

Touch Panel Sector

From over-supply to tight supply: Risk and Opportunity in touch panel sector

After prolonged oversupply and margin decline, we now expect over-supply in the touch panel industry to reverse on the back of the launch of Windows 8 along with low-cost tablet PCs. Our analysis suggests the demand from touch-on-PC and ever-growing tablet would outstrip realistic mid/large-size touch panel supply. This would likely create tight supply in 4Q12 onwards especially for One-Glass-Solution ("OGS") capacity. We believe TPK stands out in this trend. Other touch panel makers could also see spill-over effect in 2H12.

- Touch panel likely penetrates into an untapped market:** Major PC brands plan around 10% of NBs to be equipped with touch panels in 2013. Given the high price points of Win 8 NBs, however, we make conservative estimate of 2%/6% touch penetration into NBs for 2012/2013. Regardless, we forecast touch-on-NBs will account for 7%/18% of the mid/large touch panel demand in 2012/2013. The penetration rate will continue to increase along with price elasticity.
- Demand outgrows supply:** Since most of the touch panel makers barely breakeven with mid/large size touch panel, we estimate the industry capacity sees only mild growth by 39%/16% in 2012/2013 vis-à-vis demand growth of 59%/41% for 2012/2013. In the worst case scenario where demand for touchscreen PCs turns out to be disappointing during holiday seasons, second-tier touch panel makers could likely see more de-stocking risks in 1Q13, but the trend of touch-on-PCs is inevitable, in our view.
- Shortage likely in 4Q12 onwards** – Currently, the market remains skeptical about touch panel penetration into NB and PC markets. Our base case suggests a supply glut of mere 2% if touch penetration in NBs reaches 6% in 2013 and tight supply will return if the penetration exceeds 7%. Hence, we believe touch panel adoption rate in NB will be the major swing factor for supply/demand dynamic in 2013.
- Risk of in-cell in iPad** – We currently do not expect Apple to use in-cell for iPad in 2013. If Apple adopts in-cell for iPad in 2013, however, this could change the supply/demand dynamics of the touch panel industry. iPad represents 40~50% of the total mid/large touch panel demand, or equivalent to around 40 million units of NBs. Nevertheless, non-Apple devices would likely prefer OGS over in-cell to avoid high front-end costs for photo masks and tooling, as we suggested in our report *"In-Cell & Touch Panel: A major breakthrough in display: Opportunity in smartphone and tablet PC"*, published on June 16, 2012.

See page 27 for analyst certification and important disclosures, including non-US analyst disclosures.

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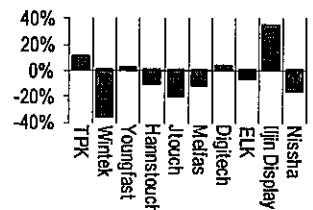
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Major touch panel makers' YTD share price performance



Source: Bloomberg. Share price as of July 18, 2012

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From over-supply to under-supply

Supply to turn tight from 4Q12

From 2010 to 2011, the touch panel sector has witnessed over-supply status and declining margins, with the launch of Windows 8 supported by Microsoft and Intel, coupled with low-cost tablet PCs. We now believe the over-supply risk is about to reverse. We estimate the demand coming from ongoing tablet momentum as well as touch on PC demand would outstrip realistic mid/large-size touch panel supply and create shortages. We believe TPK stands out to be the best beneficiary in the sector.

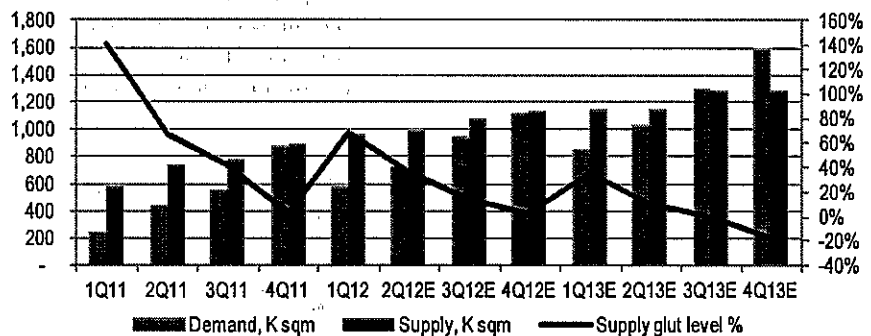
Currently, the market remains skeptical about touch panel penetration into NB and PC markets. However, based on our base case scenario with 2%/6% touch penetration into NB market, the supply would become quite tight from 4Q12 and 2013. If penetration turns out to be stronger than our forecast, we will likely witness shortage in 4Q12 and for the most part of 2013.

Table 1: Touch panel demand/supply sensitivity analysis for 7" and above screen-size
 Thousand units, %, thousand square meters

3Q12 – Win8 launch	Touch on NB adoption		Supply-glut	
	2012	2013	2012	2013
Base Case	1.9%	5.9%	24.1%	2.2%
1.0%	1.3%	4.9%	26.8%	5.5%
2.0%	1.9%	5.9%	24.1%	2.2%
3.0%	2.4%	6.9%	21.5%	-0.8%
4.0%	2.9%	7.9%	19.0%	-3.7%
5.0%	3.5%	8.9%	16.7%	-6.4%
6.0%	4.0%	9.9%	14.4%	-9.0%
7.0%	4.5%	10.9%	12.2%	-11.5%
8.0%	5.1%	11.9%	10.1%	-13.8%
9.0%	5.6%	12.9%	8.0%	-15.9%
10.0%	6.1%	13.9%	6.1%	-18.0%
12.0%	7.2%	15.9%	2.3%	-21.9%
15.0%	8.8%	18.9%	-2.8%	-27.1%
20.0%	11.5%	23.9%	-10.3%	-34.3%

Source: J.P. Morgan estimates

Figure 1: Touch Panel demand/supply for 7" and above %



Source: Company, J.P. Morgan estimates

Table 2: Tablet landscape in 2H12 and touch panel suppliers

Brand	Expected pricing	Timing	Expected vol in 2H12	Touch panel module makers	JPM view
Amazon Kindle Fire	\$149-199	Jul-Aug	5-8M	TPK	Likely stay No 2 due to pricing
Google Nexus 7	\$199-249	Jul-Aug	2-3M	TPK, Wintek	Limited unless open up for retail with brand partners
Apple iPad mini	\$249+	Nov	10+M	TPK	Likely vol. leader in low-price category
Apple New iPad	\$499-829	Already selling	27+M	TPK, Wintek	Could see some cannibalization from iPad mini
Microsoft Surface	\$599	Oct (ARM); Jan 13 (x86)	3-4M	TPK	High price points
Other Win 8 tablets	\$499+	4Q12	4-5M	TPK, Wintek, Cando, Hannstouch,	High price points
Whitebox tablets	\$70-100	Already selling	40M in 2012		Strong EM traction, threat from cheap smartphones

Source: J.P. Morgan estimates

Major assumptions/risks

To arrive at our base case supply and demand scenario, we make a few key assumptions:

- Upside in lamination demand:** Each device requires one lamination. In reality, it may require more. If the touch panel is glass-on-glass or glass-on-film projected capacitive structure, it will need two lamination processes instead of one. Currently, more than 90% of the touch NB models are OGS ("One Glass Solution") for the upcoming touchscreen NB models.
- Risk to iPad:** If Apple adopts in-cell for iPad in 2013, that could provide significant upside to our supply forecast given that LGD, Sharp, and TMD could likely expand capacities to support Apple. This could be a major swing in our supply/demand assumptions given that we expect iPad will represent nearly 50%/45% of the touch panel demand for 2012/2013E.
- Threat from Samsung/LGD:** Currently, both we believe Samsung and LGD do not have plans to provide lamination for tablet/NB sizes. If they start to address this market and add capacities, that could create more supply than our forecast.
- Threat from CMI/ Hon Hai:** For CMI/Hon Hai, CMI management indicated that they now focus more on the touch sensor rather than lamination. We assume CMI and Hon Hai's combined lamination capacity is around half of that for sensor. Judging from CMI's past experience with iPad 2 lamination, we believe it may still take time for CMI/Hon Hai to reach satisfactory lamination yield rates for mid to larger-size.

Touch Panel Demand

Demand to see another boost in an untapped market

We forecast 2%/6% touch penetration on NBs for 2012/2013. More specifically, we expect 14 million units of NBPC to be touchscreen in 2013. Provided that the major PC vendors forecast 10% of the NBPC to be touchscreen in 2H12 along with Windows 8 launch, we believe our demand assumption could see upside potential. Incremental production costs for a NBPC touch panel would range between USD40~70, and incremental purchase costs for a consumer to buy a touchscreen 14" NBPC would be USD100-150 initially, by our estimate. We think this would bring niche market opportunities at the beginning and would penetrate into mass market in 2013 with the retail prices coming down.

Table 3: Touch panel demand for 7" and above screen-size
 Thousand units, %, thousand square meters

	2012	2012	2013
PC forecast (K unit)			
Desktop	155,636	154,387	152,205
Notebook	209,448	217,825	238,668
Tablet PC	69,587	106,813	140,314
Server	9,321	9,634	10,010
Global PC	443,992	488,659	541,197
Penetration			
Desktop	0%	0%	2%
Notebook	0%	2%	6%
Tablet PC	100%	100%	100%
Server	0%	0%	0%
Global PC	16%	23%	29%
Touch market forecast (K unit)			
Desktop	-	201	2,686
Notebook	431	4,036	14,181
Tablet PC	69,587	106,813	140,314
Server	-	-	-
Total	70,018	111,050	157,182
Square Meters (K sqm)			
Desktop	-	24	320
Notebook	26	248	870
Tablet PC	2,082	3,085	3,554
Server	-	-	-
Total	2,108	3,357	4,744
Demand growth		59%	41%

Source: J.P. Morgan

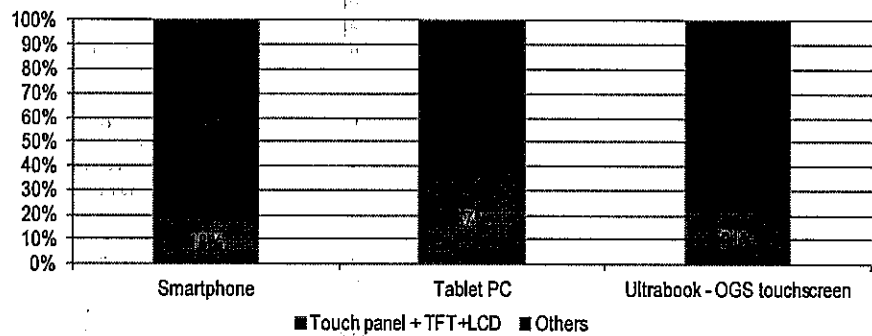
Table 4: Ultrabooks - Bill of Materials Comparison
 US\$, %

