

# **EXHIBIT 45**



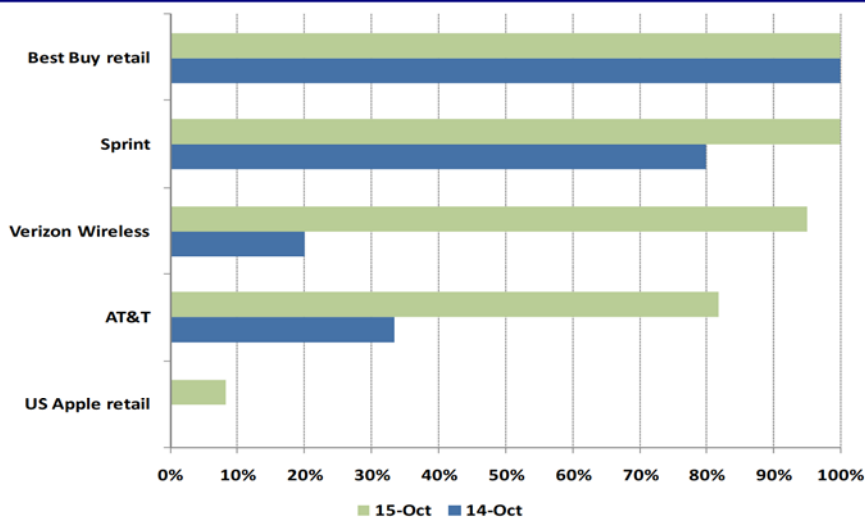
17 October 2011

# Enterprise Edge

## EE#261: iPhone 4S is a barnburner

### iPhone demand outstrips supply

We conducted a series of checks over the weekend to gauge initial iPhone 4S demand at approximately 150 stores: 55 Apple retail stores and ~90 authorized carriers in the US and UK. iPhone demand remained very robust through the weekend and calls to outlets across the US and UK showed long lines, strong demand and frequent stock-outs. By Friday evening, only Apple retail stores had supply available (ATT, Verizon, Sprint were stocked out). By Saturday, even Apple retail stores had difficulty keeping up with demand with ~10% stocked out and even though carriers were restocked they were sold out once more by the end of the day. Not surprisingly, Apple retail stores were better equipped to handle the robust demand (vs. other carriers / partners) with significantly more supply. As highlighted below, demand outstripped supply at most authorized carrier outlets, and Sprint stores reported 80% stock outs towards mid day Friday, while AT&T and Verizon showed better supply conditions with stock out rates of ~30% and 20%, respectively. In addition, our checks pointed to a slight preference for the 16GB white iPhone 4S which tended to sellout faster than the black model at some stores. In addition, current on-line purchases face elongated wait times on Apple.com (1-2 weeks) and carrier websites (3-4 weeks). We believe initial weekend volumes are tracking well ahead of the 1.7M iPhone 4 units on its launch weekend; perhaps as many as 3M+ units. While the strong start is encouraging, we believe the long-term opportunity for growth of the iPhone is even more significant and we believe our model may prove conservative- DB at 26M in December Q, 82M iPhones in CY11 and 110M in CY12. We continue to believe Apple's IOS platform remains the gold standard attracting new developers and users alike, which is translating into sustainable differentiation, stickiness and profitability. Reiterate Buy and \$530 PT.

**Figure 1: Retail store stock out rates**

Source: Deutsche Bank and company data

### Company Update

#### Stock Prices

	Close	W/W	Y/Y	YTD
AAPL	422.00	14.1%	34.1%	30.8%
DELL	16.62	8.8%	14.7%	22.7%
EK	1.25	-10.1%	-69.3%	-76.7%
EMC	23.09	3.1%	9.5%	0.8%
HPQ	26.11	4.9%	-39.0%	-38.0%
IBM	190.53	4.5%	35.1%	29.8%
LXK	29.98	3.7%	-34.3%	-13.9%
NTAP	39.23	5.2%	-22.1%	-28.6%
PBI	20.26	3.5%	-7.3%	-16.2%
SMT	3.80	-3.8%	-71.8%	-57.9%
XRX	7.73	7.8%	-30.1%	-32.9%
<b>S&amp;P 500</b>	<b>1225</b>	<b>6.0%</b>	<b>4.1%</b>	<b>-2.6%</b>
<b>NASDAQ</b>	<b>2668</b>	<b>7.6%</b>	<b>8.1%</b>	<b>0.6%</b>

