

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF PENNSYLVANIA**

CARNEGIE MELLON UNIVERSITY,)
)
Plaintiff,)
v.) Civil Action No. 2:09-cv-00290-NBF
)
MARVELL TECHNOLOGY GROUP, LTD.,)
and MARVELL SEMICONDUCTOR, INC.,)
)
Defendants.)

**DECLARATION OF CATHARINE M. LAWTON IN SUPPORT OF
PLAINTIFF CARNEGIE MELLON UNIVERSITY'S MOTION AND VERIFIED
PETITION FOR SUPPLEMENTAL RELIEF IN AID OF EXECUTION
PURSUANT TO PENNSYLVANIA RULE OF CIVIL PROCEDURE 3118**

I, Catharine M. Lawton, hereby declare:

1. I am over the age of twenty-one (21), of sound mind, and competent to make this declaration. I am also qualified to give testimony under oath. Each of the facts listed below is within my personal knowledge and is true and correct.

2. I am a Director at Berkeley Research Group, LLC, a leading international consulting firm that specializes in advising companies and counsel regarding the economic, financial, valuation, and strategy issues related to complex business problems, disputes, and litigation. I hold a bachelor of science degree in finance from the University of Illinois and have more than 28 years of experience in this field.

3. I testified as the expert witness on damages for Carnegie Mellon University (“CMU”) in the above-captioned patent infringement litigation, which resulted in a verdict for CMU on December 26, 2012 and the entry of judgment on January 14, 2013.

4. I make this declaration in support of CMU’s Motion and Verified Petition for Supplemental Relief in Aid of Execution Pursuant to Pennsylvania Rule of Civil Procedure 3118 (the “Motion”).

5. I have prepared 4 charts and tables in support of CMU’s Motion that are based on and are a fair and accurate reflection of the financial data contained in (a) Marvell Technology Group, Ltd.’s (“MTGL”) Forms 10-Q, Forms 10-K, and certain Forms 8-K filed with the Securities and Exchange Commission (the “SEC”) for fiscal years 2004 through 2013 and the first three quarters of fiscal year 2014, and (b) the available evidence of Marvell’s quarterly sales produced by Marvell during this case, using fiscal quarters, of the infringing chips for each quarter starting at the beginning of the damages period through the

end of Marvell's most recent fiscal quarter (March 6, 2003 to November 2, 2013). The charts and tables are attached hereto as Exhibits 1-4.

6. The chart entitled "Cumulative Royalty v. Marvell Total Cash + Investments," which is attached hereto as Exhibit 1, shows (a) in red, the royalty at \$0.50 per infringing chip Marvell has sold as it has accumulated over each fiscal quarter from the start of the damages period (March 6, 2013) through the end of Marvell's most recent fiscal quarter (November 2, 2013) and (b) in green, the amount of cash and investments that MTGL reported in its SEC filings for each fiscal quarter. The cumulative royalties shown in red in Exhibit 1 include royalties based on CMU's claim for supplemental damages and for post-judgment royalties at a rate of \$0.50 per chip.

7. The table entitled "Cumulative Royalty v. Marvell Total Cash + Investments (TABLE)," which is attached hereto as Exhibit 2, contains the same data as Exhibit 1, but in a table format, together with a column showing the cumulative royalty as a percentage of Marvell's reported total cash and investments.

8. The chart entitled "Cumulative Royalty v. Marvell BUT FOR Total Cash + Investments," which is attached hereto as Exhibit 3, shows (a) in red, the royalty at \$0.50 per infringing chip Marvell has sold as it has accumulated over each fiscal quarter from the start of the damages period (March 6, 2013) through the end of Marvell's most recent fiscal quarter (November 2, 2013) and (b) in green, the amount of cash and investments that MTGL would have had if it had not returned over \$2.9 billion in cash to its shareholders through its share repurchase program and dividend program since October 30, 2010. The cumulative royalties shown in red in Exhibit 3 include royalties based on CMU's claim for supplemental damages at a rate of \$0.50 per chip.

9. The table entitled “Cumulative Royalty v. Marvell BUT FOR Total Cash + Investments (TABLE),” which is attached hereto as Exhibit 4, contains the same data as Exhibit 3, but in a table format, together with a column showing the cumulative royalty as a percentage of Marvell’s “but for” total cash and investments.