Ultrabook - pure SSD option			Ultrabook - hybrid HDD option		
	End 2012	% of BOM		End 2012	% of BOM
CPU	100	17%	CPU	100	20%
SSD	140	24%	HDD w/ 16GB Hybrid Flash	70	14%
Motherboard Level	67	12%	Motherboard Level	71	14%
Touch panel	60	10%	Touch panel	60	12%
Casing (unibody or 2 piece of metal)	50	9%	Casing (mix of metal and plastic)	35	7%
TFT-LCD (Slim 13" panel)	45	8%	TFT-LCD (Slim 13" panel)	45	9%
Operating System	45	8%	Operating System	45	9%
Battery (Li Polymer)	25	4%	Battery (Li Polymer)	25	5%
Others	42	7%	Others	47	9%
Total component level costs	574	100%	Total component level costs	498	100%
Yield factor	95%		Yield factor	95%	
Cost at ODM	15		Cost at ODM	15	
FOB price	619		FOB price	539	
Brand margin	10%		Brand margin	10%	
Retailers margin	15%		Retailers margin	15%	
Street price	825		Street price	718	

Source: J.P. Morgan

From the BOM perspective, OGS/TOL (i.e. "Touch on Lens") touch panel has emerged as the preferred solution lower the BOM cost. For Ultrabook, the touch panel + TFT-LCD BOM costs are similar to that of smartphone - near 20% of the total BOM costs. Most OGS touch panels would require full-lamination where the lamination of touch panel + TFT-LCD would be done at touch panel makers.

Figure 2: Touch Panel + LCD as a % to total BOM comparison
 %



Source: iSuppli, J.P. Morgan

Touch Panel Supply

Realistic supply needs to take into account the yield rate

On the supply side, although many touch panel makers claim to be beneficiaries of Windows 8 push on touch panel penetration, we believe only top-tier touch panel makers could benefit the most. OGS has emerged as the mainstream trend for non-Apple tablets and touch on NBs. Among the touch panel makers, TPK, Cando (TPK subsidiary), Wintek, and Hannstouch, signed strategic agreements with Intel where Intel aims to ensure capacity of touch technology for expected growth of touch-enabled Ultrabook convertible designs. As we indicated in the note *"Touch Panel Sector: Intel teams up with TPK and other touch panel makers; Impact from Wintek GDR issuance"*, published on June 6, 2012, we believe the structure of the agreement could be targeted to secure a portion of capacity from each touch panel vendor solely for Ultrabook models. If the capacity is not filled up during the designated period, Intel would need to reimburse the touch panel makers with monetary compensation. Intel marketing chief Tom Kilroy noted at Computex, *"much like we've done with our ultrabook fund, we will work the supply chain to make sure the right materials are in place....we will take a checkbook, if you will, and put a guarantee out there that if you build, we'll cover it"*.

We believe with this agreement in effect, PC brands would prefer these touch panel makers over conventional TFT-LCD makers when sourcing touch panels. After all, the biggest challenge on touch panels remains on lamination, not on sensor-making.

Table 5: Touch panel supply for 7" and above screen-size
 Thousand units, thousand square meters, %

	2011	2012	2013
Module (Lamination) Capacity, K units, based on 10" equivalent			
TPK	66,000	75,600	78,000
Cando	-	1,800	2,400
Wintek	40,500	55,500	66,000
AUO	4,500	9,000	9,000
CMI/ Hon Hai	10,950	17,985	22,560
Hannstar/ Hannstouch	1,320	2,980	3,320
Digitech	9,000	15,000	15,000
ELK	6,000	6,000	6,000
Ijjin Display	4,000	5,000	6,000
Youngfast	2,000	2,400	2,400
J-touch	2,200	3,600	3,600
Mildex	800	1,000	1,000
CPT	600	2,400	2,400
Truly	800	1,260	1,480
EELY	880	1,110	1,320
Success	200	780	1,160
Wistron	-	3,000	9,000
Compal/ Heng Hao	-	-	2,600
Others	440	840	960
Total	150,190	205,255	234,200
Square Meters (K sqm)			
Input	4,651	6,356	7,253
Capacity factor	85%	85%	85%
Yield rate	76%	77%	79%
Realistic output	2,990	4,166	4,849
Supply growth		39%	16%
Supply glut level	882	809	105
Supply glut level %	42%	24%	2%

Source: J.P. Morgan estimates

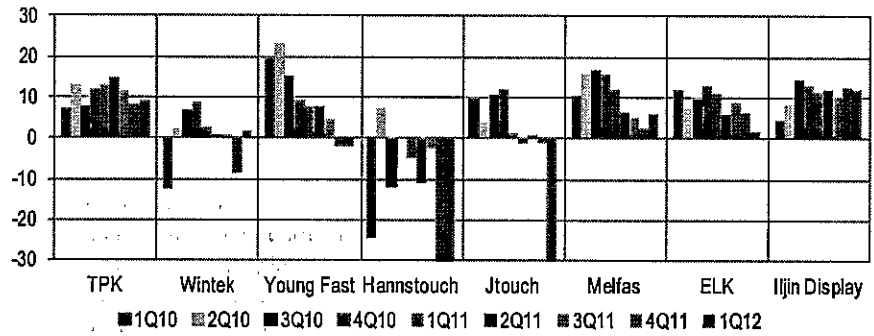
Implications for the Sector

Lamination yield rate matters to margin

In the past two years, the touch panel sector has suffered from severe over-supply and margin pressure; only until late-2011 did the sector see its margin trend stabilize. For selective touch panel players, the margin started to recover in 1Q12. We believe with the new touch panel demand from NB and PC market, the supply/demand situation would begin to turn tight. Although OGS/TOL/in-cell have emerged as a clear trend, lamination yield rate remains a key bottleneck for the second-tier vendors to gain orders.

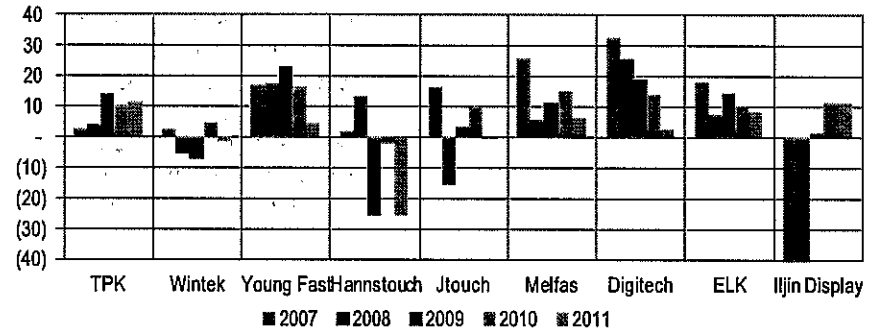
We prefer sector leader TPK, which reaps the benefits of economies of scale and continues to secure key orders from major brands. TPK is the primary touch panel vendor for all major tech product launches in 2H12, including the Google Nexus tablet, Amazon Kindle Fire, Apple iPad mini, Microsoft Surface Tablet, and Windows 8 NBs. Second-tier touch panel makers will also benefit from a tight supply situation, but these laggards could see inventory risks in 1Q13 if demand doesn't turn out to be as good as expected due to high price points, in our view.

Figure 3: Quarterly OPM trend



Source: Bloomberg

Figure 4: Annual OPM trend



Source: Bloomberg

Table 6: Global touch panel peer fundamental comparison

Local currency, US\$ in millions, x, %

Company Name	Sales Growth %			OP Margin %			Net Margin %			Earnings Growth %		
	FY11	FY12E	FY13E	FY11	FY12E	FY13E	FY11	FY12E	FY13E	FY11	FY12E	FY13E
TPK	140.6	14.7	3.4	11.4	9.7	9.8	7.9	7.4	7.6	139.2	7.0	6.4
Wintek	45.6	(2.2)	(28.7)	(1.7)	0.9	0.8	(2.0)	0.1	(0.1)	(192.5)	(103.2)	(212.0)
Young Fast	(5.0)	(8.6)	13.8	4.3	1.3	2.8	2.5	0.9	2.2	(84.3)	(66.2)	163.8
Sintek	(5.9)	n.m.	n.m.	(25.7)	n.m.	n.m.	(30.6)	n.m.	n.m.	555.5	n.m.	n.m.
Jtouch	24.0	47.9	20.2	(0.5)	n.m.	n.m.	(2.1)	6.0	6.0	(144.2)	(529.4)	20.2
Melfas	1.8	24.7	38.2	6.2	7.8	9.6	5.8	7.2	7.8	(58.4)	53.8	51.1
Digitech	1.1	83.7	24.6	2.7	8.7	8.8	3.2	7.9	7.6	(73.2)	349.1	19.2
ELK	(1.8)	15.5	47.7	8.1	8.3	9.1	5.5	5.8	8.6	(31.4)	23.5	117.7
Nissha Printing	(10.2)	(29.5)	17.5	(4.3)	(14.0)	(4.7)	(2.2)	(33.2)	(5.0)	(135.5)	983.8	(82.4)
Median - All	1.1	15.1	18.8	2.7	7.8	8.8	2.5	5.9	6.8	(44.9)	7.0	6.4

Source: Company data, Bloomberg, J.P. Morgan estimates. Prices and valuations are as of July 17, 2012.

Table 7: Global touch panel peer valuation comparison

Local currency, US\$ in millions, x, %

Company	Ticker	Rating	Price (LC)	Market cap (US\$ M)	P/E(x)		P/B(x)		ROE (%)	
					FY12E	FY13E	FY12E	FY13E	FY12E	FY13E
TPK	3673 TT	OW	336.0	3,463.5	8.5	8.0	3.5	2.8	51.4	36.6
Wintek	2384 TT	N	13.8	850.3	403.9	n.m.	0.7	0.7	0.2	(0.2)
Youngfast	3622 TT	NR	63.3	316.9	49.8	3.1	n.m.	n.m.	0.2	1.5
Hannstouch	3049 TT	NR	11.0	324.2	40.7	n.m.	n.m.	n.m.	n.m.	n.m.
Jtouch	3584 TT	NR	29.6	106.1	27.6	7.6	n.m.	n.m.	16.3	17.0
Melfas	096640 KS	NR	22,400.0	329.8	16.9	8.7	2.4	2.0	15.0	19.3
Digitech	091690 KS	NR	11,500.0	134.9	7.9	7.1	1.2	1.1	15.4	16.3
ELK	094190 KS	NR	13,200.0	140.6	11.9	7.3	1.4	1.1	16.0	24.9
Iijin Display	020760 KS	NR	15,600.0	369.5	7.5	29.7	3.2	2.2	47.7	35.4
Nissha	7915 JP	NR	800.0	434.3	n.m.	n.m.	0.7	0.8	(41.6)	(9.3)
Median					16.9	7.6	1.4	1.1	15.4	17.0

Source: Company data, Bloomberg, J.P. Morgan estimates. Prices and valuations are as of July 18, 2012.

