

## Chip stocks look exposed to a correction

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- Economic trends do not look good
- Cheapness is not a reason to invest in the sector
- Play the sector before the stocks
- Lock-in profits



### Economic and consumer data do not bode well

Chip stock performance has always been geared to economic cycles. Over the past few years the 'consumerisation of technology' has meant that the correlation with consumer confidence has also grown closer. Recent economic and consumer confidence data therefore do not bode well for the sector's performance.

### Changes in momentum are rarely priced in

The global chip industry is now trading at 11x adjusted earnings versus a five year average of c18x, but low P/E multiples are not a particularly good guide upon which to invest in the chip sector. Considering the recent down cycle and recovery, P/E ratios were low in Q208 (15x), prior to the sector's underperforming slump as the economic crisis hit. Equally, they rose to 20x prior to the recent rally.

### Can the UK's outperformance continue?

The UK chip sector has outperformed significantly, boosted by exposure to attractive product cycles – smart phones in particular and many by exposure to Apple. However, at times of economic swings, history tells us that decisions on the sector come before specific stock selection. All bar CSR are trading at within 15% of their 24-month highs and at a premium to the global sector as a whole. Sell-offs tend to be indiscriminate; the sector has performed very well. Now seems a good time to lock in profits.

### Analysts

Dan Ridsdale	020 3077 5729
Katherine Thompson	020 3077 5730
Richard Jeans	020 3077 5700

[tech@edisoninvestmentresearch.co.uk](mailto:tech@edisoninvestmentresearch.co.uk)

### For institutional enquiries please contact:

Alex Gunz	020 3077 5746
Gareth Jones	020 3077 5704

[institutional@edisoninvestmentresearch.co.uk](mailto:institutional@edisoninvestmentresearch.co.uk)

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## Chip stocks look exposed to a correction

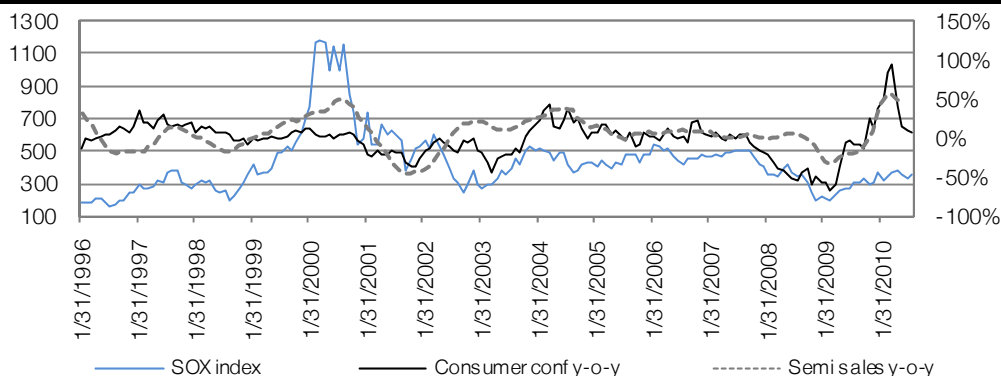
### The 'consumerisation of technology'

'Consumerisation' of technology has been one of the key trends influencing the sector over the past 10 years. Just as the PC spurred Microsoft to overtake IBM as the globe's largest technology company, now Apple has taken over the mantle on the back of the iPod, iPhone, and iPad. According to the the SIA, over half of all semiconductors by value end up in products bought by consumers.

### Consumer confidence has become key to the semi cycle...

Consequently the correlation between consumer sentiment and the semiconductor industry is increasing. The chart below is US-centric, but reflective of broader trends and in our view illustrates how the correlation between consumer sentiment, the electronics hardware industry and ultimately share prices has increased materially post Y2K. On this basis, the recent downturn in consumer confidence does not bode well for semiconductor stocks going forward.

**Exhibit 1: Consumer confidence vs semiconductor sales cycle and SOX index**



Source: Bloomberg

### ... P/Es are not

Looking at valuations, it is tempting to say that (in many cases) a slowdown is priced in. The global chip industry is now trading at 11x adjusted net income, 15% below previous troughs. However, low P/E multiples are not a particularly good guide upon which to invest in the chip sector. Considering the recent down cycle and recovery, P/Es were low in Q208 (15x vs 18x five year average), prior to the sector's underperforming slump as the economic crisis hit. Equally they rose to 20x prior to the recent rally.