10. Based on the financial data summarized in my chart that the parties provided to the Court in connection with the December 2, 2012 Joint Status Report (Dkt. 907-1), since the fiscal quarter ended October 30, 2010 (3Q FY 2011, the start of the Share Repurchase Program) through the most recent fiscal quarter ended November 2, 2013 (3Q FY 2014), with the exception of the fiscal quarters ended October 30, 2010 (3Q FY 2011), January 29, 2011 (4Q FY 2011), and July 30, 2011 (2Q FY 2012), MTGL has returned more cash to shareholders through its share repurchase program and dividend program than what the company has generated from operations, based on Marvell’s reported operating income. During the period August 1, 2010 through November 2, 2013, Marvell’s total operating income was \$1,563,610,000, whereas its total share repurchases and dividends were \$2,929,903,000.

11. Marvell’s initial \$500 million share repurchase authorization was on August 19, 2010. Since that time, Marvell has increased the amount authorized for share repurchases on five separate occasions. The amount of each of the five additional authorizations was \$500 million. The date of each authorization and the amount remaining on prior authorizations as of that date are as follows:

Date of \$500 million increase in SRP authorization	Amount remaining on prior SRP authorizations
March 3, 2011	\$150,000,000
June 28, 2011	\$0

December 14, 2011	\$138,000,000
May 17, 2012	\$348,000,000
December 18, 2012	\$383,654,000

12. The following conclusions are based on the financial data summarized in the attached charts and tables and the chart that the parties provided to the Court in connection with the December 2, 2012 Joint Status Report (Dkt. 907-1):

- a. Ignoring Marvell's possible prejudgment interest obligation to CMU, as of the date that CMU filed this lawsuit, March 6, 2009, Marvell's obligation to CMU represented 51.05% of its Total Cash and Investments.
- b. Ignoring Marvell's possible prejudgment interest obligation to CMU, as of July 28, 2012, the date through which Marvell had produced sales data prior to trial (and which was the basis for the jury's award), Marvell's obligation to CMU represented 54.32% of its Total Cash and Investments.
- c. Ignoring Marvell's possible prejudgment interest obligation to CMU, as of January 14, 2013, Marvell's obligation to CMU represented 65.03% of its Total Cash and Investments.
- d. As of November 2, 2013, Marvell had returned \$2,929,903,000 to its shareholders in the form of stock repurchases and dividends.
- e. As of the end of Marvell's most recent quarter, November 2, 2013, Marvell's obligation to CMU, ignoring Marvell's possible prejudgment interest obligation to CMU, represented 76.82% of its Total Cash and Investments.
- f. Since the date of the Judgment, from February 3, 2013 to November 2, 2013, Marvell has returned an additional \$465,845,000 to its shareholders in the form of additional stock repurchases and dividends.
- g. Since the date of the Judgment, from February 3, 2013 to November 2, 2013, Marvell's reported operating income has equaled totaled \$190,082,000.
- h. Based on Marvell's prior practices of authorizing share repurchases since August 2010, Marvell has authorized additional share repurchases when the remaining balance was in the range of \$0 to \$383.7 million.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is a true and correct statement of facts known to me, methods used and opinions formed by me, and that this declaration was executed on December 18, 2013.