Table 8: Global touch panel mid/large touch panel demand

K units, %, K square meters

	1Q11	2Q11	3Q11	4Q11	1Q12	2Q12E	3Q12E	4Q12E	1Q13E	2Q13E	3Q13E	4Q13E	2012	2012	2013
PC shipment forecast (K unit)															
Desktop	37,930	38,189	40,050	39,466	37,987	37,364	38,919	40,116	36,903	37,151	38,812	39,339	155,636	154,387	152,205
Notebook	49,328	49,368	55,272	55,479	51,202	50,170	56,433	60,019	56,484	56,673	61,742	63,769	209,448	217,825	238,668
Tablet PC	7,993	14,651	18,200	28,744	18,704	23,660	29,401	35,048	24,500	30,761	38,626	46,428	69,587	106,813	140,314
Server	2,259	2,285	2,325	2,451	2,291	2,333	2,433	2,578	2,360	2,410	2,565	2,675	9,321	9,634	10,010
Global PC	97,511	104,493	115,848	126,140	110,184	113,526	127,187	137,761	120,247	126,994	141,745	152,211	443,992	488,659	541,197
Penetration %															
Desktop	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	1.0%	1.5%	2.0%	2.5%	0%	0%	2%
Notebook	0.1%	0.1%	0.3%	0.3%	0.5%	0.5%	2.0%	4.0%	4.5%	5.0%	6.0%	8.0%	0%	2%	6%
Tablet PC	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100%	100%	100%
Server	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0%	0%	0%
Global PC	8%	14%	16%	23%	17%	21%	24%	27%	23%	27%	30%	35%	16%	23%	29%
Touch market forecast (K unit)															
Desktop	-	-	-	-	-	-	-	201	369	557	776	983	-	201	2,686
Notebook	49	49	166	166	256	251	1,129	2,401	2,542	2,834	3,705	5,102	431	4,036	14,181
Tablet PC	7,993	14,651	18,200	28,744	18,704	23,660	29,401	35,048	24,500	30,761	38,626	46,428	69,587	106,813	140,314
Server	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	8,042	14,700	18,366	28,910	18,960	23,911	30,529	37,649	27,410	34,152	43,106	52,513	70,018	111,050	157,182
Total demand (K sqm)															
Desktop	-	-	-	-	-	-	-	24	44	66	93	117	-	24	320
Notebook	3	3	10	10	16	15	69	147	156	174	227	313	26	248	870
Tablet PC	239	438	544	860	560	708	880	938	643	791	973	1,147	2,082	3,085	3,554
Server	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	242	441	555	870	575	723	949	1,110	843	1,031	1,293	1,577	2,108	3,357	4,744
Demand growth														59%	41%

Source: Company data, Bloomberg, J.P. Morgan estimates. Prices and valuations are as of July 17, 2012.

Table 9: Global touch panel mid/large touch panel supply

K units, %, K square meters

	1Q11	2Q11	3Q11	4Q11	1Q12	2Q12E	3Q12E	4Q12E	1Q13E	2Q13E	3Q13E	4Q13E	2012	2012	2013
Lamination Capacity, K units, based on 10" equivalent															
TPK	12,000	18,000	18,000	18,000	18,000	18,600	19,500	19,500	19,500	19,500	19,500	19,500	66,000	75,600	78,000
Cando	-	-	-	-	-	600	600	600	600	600	600	600	-	1,800	2,400
Wintek	7,500	9,000	10,500	13,500	13,500	13,500	13,500	15,000	15,000	15,000	18,000	18,000	40,500	55,500	66,000
AUO	1,125	1,125	1,125	1,125	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	4,500	9,000	9,000
CMI/HonHai	2,280	2,280	2,280	4,110	4,110	4,110	4,425	5,340	5,340	5,340	5,940	5,940	10,950	17,985	22,560
Hannstar/Hannstouch	330	330	330	330	660	660	830	830	830	830	830	830	1,320	2,980	3,320
Digitech	2,250	2,250	2,250	2,250	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	9,000	15,000	15,000
ELK	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	6,000	6,000	6,000
IijinDisplay	1,000	1,000	1,000	1,000	1,000	1,000	1,500	1,500	1,500	1,500	1,500	1,500	4,000	5,000	6,000
Youngfast	400	400	600	600	600	600	600	600	600	600	600	600	2,000	2,400	2,400
J-touch	400	400	700	700	900	900	900	900	900	900	900	900	2,200	3,600	3,600
Mildex	180	180	220	220	250	250	250	250	250	250	250	250	800	1,000	1,000
CPT	-	-	-	600	600	600	600	600	600	600	600	600	600	2,400	2,400
Truly	180	180	220	220	260	260	370	370	370	370	370	370	800	1,260	1,480
EELY	180	180	260	260	260	260	260	330	330	330	330	330	880	1,110	1,320
Success	-	-	100	100	100	100	290	290	290	290	290	290	200	780	1,160
Wistron	-	-	-	-	-	-	1,500	1,500	1,500	1,500	3,000	3,000	-	3,000	9,000
Compal/HengHao	-	-	-	-	-	-	-	-	-	-	1,300	1,300	-	-	2,600
Others	90	90	130	130	180	180	240	240	240	240	240	240	440	840	960
Total units	29,415	36,915	39,215	44,645	47,920	49,120	52,865	55,350	55,350	55,350	61,750	61,750	150,190	205,255	234,200
Total supply (K sqm)															
Input	911	1,143	1,214	1,383	1,484	1,521	1,637	1,714	1,714	1,714	1,912	1,912	4,651	6,356	7,253
Capacity factor	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%
Yield rate	75%	75%	76%	76%	77%	77%	77%	78%	78%	78%	79%	79%	76%	77%	79%
Realistic output	581	732	782	895	965	994	1,075	1,132	1,137	1,143	1,281	1,288	2,990	4,166	4,849
Supply growth														39%	16%
Supply glut level															
Supply glut (K sqm)	339	291	227	25	390	271	127	22	294	112	(12)	(289)	882	809	105
Supply glut %	140%	66%	41%	3%	68%	37%	13%	2%	35%	11%	-1%	-18%	42%	24%	2%

Source: Company data, Bloomberg, J.P. Morgan estimates. Prices and valuations are as of July 17, 2012.

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Companies

JPMorgan

TPK Holding Co., Ltd.

Tight supply leads to stronger bargaining power

- **Tight supply translates into margin upside:** Based on our top-down approach, we believe there is a high chance that touch panel supply could turn tight in 4Q12 and for the most part of 2013. We forecast the tablet and touchscreen PC together will represent 3/4th of TPK's gross profits by 4Q12. We estimate margins will likely see another hike in 3Q12 and slide slightly in 4Q12 due to higher percentage of OGS full-lamination. We expect TPK's OP profit to grow by 10%/31% Q/Q in 3Q12/4Q12.
- **Multiple share price catalysts:** TPK's price has outperformed the market by 16% YTD and outperformance could likely continue into the peak season. We expect to see strong revenue ramp up from 3Q12 for low-cost tablets including Google Nexus 7, Amazon Kindle Fire, Apple iPad mini, Microsoft Surface and Windows 8 NBs, which enjoy higher margin than smartphones. We also estimate new iPad shipment to see another 15% upward revision in 3Q12.
- **Key risks 1: in-cell on iPad?** New iPad represents nearly 30% of TPK's gross profit in 2013, per our estimate. If Apple adopts in-cell for New iPad in 2013, we believe earnings could see meaningful downside risks. As seen from the iPhone design cycle, any major design change in Apple products could take 9-12 months to materialize, yet we have not seen signs that in-cell iPad is work in progress for 1Q13 launch. Please Refer to "In-Cell & Touch Panel: A major breakthrough in display: Opportunity in smartphone and tablet PC" report, published on June 16, 2012, for more details.
- **Key risk 2: equity dilution -** As the supply turns tight in 4Q12, TPK may convert partial small-size capacity to mid/large size but may also consider fund raising to finance further expansion if needed. Although we believe TPK's operating cash flows should be able to fully support capacity expansion needs in 2013, there is possibility of fund-raising if the company has a more aggressive capacity expansion plan.
- **Raise earnings, PT -** With changes in our assumptions, we slightly raise our earnings for 2012/2013 by 1%/1%. Accordingly, we raise our ex-dividend Dec-12 PT to NT\$400 (based on 10x 2012E P/E). We believe the earnings momentum will continue to surprise the market on the upside and drive the share price upwards.

Bloomberg 3673 TT, Reuters 3673.TW

(Year-end Dec, NT\$ bn)	FY10	FY11	FY12E	FY13E	FY10	FY11	FY12E	FY13E	Date of Price	18 Jul 12	
Sales	59.6	143.4	164.5	170.1	Sales growth	218.6%	140.6%	14.7%	3.4%	52-Week range	NT\$653.35 - 250.80
Operating Profit	6.2	16.3	16.0	16.6	OP growth	138.6%	161.9%	-1.9%	3.7%	Market Cap	NT\$104B
EBITDA	7.3	19.2	21.8	24.6	NP growth	104.7%	139.2%	7.0%	6.4%	Market Cap	US\$3,466MM
Net profit	4.7	11.3	12.1	12.9	Quarterly EPS (NT\$)	1Q	2Q	3Q	4Q	Share Out. (Com)	309MM
EPS	17.6	37.1	39.5	41.8	EPS (11)	8.1	12.1	11.9	5.0	Free float	74.0%
BPS (NT\$)	48.4	96.0	119.8	158.1	EPS (12) E	8.6	8.7	9.5	12.7	Avg daily val	NT\$2.1B
P/E (x)	19.1	9.1	8.5	8.0	EPS (13) E	8.6	8.7	10.3	14.2	Avg daily val (US\$)	69.80MM
P/BV (x)	6.9	3.5	2.8	2.1	Difference (%)	13.3				Avg daily vol.	6.4MM shares
ROE (%)	47.2	51.4	36.6	30.1	Price Target	400				Dividend yield (%)	4.5
Net Debt	1.7	14.3	9.0	-0.0	Consensus PT	353				Exchange Rate	29.97

Source: Company data, Bloomberg, J.P. Morgan estimates.