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Figure 2: Industry Comp sheet

Valuation Matrix														
Company Name	Price	Mkt Cap	Rating	P/E		EV/EBITDA*		EV/Sales*		EV/FCF*				
				CY10A	CY11E	CY10A	CY11E	CY10A	CY11E	CY10A	CY11E	CY10A	CY11E	
Apple Inc	422.00	\$391,232	Buy	23.6	13.3	11.1	14.7	7.4	5.3	4.4	2.5	1.7	9.0	6.6
Dell	16.62	\$30,322	Buy	10.5	8.3	7.9	4.6	3.5	2.6	0.4	0.3	0.3	4.9	3.4
Eastman Kodak	1.25	\$336	Sell	NMF	NMF	NMF	NMF	NMF	5.3	0.0	0.1	0.1	NMF	NMF
EMC Corporation	23.09	\$47,680	Buy	18.2	15.4	13.2	11.0	8.7	6.9	2.5	2.2	1.8	11.4	9.2
Hewlett-Packard	26.11	\$51,880	Sell	5.4	5.8	6.1	3.5	4.2	3.9	0.5	0.6	0.5	9.8	7.6
IBM	190.53	\$227,546	Buy	16.3	14.3	12.9	12.0	10.0	8.8	2.8	2.4	2.2	16.3	12.7
Lexmark International	29.98	\$2,376	Hold	6.1	6.5	7.1	2.5	2.1	1.7	0.4	0.3	0.3	5.7	3.4
NetApp, Inc.	39.23	\$14,453	Buy	18.6	16.6	14.7	13.4	9.5	7.9	2.6	1.7	1.4	9.6	7.7
Pitney Bowes	20.26	\$4,095	Hold	9.1	9.2	9.7	7.0	6.9	6.6	1.5	1.4	1.4	12.1	10.0
SMART Technologies	3.80	\$168	Buy	5.7	6.4	4.7	2.6	3.3	2.8	0.6	0.6	0.6	5.5	3.2
Xerox	7.73	\$10,849	Hold	8.2	7.1	6.4	5.7	5.4	4.9	0.8	0.8	0.8	12.5	8.4
<b>Average IT HW</b>				<b>12.2</b>	<b>10.3</b>	<b>9.4</b>	<b>7.7</b>	<b>6.1</b>	<b>5.2</b>	<b>1.5</b>	<b>1.2</b>	<b>1.0</b>	<b>9.7</b>	<b>7.2</b>

\*EV and P/FCF calculations use current market value and share count.