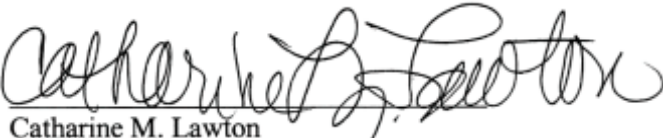

Catharine M. Lawton

EXHIBIT 1

Cumulative Royalty v. Marvell Total Cash + Investments

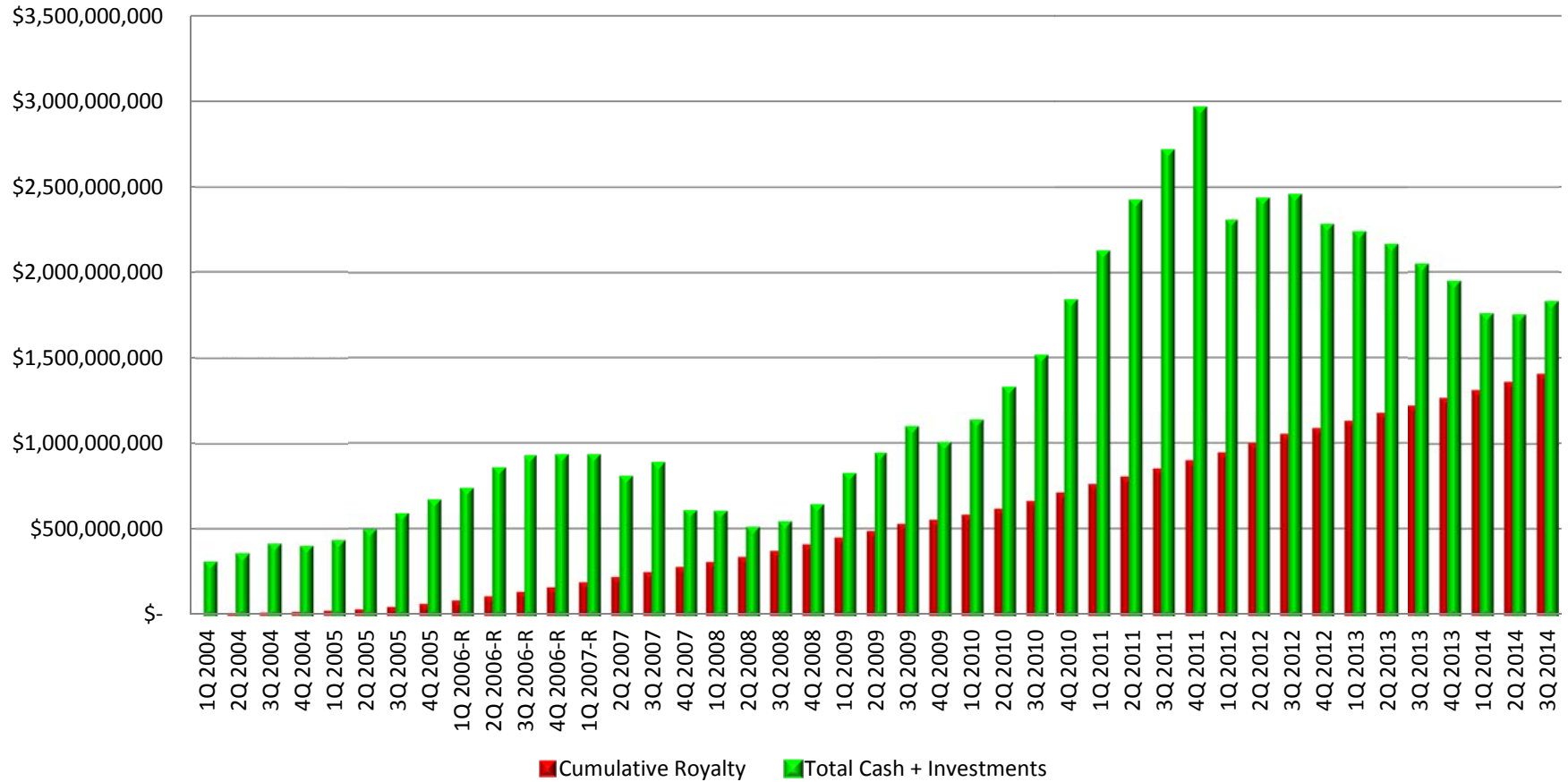


EXHIBIT 2**Cumulative Royalty v. Marvell Total Cash + Investments (TABLE)**

		[A]	[B]	[A] / [B]
FY Period	Period End Date	Cumulative Royalty	Marvell Total Cash + Investments	Cumulative Royalty as % of Marvell Total Cash + Investments
1Q 2004	4/30/2003	\$ 271,401.00	\$ 298,925,000	0.09%
2Q 2004	7/31/2003	\$ 2,330,329.50	\$ 343,980,000	0.68%
3Q 2004	10/31/2003	\$ 5,564,301.00	\$ 400,308,000	1.39%
4Q 2004	1/31/2004	\$ 10,136,413.00	\$ 386,271,000	2.62%
1Q 2005	4/30/2004	\$ 16,285,546.50	\$ 421,412,000	3.86%
2Q 2005	7/31/2004	\$ 24,765,343.50	\$ 482,418,000	5.13%
3Q 2005	10/31/2004	\$ 39,495,129.50	\$ 577,291,000	6.84%
4Q 2005	1/31/2005	\$ 56,861,447.50	\$ 660,014,000	8.62%
1Q 2006-R	4/30/2005	\$ 77,044,820.50	\$ 726,771,000	10.60%
2Q 2006-R	7/31/2005	\$ 100,664,465.00	\$ 847,064,000	11.88%
3Q 2006-R	10/31/2005	\$ 126,011,427.50	\$ 914,866,000	13.77%
4Q 2006-R	1/29/2006	\$ 153,238,982.00	\$ 921,022,000	16.64%
1Q 2007-R	4/29/2006	\$ 182,251,269.00	\$ 921,410,000	19.78%
2Q 2007	7/29/2006	\$ 212,514,476.00	\$ 797,726,000	26.64%
3Q 2007	10/28/2006	\$ 241,188,432.50	\$ 875,672,000	27.54%
4Q 2007	1/27/2007	\$ 270,844,856.00	\$ 596,380,000	45.41%
1Q 2008	4/28/2007	\$ 299,451,649.00	\$ 592,943,000	50.50%
2Q 2008	7/28/2007	\$ 329,179,235.50	\$ 496,448,000	66.31%
3Q 2008	10/27/2007	\$ 363,782,439.50	\$ 529,474,000	68.71%