See page 27 for analyst certification and important disclosures, including non-US analyst disclosures.

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Overweight

3673.TW, 3673 TT

Price: NT\$336.00

▲ Price Target: NT\$400.00
Previous: NT\$385.84

Taiwan

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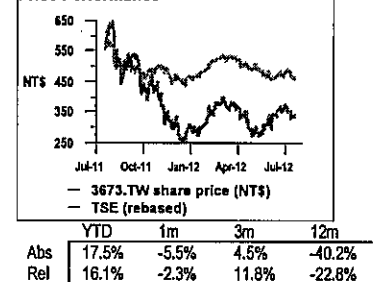
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Price Performance



Company Description

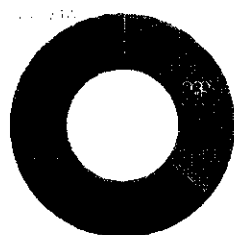
TPK (TWSE: 3673) was founded in 2003 and the co-inventor of glass-based projected capacitive (P-Cap) touch solutions and the first company to undertake mass production of these. TPK has currently five major product categories: 1) cover glass, 2) touch sensor, 3) touch module, 4) touch display, and 5) touch system. Glass-based P-Cap touch solutions are TPK's main focus, while it also has PET-film production since 2Q 2010.

Key customers include Apple, HTC, Barnes & Noble

P&L sensitivity metrics 2012 assumptions	OP profit Impact (%)	EPS Impact (%)
Touch panel volume growth assumption:		51%
Impact of each 1%	3%	3%
Touch panel blended ASP growth assumption:		-9%
Impact of each 1%	9%	10%
FX assumption:		NT\$29.4 / US\$
Impact of each 1%	3%	3%

Source: J.P. Morgan estimates.

Revenue by application (as of 1Q12)



■ Touch module
■ Touch display

Source: Company

EPS: J.P. Morgan vs consensus

NT\$	J. P. Morgan	Consensus
FY12E	39.5	35.5
FY13E	41.8	35.2

Source: Bloomberg and J.P. Morgan estimates.

Global touch panel peer valuation comparison

Local currency, US\$ in millions, x, %

Company	Ticker	Rating	Price (LC)	Market cap (US\$ M)	P/E(x)		P/B(x)		ROE (%)	
					FY12E	FY13E	FY12E	FY13E	FY12E	FY13E
TPK	3673 TT	OW	336.0	3,463.5	8.5	8.0	3.5	2.8	51.4	36.6
Wintek	2384 TT	N	13.8	850.3	403.9	n.m.	0.7	0.7	0.2	(0.2)
Youngfast	3622 TT	NR	63.3	316.9	49.8	3.1	n.m.	n.m.	0.2	1.5
Hannstouch	3049 TT	NR	11.0	324.2	40.7	n.m.	n.m.	n.m.	n.m.	n.m.
Jtouch	3584 TT	NR	29.6	106.1	27.6	7.6	n.m.	n.m.	16.3	17.0
Melfas	096640 KS	NR	22,400.0	329.8	16.9	8.7	2.4	2.0	15.0	19.3
Digittech	091690 KS	NR	11,500.0	134.9	7.9	7.1	1.2	1.1	15.4	16.3
ELK	094190 KS	NR	13,200.0	140.6	11.9	7.3	1.4	1.1	16.0	24.9
Iijin Display	020760 KS	NR	15,600.0	369.5	7.5	29.7	3.2	2.2	47.7	35.4
Nissha	7915 JP	NR	800.0	434.3	n.m.	n.m.	0.7	0.8	(41.6)	(9.3)
Median					16.9	7.6	1.4	1.1	15.4	17.0

Source: Company data, Bloomberg for NR companies, J.P. Morgan estimates. Prices and valuations are as of July 18, 2012.

Price target and valuation analysis

With changes in our assumptions, we slightly raise our earnings estimates for 2012/2013 by 1%/1%. Accordingly, we raise our ex-dividend Dec-12 price target to NT\$400 (based on current 10x 2012E P/E). We believe the earnings momentum will continue to surprise on the upside and drive the share price upwards.

Key downside risks are: (1) Apple adopts in-cell for iPad; (2) lower-than-expected demand for smartphones/tablets/PCs; (3) faster-than-expected contraction in margins due to competition; and (4) TFT-LCD makers grabbing market share with vertical integration.

Earnings estimate revisions

Earnings estimate revisions

Given the increasing full-lamination %, we revise up the revenue forecast by 12%/27% for 2012/2013 and revise down our margin assumption due to product mix change. Net-net, the net profit is up 1%/1% for 2012/2013. More specifically, we revise up the mid-size touch panel shipment forecast mostly due to higher New iPad shipment forecast by 15%. For ASP, we made slight changes to account for higher percentage of full-lamination models.

Table 10: TPK: Earnings estimate revisions
NT\$ in billions, year-end December

	Revised		Prior		Change %	
	2012E	2013E	2012E	2013E	2012E	2013E
Revenue	164.5	170.1	146.6	134.3	12%	27%
Small-size 6" and below	83.4	39.8	78.9	38.3	6%	4%
Mid-size 6" - 10"	73.3	107.5	60.2	78.7	22%	37%
Large-size 10" and above	7.7	22.9	7.4	17.3	n.m.	n.m.
Operating profit	16.0	16.6	15.9	16.7	1%	0%
OP margin (%)	9.7%	9.8%	10.8%	12.4%	-1.1%	-2.6%
Net profit	12.1	12.9	12.0	12.8	1%	1%
Net margin (%)	7.4%	7.6%	8.2%	9.5%	-0.8%	-1.9%
*EPS (NT\$)	39.5	41.8	39.2	41.9	1%	0%
Unit shipment (K units)						
Small-size touch panel	178,335	188,277	178,663	192,582	0%	-2%
Mid-size touch panel	60,157	82,558	52,532	74,769	15%	10%
Large-size touch panel	2,800	8,500	3,000	8,400	-7%	1%
ASP (US\$/unit)						
Small-size touch panel	8.4	7.2	8.2	6.7	3%	6%
Mid-size touch panel	40.5	37.2	40.4	37.4	0%	0%
Large-size touch panel	93.6	91.2	n.a.	n.a.	n.a.	n.a.

Source: J.P. Morgan estimates. *Based on weighted average number of shares outstanding.

J.P. Morgan estimates vs. Bloomberg consensus

With the changes in our major assumptions, our 2012/2013 revised earnings estimates are 11%/19% above the Bloomberg consensus. We believe smartphones and tablets remain fast-growing segments. With the help of the *Window 8* launch around the corner, the large-size touch panel market should also start to see strong demand in 2013. Given the tight supply situation, we also see upside risk to the consensus margin forecast.

Table 11: J.P. Morgan estimates vs. Bloomberg consensus
NT\$ in billions, year-end December

	3Q12E		FY12E		FY13E	
	JPM	Cons.	JPM	Cons.	JPM	Cons.
Sales	37.6	40.7	164.5	161.9	170.1	162.1
OP	3.8	3.8	16.0	14.9	16.6	15.2
OPM	10.2%	9.3%	9.7%	9.2%	9.8%	9.4%
NI	2.9	2.9	12.1	11.2	12.9	11.1
NM	7.8%	7.1%	7.4%	6.9%	7.6%	6.8%
EPS (NT\$)	9.5	9.3	39.4	35.5	41.8	35.2

Source: Bloomberg last 28 days consensus, J.P. Morgan estimates.

A structural change in the profit mix

TPK is the primary touch panel vendor for **all major tech product launches in 2H12, including the Amazon Kindle Fire, Apple iPad mini, Google Nexus 7, and Windows 8**. We forecast the tablet and touchscreen PC together will represent 75% of TPK's gross profits by 4Q12. We recommend investors accumulate the shares to ride on this inevitable touch panel trend in all directions. 2H12 revenue and earnings momentum could likely surprise the street on the upside.

Table 12: Tablet landscape in 2H12 and touch panel suppliers

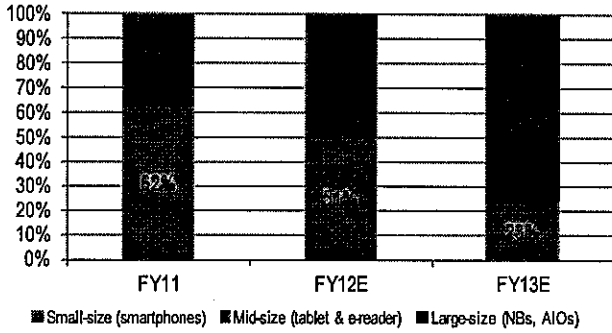
Brand	Expected pricing	Timing	Expected vol in 2H12	Touch panel module makers	JPM view
Amazon Kindle Fire	\$149-199	Jul-Aug	5-8M	TPK	Likely stay No 2 due to pricing
Google Nexus 7	\$199-249	Jul-Aug	2-3M	TPK, Wintek	Limited unless open up for retail with brand partners
Apple iPad mini	\$249+	Nov	10+M	TPK	Likely vol. leader in low-price category
Apple New iPad	\$499-829	Already selling	27+M	TPK, Wintek	Could see some cannibalization from iPad mini
Microsoft Surface	\$599	Oct (ARM); Jan 13 (x86)	3-4M	TPK	High price points
Other Win 8 tablets	\$499+	4Q12	4-5M	TPK, Wintek, Cando, Hannstouch, AUO, CMI	High price points
Whitebox tablets	\$70-100	Already selling	40M in 2012		Strong EM traction, threat from cheap smartphones

Source: J.P. Morgan

NBPC - We expect the majority of the touchscreen NBPC to be based on One Glass Solution ("OGS") projected capacitive type touch panels. Currently, we are forecasting 2.8/8.5 million units of large-size touch panels for 2012/2013 in our TPK earnings forecast, representing only 1.2%/3.6% of the total NBPC shipments of 218/239 million units for 2012/2013. Given that major PC vendors are targeting 10% of the NBPC models to feature touch function in 2013, we believe our forecast could see upside potential if the brands hit their target.

