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Apple Inc. and the iPhone 4 Antenna Issue

On June 24, 2010, Apple introduced its iPhone 4 with its new operating system iOS 4. The iPhone 4 quickly garnered praise for its crisp display, a longer-lasting battery, a faster processor, and an improved camera.¹ For the first time, Apple placed the iPhone antenna on the outside of the device to create the thinner phone with an improved battery life. The company reported iPhone 4 sales of 1.7 million in the first three days, and Jobs apologized to customers who were turned away due to lack of supply.

Within days of the iPhone's launch, reports emerged that touching the iPhone's metal antenna band, which ran along the outer lower rim, seemed to compromise the iPhone's ability to accept and hold calls (dubbed the "death grip"). Apple quickly responded noting, "Gripping any mobile phone will result in some attenuation of its antenna performance....If you ever experience this on your iPhone 4, avoid gripping it in the lower left corner in a way that covers both sides of the black strip in the middle band [i.e. the antenna], or simply use one of the many available cases [which Apple sells for \$29]."²

Within a week, several lawsuits were filed, including one class-action lawsuit in California Federal Court that accused Apple of marketing a phone with "a known defect."³ Some analysts said the iPhone's antenna issues were an indication that Apple was under pressure to stay ahead of its competition. Gartner Inc. reported that first quarter 2010 sales of smartphones based on Google's Android mobile operating system surpassed iPhone for the first time in the U.S.⁴ However, at that time, many analysts did not believe the iPhone 4 antenna issue would impact sales, although Shaw Wu, an analyst with Kaufman Brothers, stated, "We don't think the antenna issue is that big of a deal where it would warrant a product recall."⁵

In early July, Apple reported it had isolated the antenna problem and would fix it with a software upgrade. According to Apple, "Upon investigation, we were stunned to find that the formula we use to calculate how many bars of signal strength to display is totally wrong."⁶ Apple noted that all iPhones mistakenly displayed better cellular reception than actually existed. By July 12, Apple's woes were compounded when a *Consumer Reports* blog reported that the iPhone's reception issues were a result of a flawed antenna design, not a software issue, and that it could not recommend purchasing the iPhone 4.⁷ Apple's share price declined more than four percent in next day trading,

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while shares of Research In Motion (maker of rival Blackberry) and Google Inc. rose by more than three percent.⁸

Toni Sacconaghi, a tech analyst at Bernstein Research, wrote, "We see the potential for a cycle of press reports triggering downward pressure in Apple shares and believe that Apple needs to explicitly and constructively address the iPhone 4's reception problems."⁹ Although many believed existing, loyal iPhone users would upgrade to the iPhone 4 regardless, analyst Phil Cusick wrote "longer term though the risk is that incremental customers are put off by the design flaw and potential issues, and choose a different device instead."¹⁰

Management's Options

Analysts were speculating about how Apple management would address the antenna issue, if at all. Most were finding it difficult to see past the negative press coverage in order to assess how many of the estimated 3 million iPhone 4 users had actually complained about the antenna issue. Analysts with Piper Jaffray estimated the problem periodically affected 25% of the users. Meanwhile, analysts at JP Morgan noticed that most complaints were coming from the U.S., and hypothesized that the problem could be partially due to the variability in AT&T's network signal strength, rather than the iPhone 4 per se.

One option to address the iPhone 4's reception issue included a free "bumper case." William Fearnley, Jr., an analyst with Janney Capital Markets, suggested that the firm could issue a coupon/voucher for all iPhone 4 owners. Under this scenario, all customers could redeem the voucher, including those who had already bought a case (estimates for that number varied widely, ranging from 15% according to analysts at Macquarie to 75% according to Piper Jaffray). However, analyst Rob Enderle disliked the approach stating, "It's like sending back a Rolex, and we have now encased it in rubber. If I wanted a rubber watch, I would have bought a Timex....It is unusual for a quality company to have a fix that damages the overall aesthetics of the product."¹¹ Alternatively, the company could decide to give a discount on cases (e.g., 50% off the \$29 unit MSRP), and/or give away free bumpers only to new customers.

Another option, a product recall, would be more costly. Saccognaghi estimated that a recall would cost about \$1.5 billion and noted, "Perhaps the bigger longer term concern for Apple investors is the emerging pattern of hubris that the company has displayed."¹² According to Mike Abramsky, an analyst with RBC Capital Markets, a recall could cost Apple \$900 million or 71 cents a share. He estimated a free protective case would cost the company \$45 million or 4 cents a share. Alternatively, and assuming that the issue could be addressed through a hardware fix, Abramsky estimated that a product repair would cost Apple \$300 million, assuming a \$100 in-store repair cost per unit.