### Consumer headwinds likely to strengthen

Sales of consumer electronics devices were surprisingly resilient through the crux of downturn. However, as the move from stimulus to austerity progresses, we feel that things are likely to get more difficult from here. Pay cuts, rising unemployment and rising taxes likely to feature in many 'developed' markets. Most economic forecasts point to a deceleration in growth in 2011 and are currently on a downward trend. Recent consumer confidence surveys for the US, UK and Japan were all negative. China nudged into positive territory, but the recent deceleration in Chinese import growth does suggest that moves to slow the economy are starting to have an impact.

## Restocking is ongoing, but its effects will wane soon

Moreover, there is a clear risk that the inventory replenishment cycle will lead to investors over-trending strong performance in H1. Stocks became so depleted through logistics channels at the end of 2008 and into last year that the inevitable rebuild of stocks has added to the perceived level of demand. Since bottoming at an all-time low in Q3 last year, supply chain inventory levels (including IC firms, distributors EMS vendors and handset, PC and communications equipment OEMs) grew sequentially by 4% in Q4, 4% in Q1 then by 10% in Q2.<sup>1</sup>

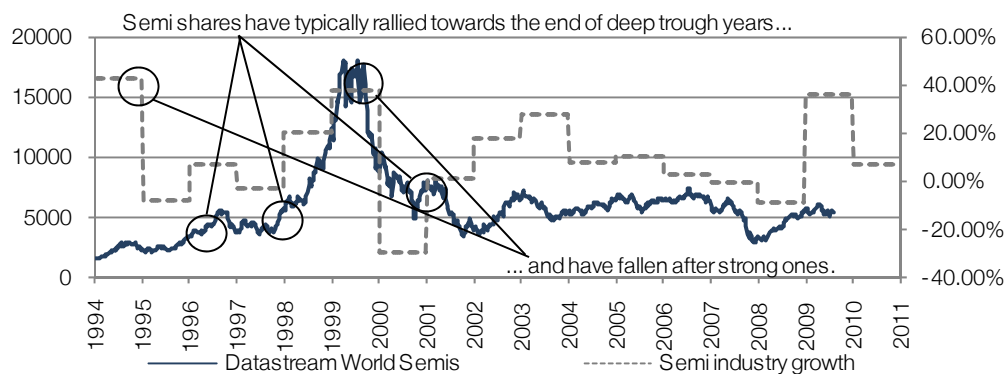
## Semiconductor sales are outgrowing their end markets

As a sanity check, iSuppli recently revised its forecast for the chip market upwards and now expects sales for the industry to be up 35% this year to \$310.3bn. Meanwhile factory OEM revenue for electronic equipment is projected to grow by \$131bn to reach \$1.54tn in 2010, up 9.3% from 2009. Clearly capacity related price hikes paid a major role in this comparative outperformance, but this catch up period cannot last forever. It could quickly reverse if fundamental demand turns out to be weaker than anticipated.

## And shares have tended to underperform at the back end of replenishment years

We would also highlight that semiconductor shares have historically outperformed toward the end of 'deep trough' years, and have often underperformed towards the end of peak years.

### Exhibit 2: Semi share performance vs industry growth



Source: Thomson Datastream

## A capacity squeeze could exacerbate the issue

At the same time, some component manufacturers cannot keep up with demand. CSR and Ericsson have downgraded due to capacity constraints while many others, eg Pace and HTC, have been affected. There is an argument that this is a 'nicer problem to have', but CSR has seen its share price fall 22% since lowering guidance, which was attributed primarily for this reason.

It is tempting to say that the favourable pricing environment created by capacity shortages should be a good thing for the industry, but we highlight that the benefit is felt primarily by commodity chip suppliers (memory, discrete etc). Such players are thin on the ground in Europe and price rises will be inflationary to electronics prices. This seems incongruous with a potentially weakening demand environment in our view.

<sup>1</sup> According to research by FBR Capital Markets.

Finally, our experience says that most production managers are much more fearful of being caught short of stock (as they are the only point of blame) than having too much (where blame can be spread onto the market, poor products etc). In a tight capacity environment, the temptation to over order to secure volumes could create a jarring halt once volume requirements have been met.

## The UK has shaken off its discount

Exhibit 4, overleaf shows the share price performance and ratings of a group of technology related stocks. It is notable that the large-cap *corporate* exposed stocks have mostly outperformed this year. The European large-cap consumer stocks (including stellar performer **Logitech**) have all underperformed their respective markets this year and the bellwether chip stocks are also, mostly down gear on year.

