Asia) (852) 2823 4068
Michael Kurtz (China) (8621) 2412 9002
Seshadri Sen (India) (9122) 6653 3053
Ferry Wong (Indonesia) (6221) 515 7335
Chris Hunt (Japan) (813) 3512 7878
Peter Eadon-Clarke (Japan) (813) 3512 7850
Eugene Ha (Korea) (822) 3705 8643
Prem Jearajasingam (Malaysia) (603) 2059 8989
Edward Ong (Malaysia) (603) 2059 8982
Alex Pomento (Philippines) (632) 857 0899
Tuck Yin Soong (ASEAN, Singapore) (65) 6231 2838
Daniel Chang (Taiwan) (8862) 2734 7516
Alastair Macdonald (Thailand) (662) 694 7741

Find our research at

Macquarie: www.macquarie.com.au/research
Thomson: www.thomson.com/financial
Reuters: www.knowledge.reuters.com
Bloomberg: MAC GO
Factset: <http://www.factset.com/home.aspx>
Email macresearch@macquarie.com for access

Sales Trading cont'd

Stuart Goddard (Europe) (44) 20 7065 2033
Brendan Rake (India) (9122) 6653 3204
Edward Robinson (London) (44) 20 7065 5883
Robert Risman (New York) (1 212) 231 2555
Isaac Huang (Taiwan) (8862) 2734 7582
Jon Omori (Tokyo) (813) 3512 7838

Alternative Strategies

Convertibles - Roland Sharman (852) 2823 4628
Depository Receipts - Robert Ansell (852) 2823 4688
Derivatives - Tim Connolly (852) 2249 3380
Futures - Tim Smith (852) 2823 4637
Hedge Fund Sales - Darin Lester (852) 2823 4736
Structured Products - Andrew Terlich (852) 2249 3225