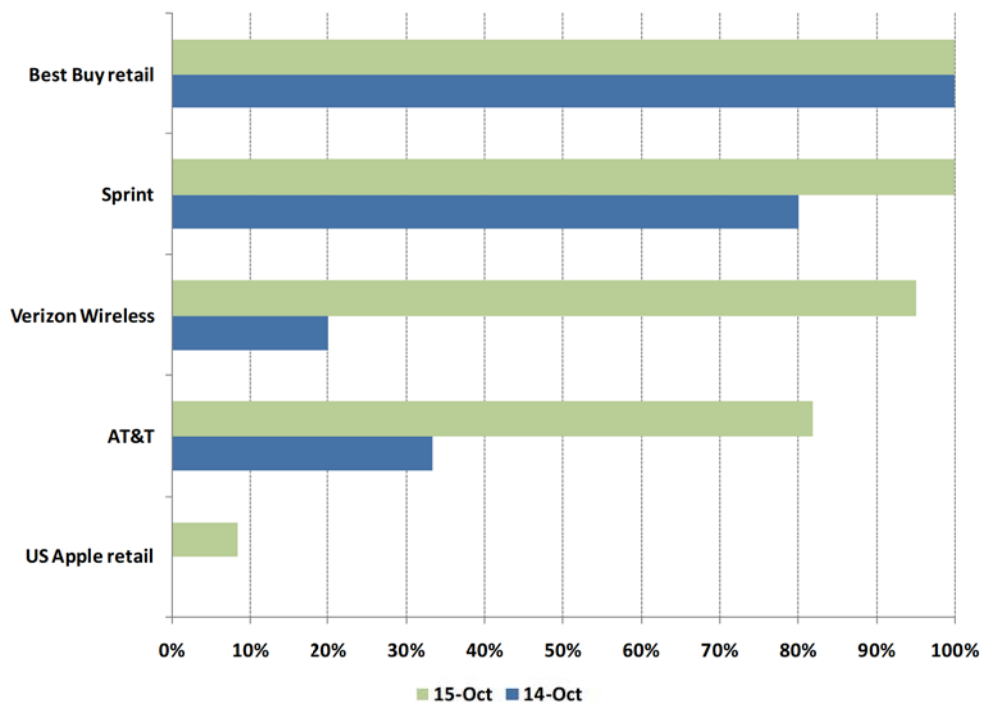
Operating Metrics													
Company (Fiscal Yr)	Gross Margin		Operating Margin		ROA		ROE		Rev/PPE		Net Debt/Market Cap		
	CY10A	CY11E	CY10A	CY11E	CY10A	CY11E	CY10A	CY11E	CY10A	CY11E	CY10A	CY11E	
Apple (Sept)	38.8%	40.6%	39.8%	31.5%	24.8%	31.1%	30.4%	34.5%	28.0%	30.4%	29.0%	16.4	-24%
Dell (Jan)**	19.1%	22.7%	22.7%	8.0%	10.7%	11.7%	40.0%	38.7%	11.2%	40.0%	30.4%	45.8	-33%
Eastman Kodak (Dec)	27.3%	19.0%	22.6%	-5.2%	5.4%	-6.1%	NMF	NMF	-2.2%	NMF	NMF	9.8	4%
EMC (Dec)	59.0%	60.8%	61.5%	18.3%	9.0%	10.7%	11.8%	13.3%	11.4%	11.8%	14.1%	8.2	-16%
HPQ (Oct)	24.2%	23.5%	23.0%	10.0%	12.4%	10.1%	27.2%	22.6%	9.0%	27.2%	17.9%	10.7	39%
IBM (Dec)	46.1%	46.9%	47.0%	19.2%	16.1%	17.8%	64.8%	65.0%	17.8%	64.8%	55.8%	8.4	14%
Lexmark (Dec)	37.1%	38.5%	37.4%	12.4%	14.0%	12.4%	28.3%	20.6%	10.5%	28.3%	16.0%	4.8	-40%
NetApp (Dec)	64.7%	62.8%	62.5%	13.7%	10.1%	9.1%	18.7%	14.8%	9.2%	18.7%	14.5%	5.8	-34%
Pitney Bowes (Dec)	50.6%	50.3%	50.2%	15.1%	9.8%	9.7%	NMF	NMF	9.4%	NMF	NMF	14.8	87%
SMART Technologies*	50.5%	48.7%	48.6%	14.4%	27.1%	19.2%	NMF	NMF	20.5%	NMF	NMF	6.9	0%
Xerox (Dec)	34.4%	33.5%	33.5%	10.3%	6.8%	7.7%	10.3%	11.7%	7.9%	10.3%	12.1%	12.2	72%
<b>Average IT HW</b>	<b>41.1%</b>	<b>40.7%</b>	<b>40.8%</b>	<b>13.4%</b>	<b>13.3%</b>	<b>12.1%</b>	<b>29.0%</b>	<b>27.6%</b>	<b>12.1%</b>	<b>29.0%</b>	<b>23.7%</b>	<b>13.1</b>	<b>6%</b>

Priced as of 10/14/11.  
Source: Deutsche Bank estimates and company data.