4Q 2008	2/2/2008	\$ 401,852,275.50	\$ 630,902,000	63.69%
1Q 2009	5/3/2008	\$ 441,471,705.00	\$ 814,101,000	54.23%
2Q 2009	8/2/2008	\$ 479,188,979.50	\$ 929,191,000	51.57%
3Q 2009	11/1/2008	\$ 519,759,801.50	\$ 1,084,817,000	47.91%
4Q 2009	1/31/2009	\$ 544,147,656.00	\$ 992,450,000	54.83%
1Q 2010	5/2/2009	\$ 573,442,192.00	\$ 1,123,360,000	51.05%
2Q 2010	8/1/2009	\$ 610,889,305.00	\$ 1,318,640,000	46.33%
3Q 2010	10/31/2009	\$ 656,614,854.00	\$ 1,503,461,000	43.67%
4Q 2010	1/30/2010	\$ 705,812,805.50	\$ 1,830,998,000	38.55%
1Q 2011	5/1/2010	\$ 756,292,630.50	\$ 2,113,438,000	35.78%
2Q 2011	7/31/2010	\$ 799,692,081.50	\$ 2,414,135,000	33.13%
3Q 2011	10/30/2010	\$ 846,872,728.50	\$ 2,706,138,000	31.29%
4Q 2011	1/29/2011	\$ 891,933,919.50	\$ 2,956,256,000	30.17%
1Q 2012	4/30/2011	\$ 937,647,895.50	\$ 2,293,909,000	40.88%
2Q 2012	7/30/2011	\$ 992,134,928.00	\$ 2,425,857,000	40.90%
3Q 2012	10/29/2011	\$ 1,046,730,267.00	\$ 2,447,916,000	42.76%
4Q 2012	1/28/2012	\$ 1,080,180,802.50	\$ 2,269,713,000	47.59%
1Q 2013	4/28/2012	\$ 1,122,795,205.50	\$ 2,225,896,000	50.44%
2Q 2013	7/28/2012	\$ 1,169,140,271.00	\$ 2,152,296,000	54.32%
3Q 2013	10/27/2012	\$ 1,213,576,124.00	\$ 2,034,902,000	59.64%
4Q 2013	2/2/2013	\$ 1,258,899,213.50	\$ 1,935,759,000	65.03%
1Q 2014	5/4/2013	\$ 1,303,769,847.00	\$ 1,749,193,000	74.54%
2Q 2014	8/3/2013	\$ 1,351,183,159.50	\$ 1,742,497,000	77.54%
3Q 2014	11/2/2013	\$ 1,398,378,439.00	\$ 1,820,226,000	76.82%

