



iROBOT CORP | IRBT

INVESTMENT RESEARCH REPORT

*"About to Short Circuit"*

RECOMMENDATION: *Strong Sell*



SPRUCE POINT  
MANAGEMENT

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# *In Spruce Point's Opinion, Numerous Reasons To Be Cautious of Investing in iRobot (IRBT)*

1

**iRobot Is The Poster Boy For A Robotics Bubble:** Media Hype of a Robotics Revolution (Similar To 3D Printing Craze) Is Overblown. IRBT Is Hypeing Its IP Portfolio, But Lacks A Monetization Strategy. The Hype Is To Divert Attention From Its Core Problems

2

**Covering-Up Weakening Fundamentals and Growth Prospects:** Competition Is Mounting in Home Vacuums, Pressuring Existing Market Share. Marketing Costs Are Now Surging Ahead of R&D To Stem The Bleed. Meanwhile, Its Telepresence “Growth Story” For the Health And Enterprise Markets Appear To Be Nothing More Than Red Herrings And Unlikely To Pan Out

3

**Signs of Aggressive Accounting:** IRBT Has Used Accounting Gimmicks w/Varying Degrees of Disclosure to Enhance EPS. In Some Cases (Reclassifying Inventory to Fixed Assets, To Potentially Avoid Write-Downs), These Gimmicks Would Affect Historical Earnings. Littered With Errors, Reclassifications, and One-Time Warranty Gains, IRBT's Financials Should Be Viewed Skeptically

4

**Insider Selling Intensifying; Egregious Rigging of Incentive Compensation:** Insider Ownership Down From 60% at IPO to Under 5% Today; Large Recent Selling In The Past Year. Meanwhile, Insiders Appear To Be Milking Shareholders For Bad Performance With Outrageous Cash Comp

5

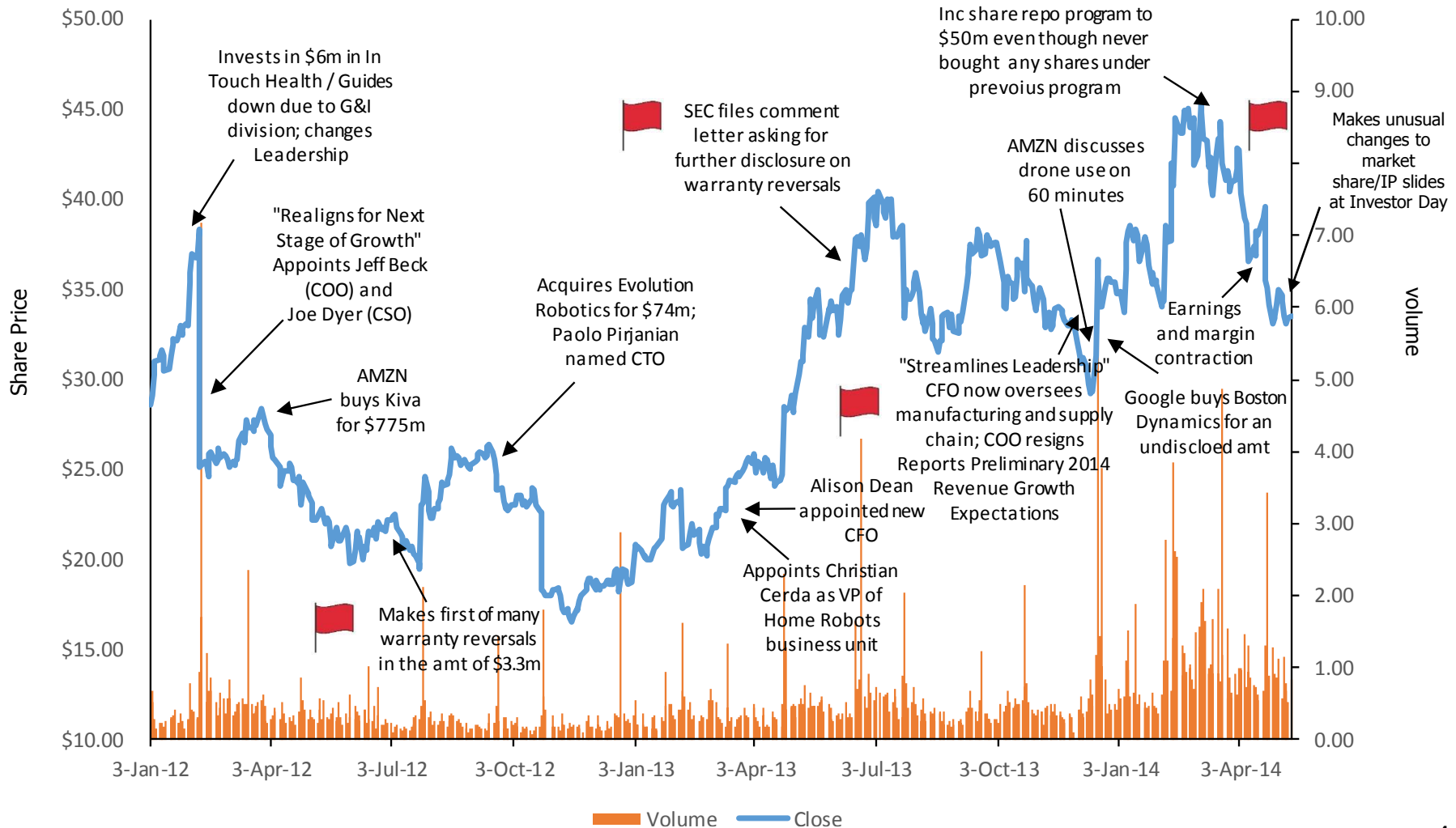
**IRBT + Analysts Incorrectly Position The Stock:** IRBT Is Playing Games To Position Itself Next To High Tech Companies 3x Bigger w/Diversified Business Models. While Analysts See +35% Upside, Spruce Point Believes IRBT Is No Longer A Robotic Innovator, But A Troubled Consumer Product Company Asking Investors To Pin Its Future On Speculative Growth Opportunities