## iPhone 4S is a barnburner

We conducted a series of checks over the weekend to gauge initial iPhone 4S demand at approximately 150 stores: 55 Apple retail stores and ~90 authorized carriers in the US and UK. iPhone demand remained very robust through the weekend and calls to outlets across the US and UK showed long lines, strong demand and frequent stock-outs. By Friday evening, only Apple retail stores had supply available (ATT, Verizon, Sprint were stocked out). By Saturday, even Apple retail stores had difficulty keeping up with demand with ~10% stocked out and even though carriers were restocked they were sold out once more by the end of the day. Not surprisingly, Apple retail stores were better equipped to handle the robust demand (vs. other carriers / partners) with significantly more supply. As highlighted below, demand outstripped supply at most authorized carrier outlets, and Sprint stores reported 80% stock outs towards mid day Friday, while AT&T and Verizon showed better supply conditions with stock out rates of ~30% and 20%, respectively. In addition, our checks pointed to a slight preference for the 16GB white iPhone 4S which tended to sellout faster than the black model at some stores. In addition, current on-line purchases face elongated wait times on Apple.com (1-2 weeks) and carrier websites (3-4 weeks). We believe initial weekend volumes are tracking well ahead of the 1.7M iPhone 4 units on its launch weekend; perhaps as many as 3M+ units. While the strong start is encouraging, we believe the long-term opportunity for growth of the iPhone is even more significant and we believe our model may prove conservative- DB at 26M in December Q, 82M iPhones in CY11 and 110M in CY12. We continue to believe Apple's IOS platform remains the gold standard attracting new developers and users alike, which is translating into sustainable differentiation, stickiness and profitability. Reiterate Buy and \$530 PT.

**Figure 3: Retail store stock out rates**



Source: Deutsche Bank and company data

### Initial iPhone 4S demand appears very strong

We conducted a series of checks over Friday and Saturday to gauge the initial demand for the iPhone 4S. Channel checks were carried out at 55 Apple retail stores (50+ in the US and 5 in UK) and at ~90 authorized carriers worldwide (25 AT&T, 18 Sprint, 10 Verizon, 10 Best Buy stores and 10 Target stores in the US, 10 Car-Phone warehouse stores, 5 O2 stores and 5 Orange stores in the UK). The iPhone release generated significant demand and foot traffic



in Apple retail stores and authorized carriers in the US, UK, Australia, France, Germany and Japan. In addition, many Apple stores we contacted did not answer the phone and we frequently received the operator message 'The store is experiencing high call volume' suggesting heavy foot traffic at most stores. Further, our checks at Apple stores pointed to long lines, and Apple's White Plains, NY retail store reported a line of ~2 hours around mid day on Saturday which suggests strong demand continued in to day 2 of the launch. Comments such as 'The 4S has been selling super fast! The store is quite busy, my best estimate is that you're looking at an hour's wait' and 'The Store is nuts today, crazier than previous launches even, the new phone is definitely a hit' were cited frequently.

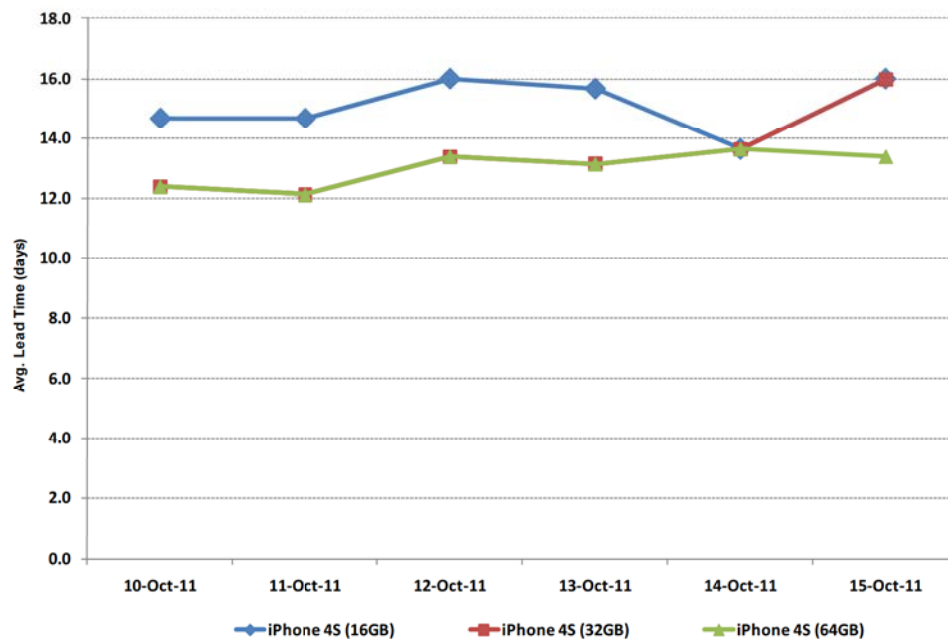
**US Apple retail** – Apple stores seemed to have significantly better supply than carrier outlets, with all of the stores we contacted on Friday reporting zero stock outs of the iPhone 4S. However, by mid day Saturday, iPhones on the Sprint network were nearing stock outs, particularly for the 16GB version. In addition, comments such as "We're pretty well stocked, we've been busy and we've been selling quite a few phones but we have plenty of numbers in store" and "We have all models in store" suggested adequate inventory levels at Apple's retail stores.