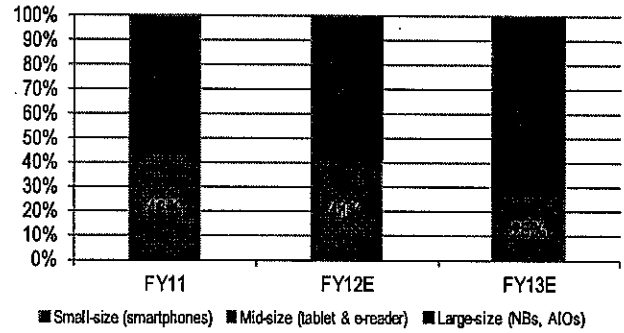
Tablet PC/E-readers - We forecast 60/82 million units of tablet PC/E-reader shipment in our TPK model. This is equivalent to approximately 56%/58% of the total tablet PC shipment of 107/140 million units for 2012/2013. We think iPad global shipment could lie within 60-65 million range. Of note, we believe there is a risk that iPad could move to in-cell in a longer term, but we do not foresee this to happen in the next 1-2 years. We believe TPK will likely deliver Q/Q earnings growth and margin increase for the rest of the 2012.

Figure 5: TPK revenue breakdown by form factor (yearly)
 %



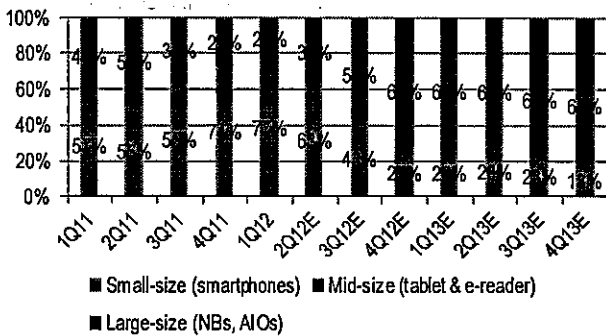
Source: Company data, J.P. Morgan estimates

Figure 6: TPK gross profit breakdown by form factor (yearly)
 %



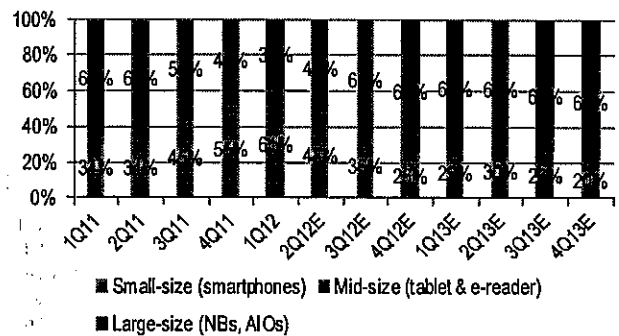
Source: Company data, J.P. Morgan estimates

Figure 7: TPK revenue breakdown by form factor (quarterly)
 %



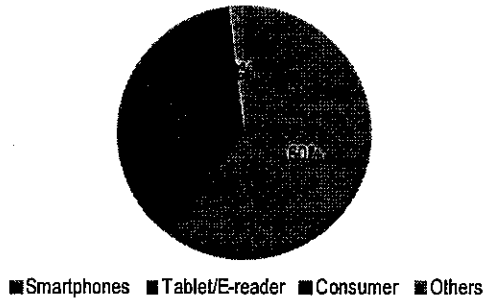
Source: Company data, J.P. Morgan estimates

Figure 8: TPK gross profit breakdown by form factor (quarterly)
 %



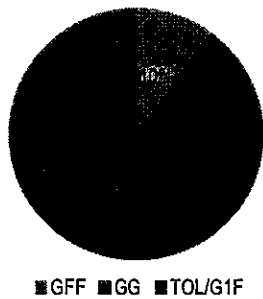
Source: Company data, J.P. Morgan estimates

Figure 9: TPK revenue breakdown by product (2011)
 %



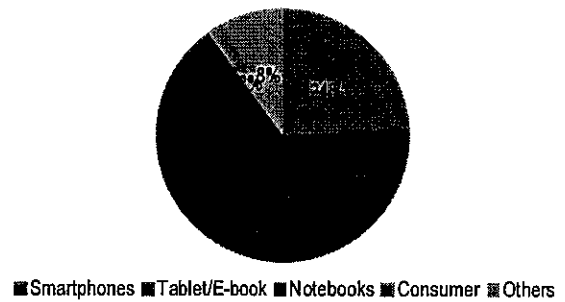
Source: Company data

Figure 11: TPK revenue breakdown by technology (2011)
 %



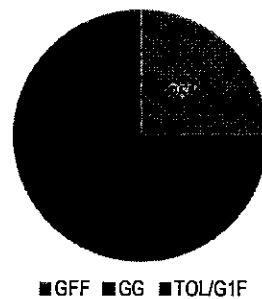
Source: Company data

Figure 10: TPK target revenue breakdown by product (2013)
 %



Source: Company data

Figure 12: TPK target revenue breakdown by technology (2013)
 %



Source: Company data

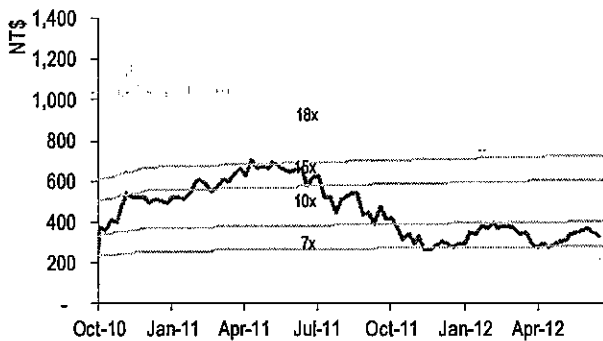
Valuation and share price expectation

Share price expectation

Attractive risk/reward at trough valuation

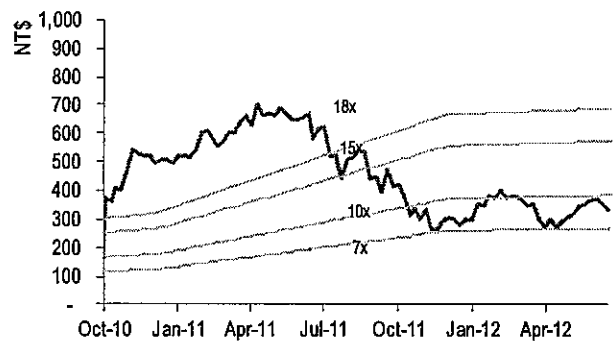
With the changes in our major assumptions, we slightly adjust our earnings estimates for 2012/2013 by 1%/1%. We raise our ex-dividend Dec-12 price target to NT\$400 as a result of our earnings estimate changes and maintaining our target P/E multiple to 10x 2012E P/E (the historical valuation median). Of note, the market had de-rated TPK in 2H11 due to potential threat from in-cell technology, and then re-rated TPK in 2012 due to the new product cycle driven by Win 8. The stock is currently trading at 9x/8x 2012/2013E P/E by our estimate. We believe there could be further upside to the consensus earnings, hence the share price could edge higher.

Figure 13: 12M forward P/E bands



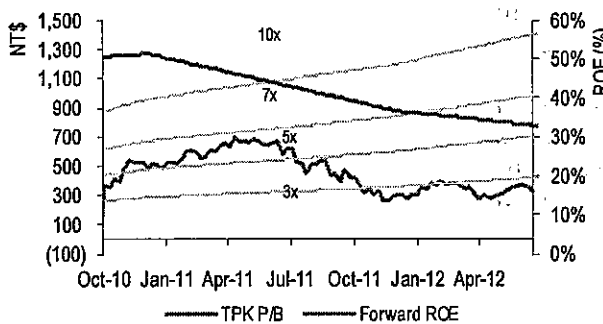
Source: Bloomberg, J.P. Morgan estimates.

Figure 14: 12M trailing P/E bands



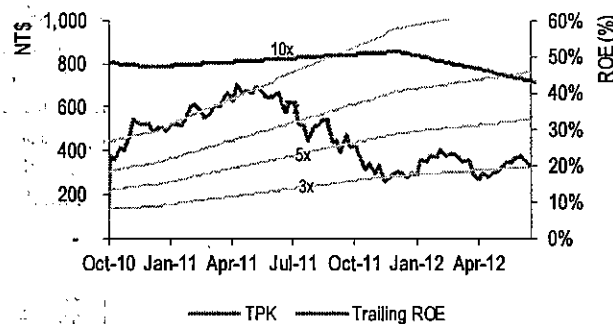
Source: Bloomberg, J.P. Morgan estimates.

Figure 15: 12M forward P/B bands



Source: Bloomberg, J.P. Morgan estimates.

Figure 16: 12M trailing P/B bands



Source: Bloomberg, J.P. Morgan estimates.