However, the UK chip stocks have significantly outperformed nearly every other peer group since the start of the year. On a P/E basis at least, UK semi-stocks are now trading at a premium to the global chip sector.

### Exhibit 3: UK chip stocks substantially outperform global sector



Source: Thompson Datastream

## Play the sector before the company

One can identify well founded reasons for this outperformance. ARM and Imagination are not really chip stocks for a start, and the IP licensing business model, for those that can make it work, looks much more robust both cyclically and competitively. One can also argue that the UK's chip basket carries positive exposure to the key hot smartphone and tablet computer product cycles. Apple's halo (ARM, IMG, IQE) also shines brightly.

## Lock-in profits

However, at times of economic swings, history tells us that decisions on the sector come before specific stock selection. Sell-offs tend to be indiscriminate; the sector has performed very well with all bar CSR trading within 15% of their 24 month highs. Now seems a good time to lock in profits.

## Exhibit 4: Returns and valuation by technology segment

	FY0	YTD	FY1 P/E	FY2 P/E	EV/FY2 sales	FY1 EPS	FY2 EPS	est 2011 EPS growth	Cash Margin	Currency
<b>Indices</b>										
Stoxx 600	28%	0%								
FTSE	22%	-3%								
SOX	70%	-9%								
<b>Euro Retailers</b>										
Dixons	183%	-32%	10.3x	7.5x	0.1x	0.02	0.03	38%	1.5%	£
Kesa	69%	-14%	10.8x	8.9x	0.1x	0.12	0.15	22%	3.5%	£
<b>Large Cap Consumer Elix</b>										
Nokia	-20%	-22%	13.3x	10.5x	0.5x	0.52	0.66	27%	7.9%	€
TomTom	45%	-30%	6.8x	6.3x	0.9x	0.65	0.70	8%	23.0%	€
Electrolux	151%	-8%	9.6x	9.0x	0.4x	15.99	17.12	7%	7.6%	SEK
Logitech	10%	-11%	17.3x	13.1x	1.0x	0.88	1.16	32%	19.1%	US\$
Apple	147%	19%	17.4x	14.3x	2.6x	14.49	17.65	22%	23.7%	US\$
DELL	40%	-17%	9.5x	8.2x	0.3x	1.27	1.46	15%	7.4%	US\$
<b>Large Cap Corporate</b>										
SAP	31%	5%	16.3x	14.2x	3.1x	2.11	2.44	15%	28.3%	€
Siemens	22%	17%	12.6x	11.4x	1.0x	5.96	6.57	10%	7.6%	€
Ericsson	12%	16%	15.1x	12.2x	1.0x	5.08	6.28	24%	11.9%	SEK
Sage	29%	8%	12.9x	12.1x	2.3x	0.18	0.20	6%	20.1%	£
CAP	16%	9%	18.4x	13.8x	0.5x	1.90	2.54	33%	5.9%	€
IBM	56%	-2%	11.4x	10.3x	1.7x	11.29	12.41	10%	21.7%	US\$
Cisco	47%	-11%	12.3x	10.8x	1.9x	1.74	1.98	14%	25.4%	US\$
<b>Large Cap Semis</b>										
Infineon	352%	19%	13.3x	10.0x	0.8x	0.35	0.46	33%	-3.7%	€
STM	34%	-9%	11.2x	9.2x	0.6x	0.67	0.81	21%	14.3%	€
TI	68%	-6%	9.8x	9.4x	1.9x	2.48	2.61	5%	25.3%	US\$
Intel	39%	-5%	9.6x	9.2x	1.9x	2.03	2.11	4%	31.8%	US\$
Qualcomm	29%	-17%	16.2x	15.0x	4.4x	2.35	2.56	9%	68.9%	US\$
MediaTek	154%	-17%	13.5x	12.5x	3.3x	34.19	36.67	7%	48.7%	TWD
<b>UK Semis</b>										
Imagination	286%	40%	44.4x	15.4x	6.5x	0.08	0.22	188%	10.7%	£
Wolfson	65%	53%	175.1x	13.7x	1.3x	0.02	0.23	1178%	11.5%	£
CSR	141%	-23%	12.2x	9.4x	.5x	0.40	0.52	29%	8.7%	£
ARM	105%	73%	34.9x	30.4x	8.8x	0.09	0.10	15%	32.1%	£
IQE	240%	43%	24.3x	18.7x	1.7x	0.01	0.01	30%	12.6%	£

Source: Company reports, IBES Consensus estimates

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