**AT&T, Verizon and Sprint stores** – Sprint stores reported 80% stock outs towards mid day Friday, while AT&T and Verizon showed better supply conditions with stock out rates of ~30% and 20%, respectively. However, by mid day Saturday nearly all carrier outlets we contacted were completely stocked out and we were frequently encouraged to pay a nominal upfront fee to pre-order the iPhone.

**Best Buy stores in the US** – All Best Buy stores we contacted had depleted their iPhone 4S inventory by Friday morning/ mid-day and comments such as "We were sold out within a couple of hours, all were pre-ordered" and "The next few shipments are only for pre-orders" cited frequently. Many representatives were unable to confirm the next shipment details and encouraged customers to pre-order the iPhone 4S for immediate pick-up when new stocks become available and frequently commented 'We are not sure about new shipment dates'. Initial checks suggest the 16GB white iPhone 4S was the most popular/ preferred product as many Apple retail stores in the U.S. stocked out of that model first.

**UK Apple retail** - Our checks suggest UK Apple stores also experienced significant demand for the new iPhone. Many Apple stores did not answer the phone suggesting heavy foot traffic and the ones that did, reported 100% stock outs by Friday afternoon. Further, our checks revealed O2, Orange and Carphone Warehouse experienced stock outs by Friday mid-day as well, and one of the representatives commented "We are completely sold out, we are expecting the next shipment in a few days".

**Online:** Apple online stores in the US, UK, Australia and France reported a 1-2-week lead-time for the iPhone 4S, while AT&T and Verizon reported wait times of 3-4 weeks and ~2 weeks, respectively. Sprint's online store was sold out of the 16GB and 32GB models on Saturday, and reported a lead time of 3-8 days for the 64GB model.

**Figure 4: Average iPhone 4S online lead times**

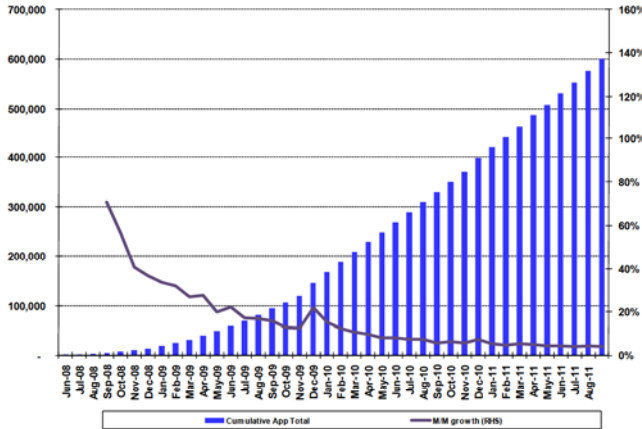
Source: Company websites

In aggregate, this round of checks suggests initial customer interest and demand for the new iPhone is higher than we would have expected.