TPK Earnings Model

NT\$ MM, year-end Dec.	2011				2012E				2013E				2011	2012E	2013E
	1Q	2Q	3Q	4Q	1Q	2QE	3QE	4QE	1QE	2QE	3QE	4QE			
Revenue	25,324	32,525	40,045	45,478	40,476	35,496	37,627	50,875	33,960	34,759	43,542	57,867	143,372	164,474	170,128
<i>Small-size touch panel</i>	14,429	17,923	22,028	33,656	31,167	22,521	16,003	13,759	9,168	9,752	10,201	10,684	89,548	83,448	39,805
<i>Mid-size touch panel</i>	10,885	17,220	12,391	12,448	9,309	12,267	19,241	32,476	21,707	21,219	26,775	37,758	53,824	73,295	107,459
<i>Large-size touch panel</i>	0	0	0	0	0	708	2,383	4,640	3,085	3,788	6,566	9,425	-	7,731	22,864
Depreciation	467	556	853	1,001	1,161	1,388	1,561	1,686	1,811	1,936	2,061	2,186	2,877	5,796	7,994
COGS	20,545	26,336	33,124	39,175	34,764	30,070	31,607	42,900	28,635	29,318	36,953	48,990	119,179	139,341	143,897
Gross profit	4,779	6,190	6,921	6,303	5,712	5,426	6,020	7,975	5,324	5,440	6,589	8,877	24,193	25,134	26,231
Operating expense	1,571	1,463	2,294	2,540	2,128	1,924	2,175	2,892	1,905	1,955	2,486	3,272	7,869	9,119	9,619
Operating income	3,207	4,727	4,627	3,763	3,583	3,502	3,846	5,083	3,419	3,485	4,103	5,605	16,324	16,014	16,612
Net Interest Income	-26	-100	-111	-30	-54	-24	-68	-56	-13	-29	-24	21	-267	-203	-44
Net Other Income	-19	98	-73	-1,683	-151	-76	0	0	0	0	0	0	-1,676	-227	0
Pre-tax profit	3,162	4,725	4,444	2,050	3,378	3,402	3,777	5,027	3,407	3,456	4,079	5,626	14,381	15,585	16,568
Tax expense (credit)	693	1,030	857	574	781	773	858	1,142	774	785	927	1,278	3,153	3,555	3,765
Net profit reported	2,470	3,715	3,626	1,534	2,624	2,656	2,946	3,912	2,660	2,698	3,180	4,375	11,344	12,139	12,912
New TWN GAAP EPS (NT\$)	8.1	12.1	11.9	5.0	8.6	8.7	9.5	12.7	8.6	8.7	10.3	14.2	37.1	39.5	41.8
Key Drivers (Mn unit)															
Touch panel shipment	25.21	39.86	43.65	50.53	51.91	53.61	61.04	71.94	57.05	61.19	69.30	83.29	159.2	238.5	270.8
<i>Small-size touch panel</i>	17.5	27.0	33.5	40.9	44.4	43.4	44.6	45.9	40.6	45.0	49.1	53.5	118.9	178.3	188.3
<i>Mid-size touch panel</i>	7.7	12.8	10.2	9.6	7.5	10.2	16.4	26.0	16.4	16.2	20.2	29.8	40.3	60.2	82.6
<i>Large-size touch panel</i>	-	-	-	-	-	0.4	0.8	1.6	1.1	1.4	2.5	3.6	-	2.8	8.5
Touch panel blended ASP	34.3	28.3	31.5	29.8	26.4	22.3	20.6	23.4	19.8	18.8	20.6	22.6	30.6	23.1	20.6
<i>Small-size touch panel</i>	13.3	12.9	12.6	12.2	12.0	12.0	12.0	12.0	11.4	10.9	10.5	10.0	9.8	8.4	7.2
<i>Mid-size touch panel</i>	48.9	44.0	42.7	42.7	41.8	41.0	40.2	39.4	38.6	37.8	37.0	36.3	44.3	40.5	37.2
<i>Large-size touch panel</i>	-	-	-	-	-	60.0	100.9	98.3	95.0	91.7	90.8	90.0	-	93.6	91.2
Revenue breakdown															
<i>Small-size touch panel</i>	57%	55%	55%	74%	77%	63%	43%	27%	27%	28%	23%	18%	62%	51%	23%
<i>Mid-size touch panel</i>	43%	53%	31%	27%	23%	35%	51%	64%	64%	61%	61%	65%	38%	45%	63%
<i>Large-size touch panel</i>	0%	0%	0%	0%	0%	2%	6%	9%	9%	11%	15%	16%	0%	5%	13%
Margins (%)															
Gross Margin	18.9	19.0	17.3	13.9	14.1	15.3	16.0	15.7	15.7	15.7	15.1	15.3	16.9	15.3	15.4
Operating Margin	12.7	14.5	11.6	8.3	8.9	9.9	10.2	10.0	10.1	10.0	9.4	9.7	11.4	9.7	9.8
EBITDA Margin	14.5	16.2	13.7	10.5	11.7	13.8	14.4	13.3	15.4	15.6	14.2	13.5	13.4	13.3	14.5
Net Margin	9.8	11.4	9.1	3.4	6.5	7.5	7.8	7.7	7.8	7.8	7.3	7.6	7.9	7.4	7.6
Sequential Growth (%)															
Revenue	-5.5	28.4	23.1	13.6	-11.0	-12.3	6.0	35.2	-33.2	2.4	25.3	32.9	140.6	14.7	3.4
Gross Profit	8.6	29.5	11.8	-8.9	-9.4	-5.0	11.0	32.5	-33.2	2.2	21.1	34.7	141.5	3.9	4.4
EBIT	-0.3	47.4	-2.1	-18.7	-4.8	-2.3	9.8	32.2	-32.7	1.9	17.7	36.6	161.9	-1.9	3.7
Net Profit reported	14.1	50.4	-2.4	-57.7	71.1	1.2	10.9	32.8	-32.0	1.4	17.8	37.6	139.2	7.0	6.4

Source: Company, J.P. Morgan estimates.

TPK Holding Co., Ltd.: Summary of Financials

Profit and Loss Statement						Ratio Analysis					
NT\$ in millions, year end Dec	FY09	FY10	FY11	FY12E	FY13E	NT\$ in millions, year end Dec	FY09	FY10	FY11	FY12E	FY13E
Revenues	18,709	59,599	143,372	164,474	170,128	Gross margin	22.6%	16.8%	16.9%	15.3%	15.4%
Cost of goods sold	-14,473	-49,582	-119,179	-139,341	-143,897	EBITDA margin	17.7%	12.2%	13.4%	13.3%	14.5%
Gross Profit	4,236	10,017	24,193	25,134	26,231	Operating margin	14.0%	10.5%	11.4%	9.7%	9.8%
R&D expenses	-639	-1,574	-3,491	-4,016	-4,183	Net margin	12.4%	8.0%	7.9%	7.4%	7.6%
SG&A expenses	-985	-2,210	-4,378	-4,763	-4,975	R&D/sales	3.4%	2.6%	2.4%	2.4%	2.5%
Operating profit (EBIT)	2,612	6,232	16,324	16,014	16,612	SG&A/Sales	5.3%	3.7%	3.1%	2.9%	2.9%
EBITDA	3,312	7,292	19,201	21,810	24,606	Sales growth	44.6%	218.6%	140.6%	14.7%	3.4%
Interest income	3	16	161	480	708	Operating profit growth	430.7%	138.6%	161.9%	-1.9%	3.7%
Interest expense	-69	-87	-428	-683	-752	Net profit growth	496.4%	104.7%	139.2%	7.0%	6.4%
Investment income (Exp.)	-66	-71	-267	-203	-44	EPS (reported) growth	11.7%	46.9%	110.9%	6.4%	5.8%
Non-operating income (Exp.)	-48	-299	-1,943	-430	-44	Interest coverage (x)	50.33	102.17	71.88	107.50	558.72
Earnings before tax	2,564	5,933	14,381	15,585	16,568	Net debt to total capital	8.8%	11.5%	37.6%	15.6%	-0.0%
Tax	254	1,185	3,153	3,555	3,765	Net debt to equity	10.8%	11.5%	48.7%	24.2%	-0.1%
Net income (reported)	2,317.0	4,742.6	11,344.3	12,138.5	12,912.2	Asset turnover	1.91	2.25	2.13	1.69	1.55
Net income (adjusted)	2,310	4,749	11,227	12,030	12,912	Working capital turns (x)	-	-	-	-	-
EPS (reported)	11.97	17.59	37.09	39.48	41.77	ROE	54.1%	47.2%	51.4%	36.6%	30.1%
EPS (adjusted)	11.94	17.61	36.71	39.12	41.77	ROIC	34.7%	31.5%	28.7%	19.6%	17.8%
BVPS	20.62	48.37	96.00	119.79	158.08	ROIC (net of cash)	41.8%	41.5%	36.2%	25.1%	24.9%
DPS	0.00	0.00	0.00	15.09	3.48						
Shares outstanding	258	306	306	309	309						
Balance sheet						Cash flow statement					
NT\$ in millions, year end Dec	FY09	FY10	FY11	FY12E	FY13E	NT\$ in millions, year end Dec	FY09	FY10	FY11	FY12E	FY13E
Cash and cash equivalents	1,671	5,564	10,383	14,982	22,764	Net income	2,317.0	4,742.6	11,344.3	12,138.5	12,912.2
Accounts receivable	835	11,999	7,853	7,246	8,241	Depr. & amortization	700	1,059	2,877	5,796	7,994
Inventories	971	3,056	11,868	15,246	17,341	Change in working capital	-315	2,268	3,753	1,845	1,145
Others	776	1,668	12,308	9,737	11,075	Other	-256	3,793	-3,746	4,409	667
Current assets	4,253	22,287	42,412	47,210	59,421	Cash flow from operations	2,695	8,076	17,858	19,671	21,942
LT investments	0	0	4,120	3,825	3,825	Capex	-1,356	-13,073	-28,665	-10,395	-12,000
Net fixed assets	5,959	17,973	43,760	48,360	52,366	Disposal/(purchase)	0	0	0	0	0
Others	761	1,670	2,661	2,522	2,510	Cash flow from investing	-1,397	-13,981	-33,776	-9,961	-11,988
Total Assets	10,974	41,929	92,953	101,917	118,122	Free cash flow	1,339	-4,997	-10,807	9,276	9,942
Liabilities						Equity raised/(repaid)	0	6,160	0	0	0
ST Loans	1,650	3,657	5,470	6,447	6,112	Debt raised/(repaid)	43	5,074	17,395	-750	-1,204
Payables	2,204	13,927	26,092	26,298	29,867	Other	-232	-1,436	3,342	280	109
Others	1,173	5,858	12,752	14,589	16,594	Dividends paid	0	0	0	-4,641	-1,077
Total current liabilities	5,026	23,441	44,314	47,334	52,574	Cash flow from financing	-189	9,799	20,737	-5,110	-2,172
Long-term debt	595	3,605	19,212	17,498	16,625	Net change in cash	1,109	3,893	4,819	4,599	7,782
Other liabilities	33	91	65	53	56	Beginning cash	562	1,671	5,564	10,383	14,982
Total Liabilities	5,654	27,136	63,591	64,885	69,254	Ending cash	1,671	5,564	10,383	14,982	22,764
Shareholders' equity	5,320	14,793	29,363	37,032	48,867						

Source: Company reports and J.P. Morgan estimates.

Wintek Corporation

Trading at new trough valuation due to lack of upside catalysts

Wintek's 2Q12 iPhone orders dropped more significantly than our previous expectation. iPad orders also witnessed slight Q/Q decline. Net-net, we forecast that Wintek would turn into net loss again in 2Q12 and 3Q12. The share price has fallen significantly to 0.7x 2012E P/B, a new trough since Wintek has entered into touch panel business, but we do not see much upside catalysts in 2H12 and would stay away from the stock.