As the company was slated to announce financial results for its fiscal 2012 third quarter ended June 26, 2010, market participants were awaiting management's reaction to the issue, and wondering whether it would have any impact on the company's financials and market value (see **Exhibits 1 and 2** for the latest quarterly revenue breakdown, summary annual financial statements and stock price performance.)

Exhibit 1 Apple Inc. Select Historical Financial Data**1a: Apple Inc. Q1 2010 Unaudited Summary Data**

	Q4 2009		Q1 2009		Q1 2010		Sequential Change		Year/Year Change	
	CPU Units (K)	Revenue (\$M)	CPU Units (K)	Revenue (\$M)	CPU Units K	Revenue (\$M)	CPU Units	Revenue	CPU Units	Revenue
Operating Segments										
Americas	1,252	\$5,236	912	\$5,301	1,187	\$6,092	-5%	16%	30%	15%
Europe	761	3,235	795	3,585	1,068	5,024	40%	55%	34%	40%
Japan	79	634	99	498	105	783	33%	24%	6%	57%
Asia Pacific	291	1,061	203	750	313	1,813	8%	71%	54%	142%
Retail	670	2,041	515	1,746	689	1,971	3%	-3%	34%	13%
Total Operating Segments	3,053	\$12,207	2,524	\$11,880	3,362	\$15,683	10%	28%	33%	32%
Product Summary										
Desktops ^a	787	\$1,089	728	\$1,045	1,234	\$1,692	57%	55%	70%	62%
Portables ^b	2,266	2,891	1,796	2,520	2,128	2,758	-6%	-5%	18%	9%
Subtotal CPUs	3,053	\$3,980	2,524	\$3,565	3,362	\$4,450	10%	12%	33%	25%
iPod	10,177	1,563	22,727	3,371	20,970	3,391	106%	117%	-8%	1%
Other Music-Related Products and Services ^c		1,018		1,011		1,164		14%		15%
iPhone and Related Products and Services ^d	7,367	4,606	4,363	2,940	8,737	5,578	19%	21%	100%	90%
Peripherals and Other Hardware		391		387		469		20%		21%
Software, Service and Other Sales		649		606		631		-3%		4%
Total Apple		\$12,207		\$11,880		\$15,683		28%		32%

Source: "Apple Reports First Quarter Results," January 25, 2010, <http://www.apple.com/pr/library/2010/01/25results.html>, accessed 6/14/10.

Note: K = units in thousands; \$M = amounts in millions.

^aIncludes iMac, Mac mini, Mac Pro, and Xserve product lines. ^bIncludes MacBook, MacBook Air, and MacBook Pro product lines. ^cConsists of iTunes Store sales, iPod services, and Apple-branded and third-party iPod accessories. ^dUnits consist of iPhone handset sales; Revenue is derived from handset sales, carrier agreements, and Apple-branded and third-party iPhone accessories.

Exhibit 1 (continued)***1b. Apple Inc. Unaudited Condensed Consolidated Statement of Operations (in millions, except share amounts which are reflected in thousands and per share amounts)***

	Three Months Ended:	
	December 26, 2009*	December 27, 2008*
Net sales	\$15,683	\$11,880
Cost of sales ^a	<u>9,272</u>	<u>7,373</u>
Gross margin	<u>6,411</u>	<u>4,507</u>
Operating expenses:		
Research and development ^a	398	315
Selling, general, and administrative ^a	<u>1,288</u>	<u>1,091</u>
Total operating expenses	<u>1,686</u>	<u>1,406</u>
Operating income	4,725	3,101
Other income and expense	<u>33</u>	<u>158</u>
Income before provision for income taxes	4,758	3,259
Provision for income taxes	<u>1,380</u>	<u>1,004</u>
Net income	<u>\$ 3,378</u>	<u>\$ 2,255</u>
Earnings per common share:		
Basic	\$ 3.74	\$ 2.54
Diluted	\$ 3.67	\$ 2.50
Shares used in computing earnings per share:		
Basic	903,542	889,142
Diluted	919,783	901,494

^aIncludes stock-based compensation expense as follows:

Cost of sales	\$ 37	\$ 28
Research and development	\$ 74	\$ 60
Selling, general, and administrative	\$ 94	\$ 82

Source: "Apple Reports First Quarter Results," January 25, 2010, <http://www.apple.com/pr/library/2010/01/25results.html>, accessed 6/14/10.