#### Apple's platform is a key competitive differentiator

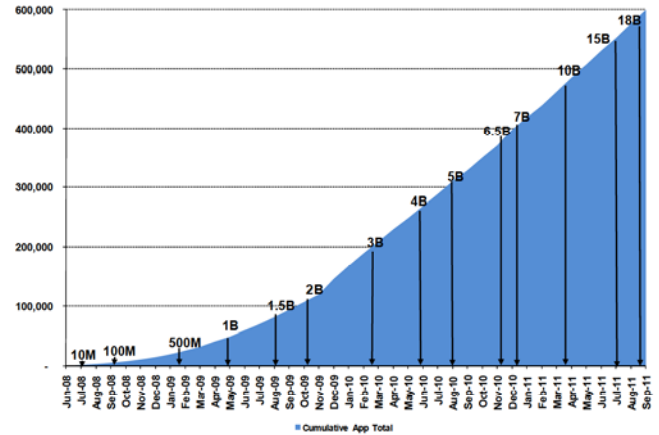
As discussed in prior research, we view Apple's large and rapidly growing iOS installed base and iTunes/ App store as the competitive moat which competing handset vendors cannot replicate. As highlighted below, there are ~500K apps available on the iTunes App Store which is growing at a rate of ~5% M/M. In addition, cumulative App downloads exceeded 18B in September 2011 (vs. 15B in July 2011, 10B downloads in January 2011 and 7B in October 2010). By comparison there are approximately 243K Android Apps (although this platform is forking for various implementations) and 42K Blackberry Apps. We continue to view the App Store and Touch UI as primary sources of long-term competitive advantage for Apple. In addition, we believe attention surrounding the iPad is generating greater developer investment and content creation/ support for Apple's platform. We expect these trends along with healthy uptake of the iPad to further propagate the virtuous circle of a large, growing user base attracting additional App developers/ Content providers – thereby making the platform even more attractive for both users and developers.