- **Lack of major order wins except for Google Nexus 7** – We believe Wintek has started supplying Google Nexus 7 touch panels from end-2Q12 and the shipment momentum could last till 4Q12. We estimate new iPad shipment for 3Q12, up by around 15%, possibly due to the demand from China. On the downside, the company's exposure to other tablet device (i.e. Apple iPad mini, Amazon Kindle Fire, and Microsoft Surface) could be limited, hence the earnings visibility could remain low until new earnings drivers kick in.
- **Monthly revenue could see a temporary spike** – We expect Wintek's monthly revenue to see a significant increase in July, as some rush orders for iPhone 4/4S came in. However, the momentum could fade away quickly given our assumption that iPhone 5 would use in-cell technology. Given that, we estimate the revenue could fall by 20% in 4Q12. Quarterly revenue growth momentum could pick up again in 2Q13 riding on touch penetration in NBs, by our estimate.
- **Lower estimates; PT:** With the changes of our earnings assumptions and the recent equity issuance, we lower our earnings estimate and our Dec-12 PT by 40% from NT\$23 to NT\$14 (equity dilution of book value was 12% and lower P/B multiple by 30% from 1x 2012E book to 0.7x). We expect the share price to stay rangebound in 2H12 given low earnings visibility. Key upside risks include (1) New order wins from non-Apple tablets; (2) Earlier than expected take-off of Win 8 touch NBs. Key downside risks include (1) iPad adopts in-cell technology; (2) cannibalization of New iPad sales by low-price tablets (3) faster-than-expected pricing erosion.

Neutral

2384.TW, 2384 TT

Price: NT\$13.80

▼ **Price Target: NT\$14.00**
Previous: NT\$23.00

Taiwan

Technology - Semiconductors

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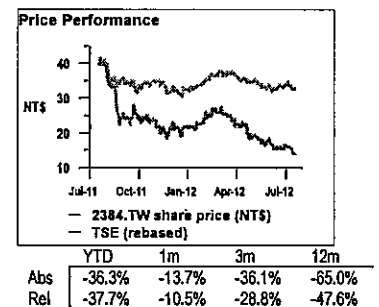
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Bloomberg 2384 TT, Reuters 2384.TW

(Year-end Dec, NT\$ bn)	FY10	FY11	FY12E	FY13E	FY10	FY11	FY12E	FY13E	Date of Price	18 Jul 12	
Sales	63.9	93.0	91.0	64.8	Sales growth	133.2%	45.6%	(2.2%)	(28.7%)	52-Week range	NT\$38.64 - 13.80
Operating Profit	2.8	-1.6	0.8	0.5	OP growth	-234.2%	-158.0%	-151.0%	-34.4%	Market Cap	NT\$25B
EBITDA	9.1	6.0	9.2	8.2	NP growth	-178.5%	-192.5%	-103.2%	-212.0%	Market Cap	US\$851MM
Net profit	2.1	-1.9	0.1	-0.1	Quarterly EPS (NT\$)	1Q	2Q	3Q	4Q	Share Out. (Com)	1,848MM
EPS	1.7	-1.2	0.0	-0.0	EPS (11)	0.2	-0.2	0.2	-1.3	Free float	70.0%
BPS (NT\$)	22.1	21.8	20.2	20.2	EPS (12) E	0.1	-0.0	-0.0	0.0	Avg daily val	NT\$0.5B
P/E (x)	8.1	NM	403.9	NM	EPS (13) E	-0.0	-0.0	-0.0	0.0	Avg daily val (US\$)	15.36MM
P/BV (x)	0.6	0.6	0.7	0.7	Difference (%)	-27.9				Avg daily vol.	27.1MM shares
ROE (%)	7.9	-5.9	0.2	-0.2	Price Target	14				Dividend yield (%)	0.0
Net Debt	18.3	24.9	21.8	25.1	Consensus PT	19				Exchange Rate	29.97

Source: Company data, Bloomberg, J.P. Morgan estimates.

See page 27 for analyst certification and important disclosures, including non-US analyst disclosures.

J.P. Morgan 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.

Company Description

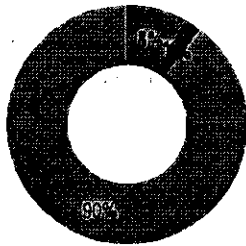
Wintek (TWSE: 2384) was founded in 1990 and is one of the leading manufacturers of handset display modules and touch panels in Taiwan. Its major products can be divided into: (1) touch panel; and (2) display, including small- and medium-sized TFT-LCD panels, MSTN and CSTN.

P&L sensitivity metrics	OP profit	EPS
2012 assumptions	Impact (%)	Impact (%)
Touch panel volume growth assumption:		10%
Impact of each 1%	14%	71%
Touch panel blended ASP growth assumption:		-9%
Impact of each 1%	78%	385%
		NT\$29.4 / US\$
FX assumption:		231%
Impact of each 1%	47%	

Source: J.P. Morgan estimates.

Key customers include Apple, Nokia, HTC, Google, Amazon

Revenue by application (as of 1Q12)



■ TFT ■ CSTN ■ MSTN ■ Touch Panel ■

Source: Company, J.P. Morgan estimates.

EPS: J.P. Morgan vs consensus

NT\$	J.P. Morgan	Consensus
FY12E	0.0	0.6
FY13E	0.0	1.0

Source: Bloomberg and J.P. Morgan estimates.

Price target and valuation analysis

With the changes of our assumptions, we lower the earnings estimate and our target price (based on 0.7x 2012E book value). We expect the share price to stay rangebound in 2H12 given low earnings visibility.

Key upside risks: (1) New order wins from non-Apple tablets; (2) better-than-expected margins due to yield-rate improvement (3) Earlier than expected take-off of Win 8 touch NBs.

Key downside risks: (1) iPad adopts in-cell technology; (2) cannibalization of New iPad sales by low-price tablets (3) faster-than-expected pricing erosion; and (4) low yield rate on new-product ramp-up.

Global touch panel peer valuation comparison

Local currency, US\$ in millions, x, %

Company	Ticker	Rating	Price (LC)	Market cap (US\$ M)	P/E(x)		P/B(x)		ROE (%)	
					FY12E	FY13E	FY12E	FY13E	FY12E	FY13E
TPK	3673 TT	OW	336.0	3,463.5	8.5	8.0	3.5	2.8	51.4	36.6
Wintek	2384 TT	N	13.8	850.3	403.9	n.m.	0.7	0.7	0.2	(0.2)
Youngfast	3622 TT	NR	63.3	316.9	49.8	3.1	n.m.	n.m.	0.2	1.5
Hannstouch	3049 TT	NR	11.0	324.2	40.7	n.m.	n.m.	n.m.	n.m.	n.m.
Jtouch	3584 TT	NR	29.6	106.1	27.6	7.6	n.m.	n.m.	16.3	17.0
Melfas	096640 KS	NR	22,400.0	329.8	16.9	8.7	2.4	2.0	15.0	19.3
Digitech	091690 KS	NR	11,500.0	134.9	7.9	7.1	1.2	1.1	15.4	16.3
ELK	094190 KS	NR	13,200.0	140.6	11.9	7.3	1.4	1.1	16.0	24.9
Iijin Display	020760 KS	NR	15,600.0	369.5	7.5	29.7	3.2	2.2	47.7	35.4
Nissha	7915 JP	NR	800.0	434.3	n.m.	n.m.	0.7	0.8	(41.6)	(9.3)
Median					16.9	7.6	1.4	1.1	15.4	17.0

Source: Company data, Bloomberg for NR companies, J.P. Morgan estimates. Prices and valuations are as of July 16, 2012.

Wintek Earnings Model

NT\$ in MM, year-end December	2011				2012E				2013E				2011	2012E	2013E
	1Q	2Q	3Q	4Q	1Q	2QE	3QE	4QE	1QE	2QE	3QE	4QE			
Revenue	21,232	21,275	24,722	25,803	28,799	21,291	22,892	17,993	12,465	14,002	17,566	20,804	93,032	90,975	64,836
<i>Touch panel</i>	17,176	17,595	21,097	22,225	25,621	18,012	19,448	14,771	9,295	10,855	14,275	17,716	78,093	77,852	52,141
<i>Display</i>	4,056	3,680	3,625	3,578	3,178	3,279	3,444	3,222	3,169	3,147	3,291	3,088	14,939	13,123	12,696
Depreciation	1,827	1,821	1,912	2,033	2,078	2,107	2,128	2,031	1,921	1,880	1,933	1,960	7,594	8,344	7,694
COGS	19,873	20,285	23,420	27,067	27,386	20,365	21,858	17,078	11,819	13,287	16,707	19,755	90,644	86,686	61,568
Gross profit	1,359	990	1,303	-1,264	1,414	927	1,034	914	646	715	860	1,048	2,388	4,289	3,268
Operating expense	880	935	1,154	1,019	959	791	965	758	525	590	740	877	3,988	3,472	2,732
Operating income	480	55	148	-2,283	455	136	70	156	120	125	119	172	-1,601	817	536
Net Interest Income	-111	-106	-135	-196	-203	-191	-178	-179	-174	-171	-176	-181	-549	-751	-701
Net Other Income	140	-103	235	115	32	23	25	20	14	15	19	23	387	100	71
Pre-tax profit	508	-154	248	-2,364	284	-32	-83	-3	-39	-31	-37	14	-1,762	166	-94
Tax expense (credit)	162	153	-32	-174	129	-9	-17	-4	-9	-7	-9	-2	109	99	-26
Net profit reported	346	-311	261	-2,203	148	-23	-66	1	-31	-24	-28	15	-1,905	60	-67
New TWN GAAP EPS (NT\$)	0.24	-0.21	0.16	-1.34	0.09	-0.01	-0.04	0.00	-0.02	-0.01	-0.02	0.01	(1.2)	0.0	(0.0)
Key Drivers (Mn unit)															
Touch panel shipment (MM units)	22.7	21.2	25.1	24.0	28.6	21.6	23.8	22.0	11.1	12.6	14.4	16.4	93.0	96.0	54.5
Touch panel blended ASP(US\$/unit)	25.8	28.6	28.8	30.6	30.4	27.0	25.5	20.0	25.0	24.6	25.6	26.8	28.5	25.9	25.7
Revenue breakdown															
Touch panel	81%	83%	85%	86%	89%	85%	85%	82%	75%	78%	81%	85%	84%	86%	80%
Display	19%	17%	15%	14%	11%	15%	15%	18%	25%	22%	19%	15%	16%	14%	20%
Margins (%)															
Gross Margin	6.4	4.7	5.3	-4.9	4.9	4.4	4.5	5.1	5.2	5.1	4.9	5.0	2.6	4.7	5.0
Operating Margin	2.3	0.3	0.6	-8.8	1.6	0.6	0.3	0.9	1.0	0.9	0.7	0.8	-1.7	0.9	0.8
EBITDA Margin	10.9	8.8	8.3	-1.0	8.8	10.5	9.6	12.2	16.4	14.3	11.7	10.2	6.4	10.1	12.7
Net Margin	1.6	-1.5	1.1	-8.5	0.5	-0.1	-0.3	0.0	-0.2	-0.2	-0.2	0.1	-2.0	0.1	-0.1
Sequential Growth (%)															
Revenue	-12.9	0.2	16.2	4.4	11.6	-26.1	7.5	-21.4	-30.7	12.3	25.5	18.4	45.6	-2.2	-28.7
Gross Profit	-57.0	-27.2	31.6	n.m.	n.m.	-34.5	11.6	-11.6	-29.4	10.7	20.3	21.9	-59.5	79.6	-23.8
EBIT	-77.4	-88.6	171.7	n.m.	n.m.	-70.2	-48.7	123.9	-22.9	3.6	-4.2	43.8	n.m.	n.m.	-34.4
Net Profit reported	-76.9	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.