Exhibit 1 (continued)**1c: Unaudited Condensed Consolidated Balance Sheets (in millions, except share amounts)**

	December 26, 2009*	September 26, 2009*
ASSETS:		
Current Assets:		
Cash and cash equivalents	\$ 7,609	\$ 5,263
Short-term marketable securities	17,187	18,201
Accounts receivable, less allowances of \$54 and \$52, respectively	3,090	3,361
Inventories	576	459
Deferred tax assets	1,180	1,135
Other current assets	3,690	3,140
Total current assets	33,332	31,555
Long-term marketable securities	15,024	10,528
Property, plant and equipment, net	3,115	2,954
Goodwill	253	206
Acquired intangible assets, net	241	247
Other assets	1,961	2,011
Total Assets	\$53,926	\$47,501
LIABILITIES AND SHAREHOLDERS' EQUITY:		
Current Liabilities:		
Accounts payable	\$6,511	\$5,601
Accrued expenses	3,996	3,852
Deferred revenue	2,590	2,053
Total current liabilities	13,097	11,506
Deferred revenue—Noncurrent	922	853
Other noncurrent liabilities	4,139	3,502
Total Liabilities	\$18,158	\$15,861
Commitments and contingencies		
Shareholders' Equity:		
Common stock, no par value; 1,800,000,000 shares authorized; 906,282,182 and 899,805,500 shares issued and outstanding, respectively	8,962	8,210
Retained earnings	26,695	23,353
Accumulated other comprehensive income	111	77
Total Shareholders' Equity	\$35,768	\$31,640
Total Liabilities and Shareholders' Equity	\$53,926	\$47,501

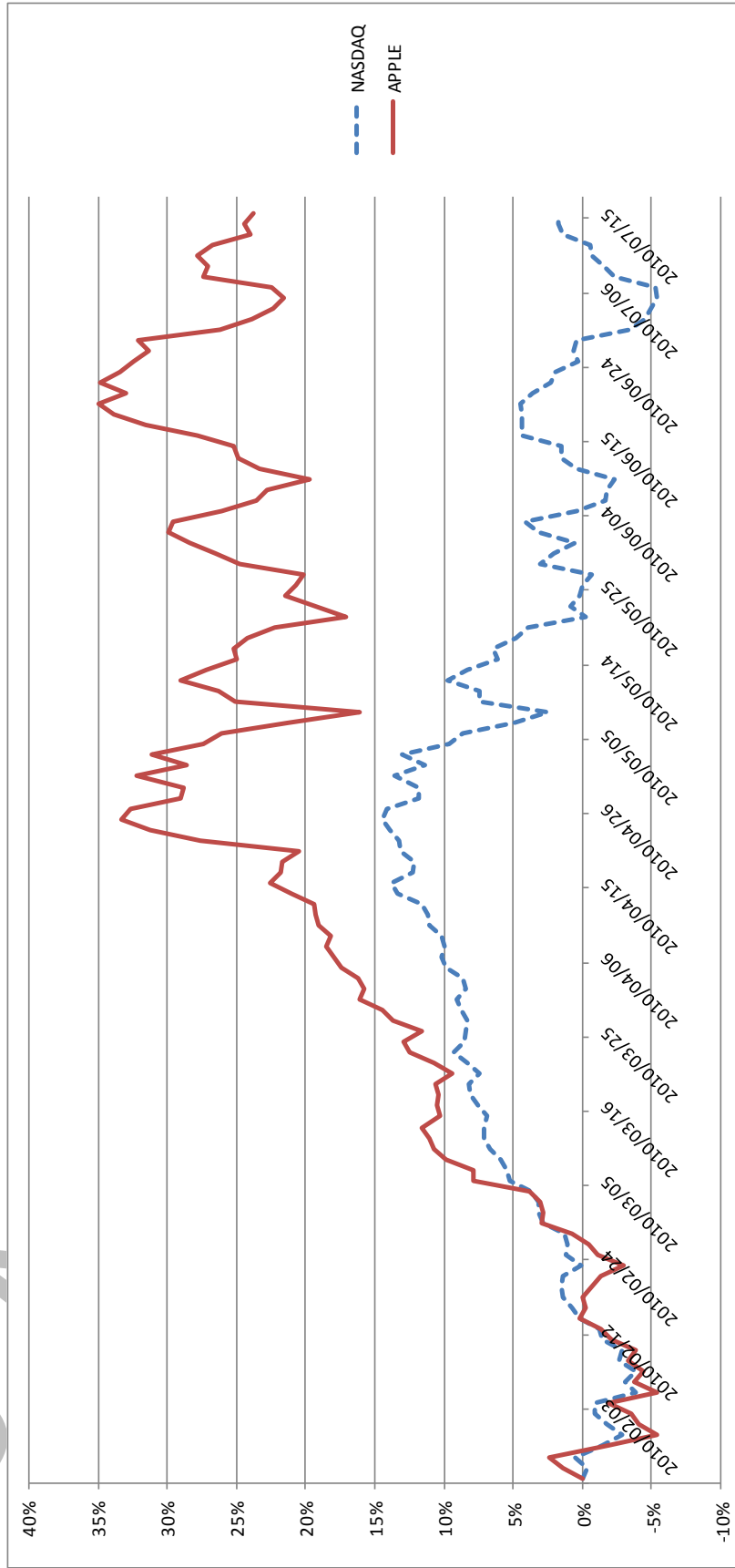
Source: "Apple Reports First Quarter Results," January 25, 2010, <http://www.apple.com/pr/library/2010/01/25results.html>, accessed 6/14/10.