**Figure 5: Cumulative apps and growth (M/M)**



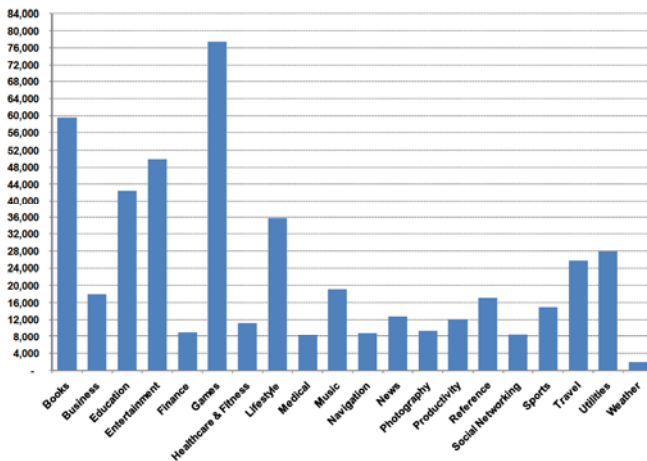
Source: Deutsche Bank and Apple data

**Figure 6: Cumulative apps and downloads**



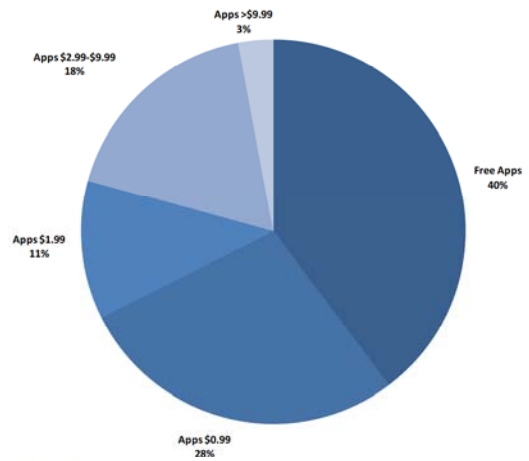
Source: Deutsche Bank and Apple data

**Figure 7: Apps by category**



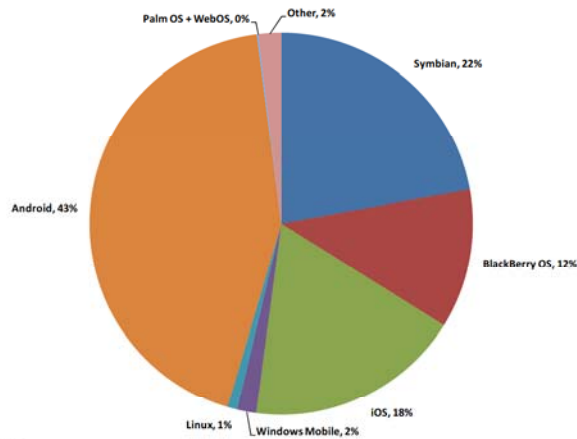
Source: Deutsche Bank and Apple data

**Figure 8: Apps by price**



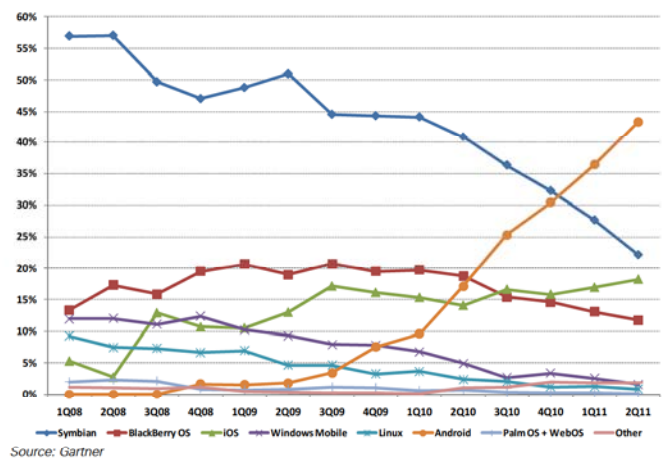
Source: Deutsche Bank and Apple data

**Figure 9: Smartphone OS share 2Q11**



Source: Gartner

**Figure 10: Smartphone OS share trend**



Source: Gartner

**Sector valuation and risks**

We value the hardware sector based on a combination of historical relative earnings multiples, price to cash flow and discounted cash flow. We select what we deem to be an appropriate multiple on our forward earnings estimates based on our assessment of relative growth rates, profitability, competitive position and macroeconomic outlook. General risks include general economic weakness affecting consumer electronics/IT demand, unexpected changes in component pricing, and accelerated price competition in PCs/other hardware.



# News

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## Company news

- Apple announced it has received 1M+ pre-orders for the recently introduced iPhone 4S on its pre-order launch date.
- The Wall Street Journal reported HP is currently reevaluating its previously proposed plan to spin off its PC business as recent analyses indicate that the costs associated with such a spinoff may outweigh the benefits.
- IBM announced plans to acquire Platform Computing, a privately-held provider of cluster and grid management software solutions based in Toronto, Canada. Based on the terms of the acquisition, IBM plans to integrate Platform Computing within its System and Technology Group. The acquisition is expected to close in 4Q11, subject to closing conditions. Financial terms of the acquisition were not disclosed.

## PC and Consumer Electronics

- According to IDC preliminary data, worldwide PC unit shipments increased 3.6% Y/Y in 3Q11. HP continues to lead the market with an 18.1% share, followed by, Lenovo and Dell with 13.7% and 12.0% share, respectively.
- The Wall Street Journal reported an Australian court has upheld a temporary injunction preventing Samsung from selling its Galaxy Tab 10.1 in Australia.
- Separately, Reuters reported a Dutch court has rejected Samsung's request for an injunction on all Apple's mobile products that use 3G technology in the Netherlands.
- Cisco announced it has entered in to a strategic partnership with Citrix Systems to develop solutions for large scale desktop virtualization deployments. In addition, the companies will continue to build upon their data center solutions and cloud technologies to accelerate the deployment of cloud services. Financial terms of the agreement were not disclosed.
- Western Digital announced that hard drive production at one of its facilities close to Bangkok is expected to be constrained this quarter due to the severe floods in Thailand. The company has stated that the impact of the floods on its operations in Thailand cannot yet be fully determined.

## Imaging

- According to IRI film data for September, total film revenue fell 26.9% Y/Y. Conventional and Disposables film revenue both declined 34.0% and 24.5% Y/Y, respectively. Total film units declined 31.1% Y/Y, with Conventional and Disposables film units falling 27.5% and 33.2% Y/Y, respectively.