EXHIBIT 3

Cumulative Royalty v. Marvell *BUT FOR* Cash + Investments

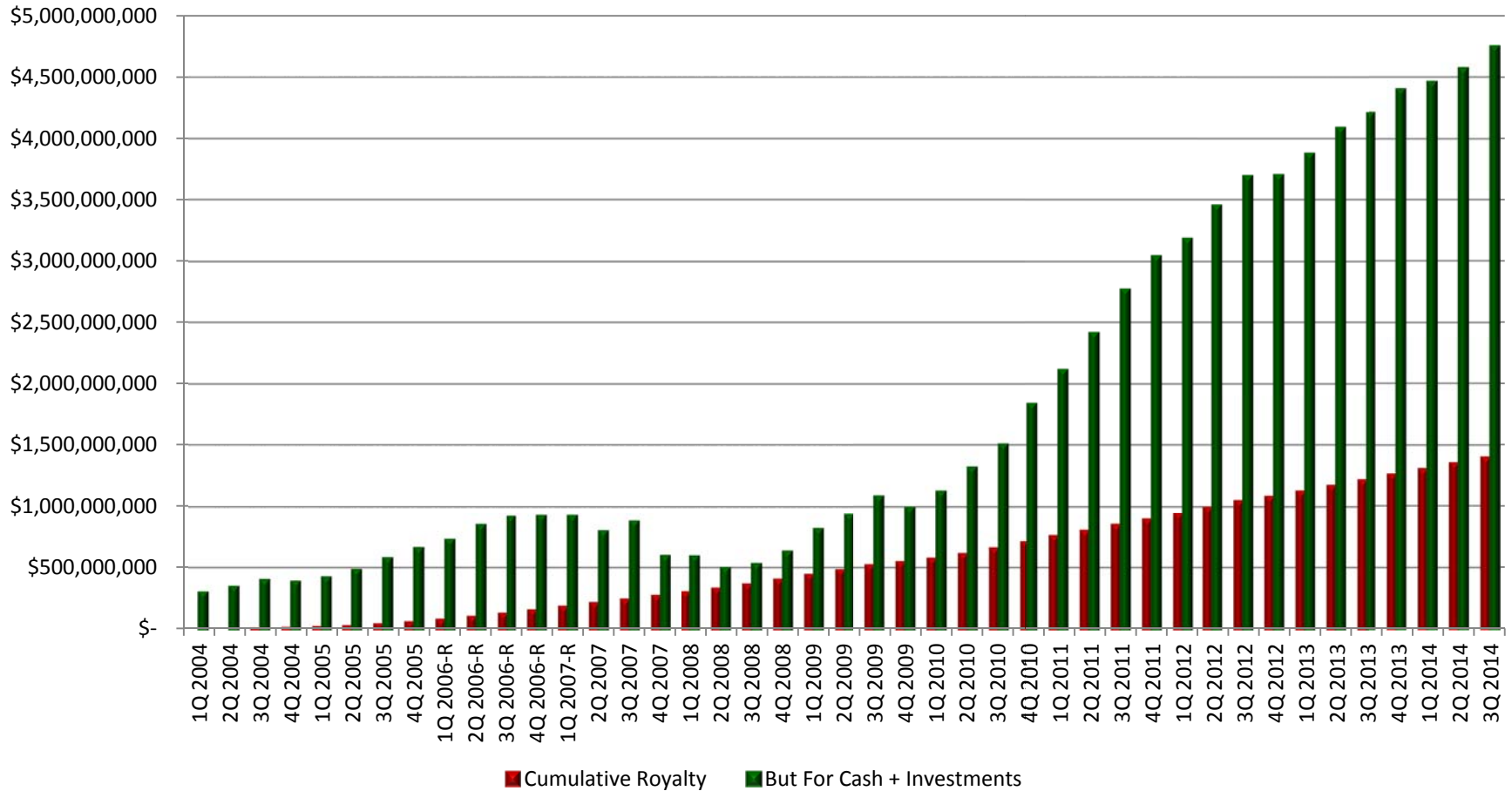


EXHIBIT 4**Cumulative Royalty v. Marvell BUT FOR Total Cash + Investments (TABLE)**