Exhibit 1 (continued)**1d. Unaudited Condensed Consolidated Statements of Cash Flows (in millions)**

	Three Months Ended:	
	December 26, 2009*	December 27, 2008*
Cash and cash equivalents, beginning of the period	\$ 5,263	\$ 11,875
Operating Activities:		
Net income	3,378	2,255
Adjustments to reconcile net income to cash generated by operating activities:		
Depreciation, amortization and accretion	209	168
Stock-based compensation expense	205	170
Deferred income tax expense	425	276
Loss on disposition of property, plant, and equipment	6	7
Changes in operating assets and liabilities:		
Accounts receivable, net	271	226
Inventories	(121)	113
Other current assets	(517)	1,097
Other assets	47	7
Accounts payable	956	(767)
Deferred revenue	606	200
Other liabilities	316	186
Cash generated by operating activities	5,781	3,938
Investing Activities:		
Purchases of marketable securities	(12,922)	(13,082)
Proceeds from maturities of marketable securities	6,216	2,226
Proceeds from sales of marketable securities	3,199	2,668
Purchases of other long-term investments	(6)	(38)
Payment for acquisition of property, plant, and equipment	(376)	(339)
Payment for acquisition of intangible assets	(5)	(14)
Other	(64)	(60)
Cash used in investing activities	(3,958)	(8,639)
Financing Activities:		
Proceeds from issuance of common stock	374	77
Excess tax benefits from stock-based compensation	252	19
Cash used to net share settle equity awards	(103)	(34)
Cash generated by financing activities	523	62
Increase/(decrease) in cash and cash equivalents	2,346	(4,639)
Cash and cash equivalents, end of the period	\$ 7,609	\$ 7,236
Supplemental cash flow disclosure:		
Cash paid for income taxes, net	\$ 980	\$ 550

Source: "Apple Reports First Quarter Results," January 25, 2010, <http://www.apple.com/pr/library/2010/01/25results.html>, accessed 6/14/10.

Exhibit 2 Apple Inc. Share Price Performance (January 25, 2010-July 15, 2010)



Source: Casewriter, using data from the Center for Research in Security Prices, accessed 09/15/2010.

Note: Apple share price performance versus the Nasdaq Composite Index over the time period that includes Apple's fiscal 2010 first quarter, second quarter, and ends a week before the third quarter earnings announcements.

Endnotes

¹ "Apple iPhone 4 Garners Praise from Journal Times," *eWeek*, June 24, 2010, (accessed by Factiva 8/20/10).

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⁴ Therese Poletti, "Apple's Stumbles May Prove to Be More Costly Now," *Marketwatch*, June 29, 2010, (accessed by Factiva 8/20/10).

⁵ Therese Poletti, "Apple's Stumbles May Prove to Be More Costly Now," *Marketwatch*, June 29, 2010, (accessed by Factiva 8/20/10).

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⁹ Therese Poletti, "Wall Street Puts Price Tag on iPhone 4 Troubles," *Marketwatch*, July 14, 2010, (accessed by Factiva 8/20/10).

¹⁰ Therese Poletti, "Wall Street Puts Price Tag on iPhone 4 Troubles," *Marketwatch*, July 14, 2010, (accessed by Factiva 8/20/10).

¹¹ Therese Poletti, "Wall Street Puts Price Tag on iPhone 4 Troubles," *Marketwatch*, July 14, 2010, (accessed by Factiva 8/20/10).

¹² Therese Poletti, "Wall Street Puts Price Tag on iPhone 4 Troubles," *Marketwatch*, July 14, 2010, (accessed by Factiva 8/20/10).