## Services

- IBM announced it has signed a 5-year extension to a previous IT services agreement with Westpac, New Zealand, a financial services company. Based on the terms of the renewed agreement, IBM will provide a range of IT services to maintain Westpac's IT infrastructure through 2017. Financial terms of the agreement were not disclosed.

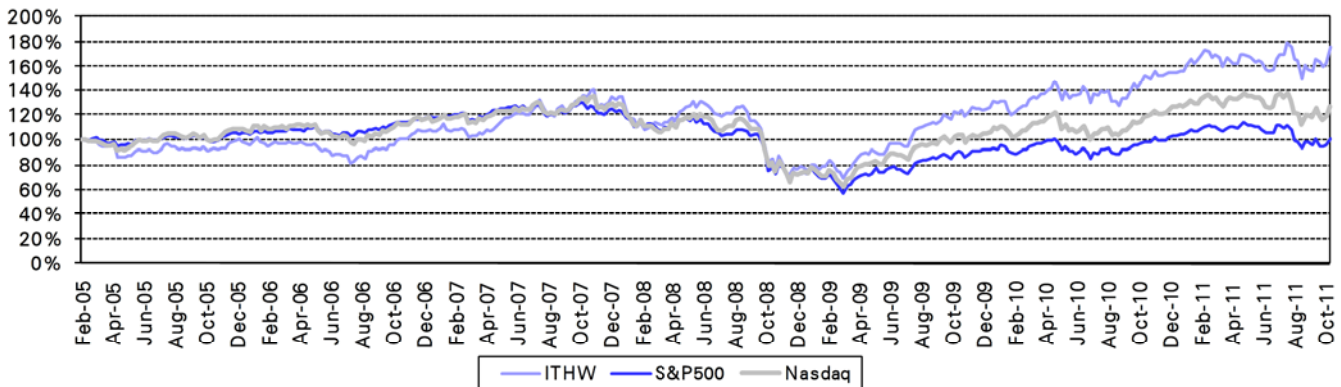
The authors of this report wish to acknowledge the contribution made by Sachith Jayakody and Qadhir Sheriff, employees of Amba Research Lanka (Private) Limited, a third-party provider to Deutsche Bank of offshore research support services.

# Forecasts and charts

**Figure 11: New PC Growth Forecasts**

Source: Deutsche Bank, IDC

**Figure 12: Stock price performance of indices versus IT Hardware (Jan. 5, 2001 as base), market weighted**



Source: Deutsche Bank, FactSet

# Appendix 1

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Additional information available upon request

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### Equity rating key

### Equity rating dispersion and banking relationships

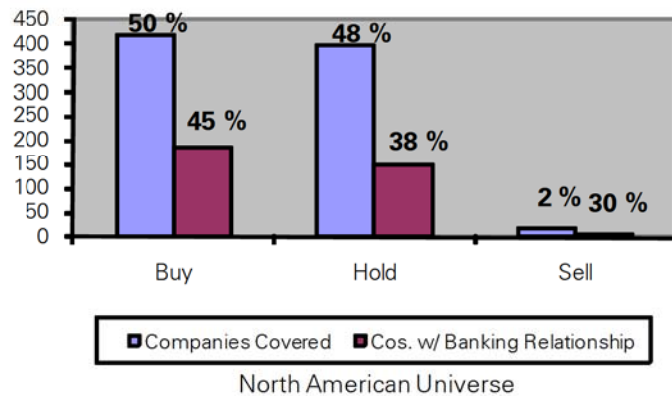
**Buy:** Based on a current 12-month view of total shareholder return (TSR = percentage change in share price from current price to projected target price plus projected dividend yield), we recommend that investors buy the stock.

**Sell:** Based on a current 12-month view of total shareholder return, we recommend that investors sell the stock.

**Hold:** We take a neutral view on the stock 12-months out and, based on this time horizon, do not recommend either a Buy or Sell.

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  - Sell: Expected total return (including dividends) of -10% or worse over a 12-month period



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