		[A]	[B]	[A] / [B]
FY Period	Period End Date	Cumulative Royalty	Marvell BUT FOR Total Cash + Investments	Cumulative Royalty as % of Marvell BUT FOR Total Cash + Investments
1Q 2004	4/30/2003	\$ 271,401.00	\$ 298,925,000	0.09%
2Q 2004	7/31/2003	\$ 2,330,329.50	\$ 343,980,000	0.68%
3Q 2004	10/31/2003	\$ 5,564,301.00	\$ 400,308,000	1.40%
4Q 2004	1/31/2004	\$ 10,136,413.00	\$ 386,271,000	2.65%
1Q 2005	4/30/2004	\$ 16,285,546.50	\$ 421,412,000	3.91%
2Q 2005	7/31/2004	\$ 24,765,343.50	\$ 482,418,000	5.21%
3Q 2005	10/31/2004	\$ 39,495,129.50	\$ 577,291,000	6.96%
4Q 2005	1/31/2005	\$ 56,861,447.50	\$ 660,014,000	8.80%
1Q 2006-R	4/30/2005	\$ 77,044,820.50	\$ 726,771,000	10.88%
2Q 2006-R	7/31/2005	\$ 100,664,465.00	\$ 847,064,000	12.26%
3Q 2006-R	10/31/2005	\$ 126,011,427.50	\$ 914,866,000	14.31%
4Q 2006-R	1/29/2006	\$ 153,238,982.00	\$ 921,022,000	17.42%
1Q 2007-R	4/29/2006	\$ 182,251,269.00	\$ 921,410,000	20.89%
2Q 2007	7/29/2006	\$ 212,514,476.00	\$ 797,726,000	28.40%
3Q 2007	10/28/2006	\$ 241,188,432.50	\$ 875,672,000	29.67%
4Q 2007	1/27/2007	\$ 270,844,856.00	\$ 596,380,000	49.45%
1Q 2008	4/28/2007	\$ 299,451,649.00	\$ 592,943,000	55.59%
2Q 2008	7/28/2007	\$ 329,179,235.50	\$ 496,448,000	73.76%
3Q 2008	10/27/2007	\$ 363,782,439.50	\$ 529,474,000	77.12%
4Q 2008	2/2/2008	\$ 401,852,275.50	\$ 630,902,000	71.99%
1Q 2009	5/3/2008	\$ 441,471,705.00	\$ 814,101,000	61.54%
2Q 2009	8/2/2008	\$ 479,188,979.50	\$ 929,191,000	58.66%
3Q 2009	11/1/2008	\$ 519,759,801.50	\$ 1,084,817,000	54.62%
4Q 2009	1/31/2009	\$ 544,147,656.00	\$ 992,450,000	62.77%
1Q 2010	5/2/2009	\$ 573,442,192.00	\$ 1,123,360,000	58.52%
2Q 2010	8/1/2009	\$ 610,889,305.00	\$ 1,318,640,000	53.10%
3Q 2010	10/31/2009	\$ 656,614,854.00	\$ 1,503,461,000	50.00%
4Q 2010	1/30/2010	\$ 705,812,805.50	\$ 1,830,998,000	44.08%
1Q 2011	5/1/2010	\$ 756,292,630.50	\$ 2,113,438,000	40.89%
2Q 2011	7/31/2010	\$ 799,692,081.50	\$ 2,414,135,000	37.88%
3Q 2011	10/30/2010	\$ 846,872,728.50	\$ 2,766,732,000	35.03%
4Q 2011	1/29/2011	\$ 891,933,919.50	\$ 3,043,742,000	33.58%
1Q 2012	4/30/2011	\$ 937,647,895.50	\$ 3,184,896,000	33.79%
2Q 2012	7/30/2011	\$ 992,134,928.00	\$ 3,452,584,000	33.00%
3Q 2012	10/29/2011	\$ 1,046,730,267.00	\$ 3,689,798,000	32.61%
4Q 2012	1/28/2012	\$ 1,080,180,802.50	\$ 3,698,075,000	33.71%
1Q 2013	4/28/2012	\$ 1,122,795,205.50	\$ 3,877,415,000	33.51%
2Q 2013	7/28/2012	\$ 1,169,140,271.00	\$ 4,087,679,000	33.18%
3Q 2013	10/27/2012	\$ 1,213,576,124.00	\$ 4,206,748,000	33.56%
4Q 2013	2/2/2013	\$ 1,258,899,213.50	\$ 4,399,817,000	33.42%
1Q 2014	5/4/2013	\$ 1,303,769,847.00	\$ 4,460,198,000	33.97%
2Q 2014	8/3/2013	\$ 1,351,183,159.50	\$ 4,571,407,000	34.18%
3Q 2014	11/2/2013	\$ 1,398,378,439.00	\$ 4,750,129,000	33.89%