Source: Company, J.P. Morgan estimates.

Wintek Corporation: Summary of Financials

Profit and Loss Statement					Ratio Analysis				
NT\$ in millions, year end Dec	FY10	FY11	FY12E	FY13E	NT\$ in millions, year end Dec	FY10	FY11	FY12E	FY13E
Revenues	63,886	93,032	90,975	64,836	Gross margin	9.2%	2.6%	4.7%	5.0%
Cost of goods sold	57,984	90,644	86,686	61,568	EBITDA margin	14.2%	6.4%	10.1%	12.7%
Gross Profit	5,903	2,388	4,289	3,268	Operating margin	4.3%	(1.7%)	0.9%	0.8%
R&D expenses	-908	-1,460	-1,101	-785	Net margin	3.2%	-2.0%	0.1%	-0.1%
SG&A expenses	-2,235	-2,529	-2,369	-1,945	R&D/sales	1.4%	1.6%	1.2%	1.2%
Operating profit (EBIT)	2,759	-1,601	817	536	SG&A/Sales	3.5%	2.7%	2.6%	3.0%
EBITDA	9,070	5,993	9,161	8,231	Sales growth	133.2%	45.6%	(2.2%)	(28.7%)
Interest income	61	111	58	56	Operating profit growth	-234.2%	-158.0%	-151.0%	-34.4%
Interest expense	-516	-659	-809	-757	Net profit growth	-178.5%	-192.5%	-103.2%	-212.0%
Investment income (Exp.)	-455	-549	-751	-701	EPS (reported) growth	(173.7%)	(172.3%)	(102.8%)	(206.8%)
Non-operating income (Exp.)	-156	-162	-650	-630	Interest coverage (x)	19.94	10.92	12.20	11.73
Earnings before tax	2,603	-1,762	166	-94	Net debt to total capital	36.0%	40.8%	31.9%	36.9%
Tax	533	109	99	-26	Net debt to equity	63.8%	69.3%	58.2%	67.2%
Net income (reported)	2,058.7	-1,904.9	60.2	-67.4	Asset turnover	1.03	1.17	1.08	0.80
Net income (adjusted)	2,047	-1,939	53	-67	Working capital turns (x)	-	-	-	-
EPS (reported)	1.70	(1.23)	0.03	(0.04)	ROE	7.9%	(5.9%)	0.2%	(0.2%)
EPS (adjusted)	1.69	-1.25	0.03	-0.04	ROIC	3.1%	-4.2%	-1.0%	-1.1%
BVPS	22.07	21.78	20.25	20.19	ROIC (net of cash)	3.5%	-4.7%	-1.1%	-1.2%
DPS	0.00	0.00	0.00	0.02					
Shares outstanding	1,297	1,648	1,848	1,848					
Balance sheet					Cash flow statement				
NT\$ in millions, year end Dec	FY10	FY11	FY12E	FY13E	NT\$ in millions, year end Dec	FY10	FY11	FY12E	FY13E
Cash and cash equivalents	6,224	8,095	8,418	5,804	Net income	2,058.7	-1,904.9	60.2	-67.4
Accounts receivable	10,984	15,509	10,215	11,811	Depr. & amortization	6,310	7,594	8,344	7,695
Inventories	10,336	11,647	7,937	9,176	Change in working capital	-814	-2,708	3,426	-891
Others	3,010	3,651	1,252	1,447	Other	1,221	138	-823	306
Current assets	30,554	38,901	27,822	28,239	Cash flow from operations	7,567	3,015	11,838	6,735
LT investments	471	252	251	251	Capex	-9,619	-18,652	-10,233	-10,000
Net fixed assets	36,683	47,741	49,630	51,937	Disposal/(purchase)	0	0	0	0
Others	1,791	2,117	2,082	2,082	Cash flow from investing	-10,270	-18,758	-10,198	-10,000
Total Assets	69,499	89,012	79,785	82,509	Free cash flow	-2,052	-15,637	1,604	-3,265
Liabilities					Equity raised/(repaid)	0	0	0	0
ST Loans	12,184	18,389	18,938	19,961	Debt raised/(repaid)	-541	8,471	-2,772	695
Payables	10,738	13,729	8,974	10,612	Other	3,315	9,143	1,455	-0
Others	5,656	6,434	3,212	3,714	Dividends paid	0	0	0	-44
Total current liabilities	28,577	38,552	31,124	34,287	Cash flow from financing	2,774	17,614	-1,317	651
Long-term debt	12,300	14,565	11,245	10,916	Net change in cash	71	1,870	323	-2,614
Other liabilities	0	1	0	0	Beginning cash	6,153	6,224	8,095	8,418
Total Liabilities	40,877	53,117	42,368	45,204	Ending cash	6,224	8,095	8,418	5,804
Shareholders' equity	28,622	35,894	37,417	37,305					

Source: Company reports and J.P. Morgan estimates.

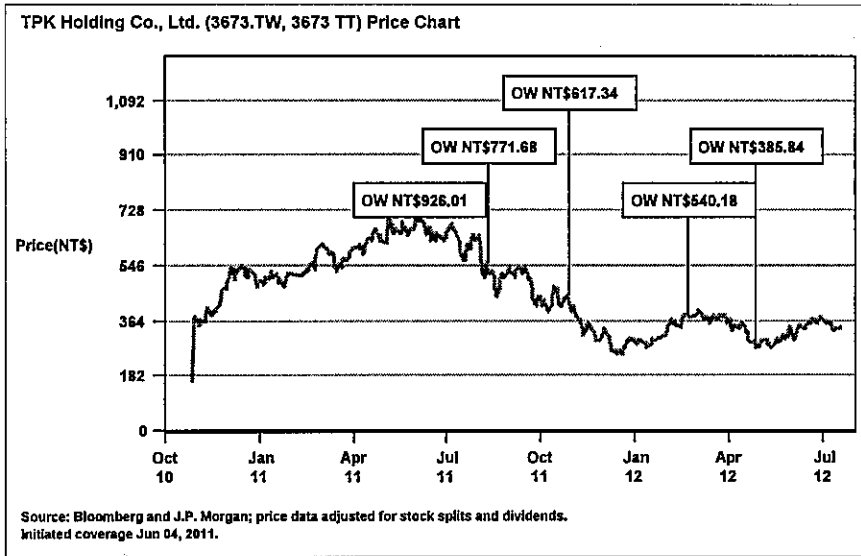
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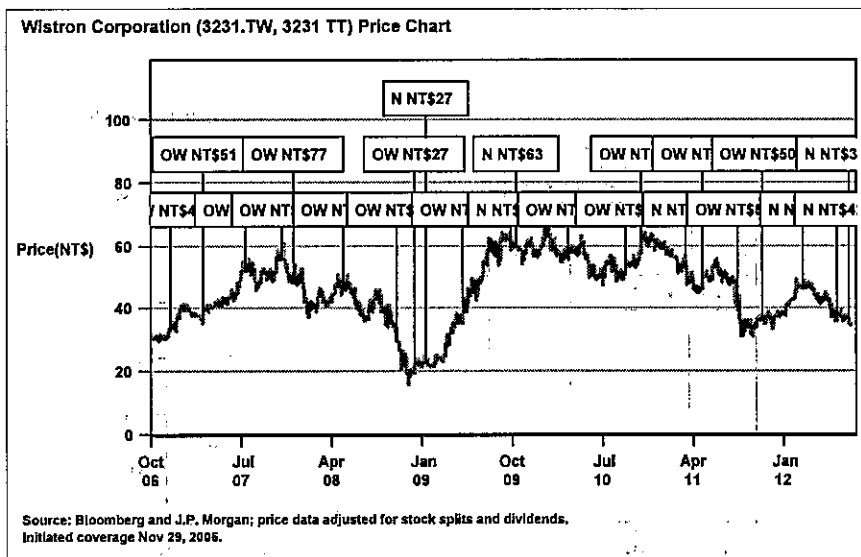
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Date	Rating	Share Price (NT\$)	Price Target (NT\$)
04-Jun-11	OW	687.90	926.01
11-Aug-11	OW	554.84	771.68
28-Oct-11	OW	448.35	617.34
22-Feb-12	OW	378.89	540.18
26-Apr-12	OW	297.10	385.84



Date	Rating	Share Price (NT\$)	Price Target (NT\$)
29-Nov-06	OW	33.24	46.00
09-Mar-07	OW	36.93	51.00
12-Jul-07	OW	52.73	68.00
28-Oct-07	OW	55.72	74.00
07-Dec-07	OW	50.86	77.00
06-May-08	OW	46.43	79.00
13-Oct-08	OW	32.87	68.00
08-Dec-08	OW	20.58	27.00
11-Jan-09	N	23.54	27.00
03-May-09	OW	40.79	56.00
25-Sep-09	N	59.90	64.00
12-Oct-09	N	60.00	63.00
17-Mar-10	OW	58.90	67.00
09-Sep-10	OW	51.50	72.00
25-Oct-10	OW	61.00	75.00
08-Mar-11	N	56.20	60.00
27-Apr-11	OW	46.40	65.00
09-Aug-11	OW	42.10	59.00
25-Oct-11	OW	36.40	50.00
23-Feb-12	N	47.85	45.00
07-Jun-12	N	36.30	42.00
16-Jul-12	N	36.15	35.00

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	Overweight (buy)	Neutral (hold)	Underweight (sell)
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IB clients*	51%	47%	34%
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IB clients*	70%	62%	51%

*Percentage of investment banking clients in each rating category.

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