Price Target: \$20 - \$25 per share >>> 25% – 40% Downside



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# *iRobot's Stock Price Flying High On A Wing And A Prayer*



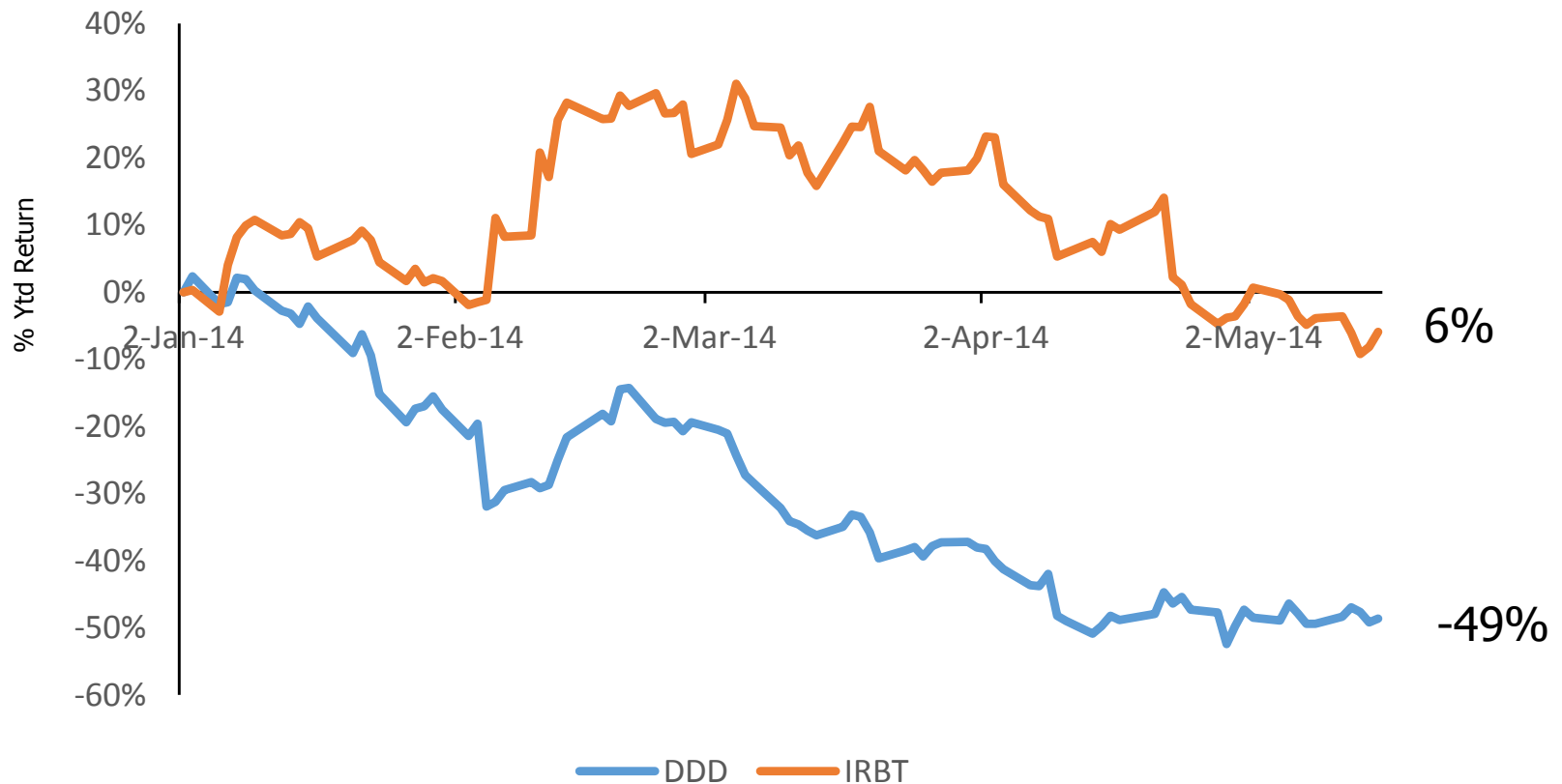




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# *First The 3D Printing Bubble Cracks, Are Robotic Stocks Next?*

Is IRBT Headed The Way of 3D Systems (DDD)?

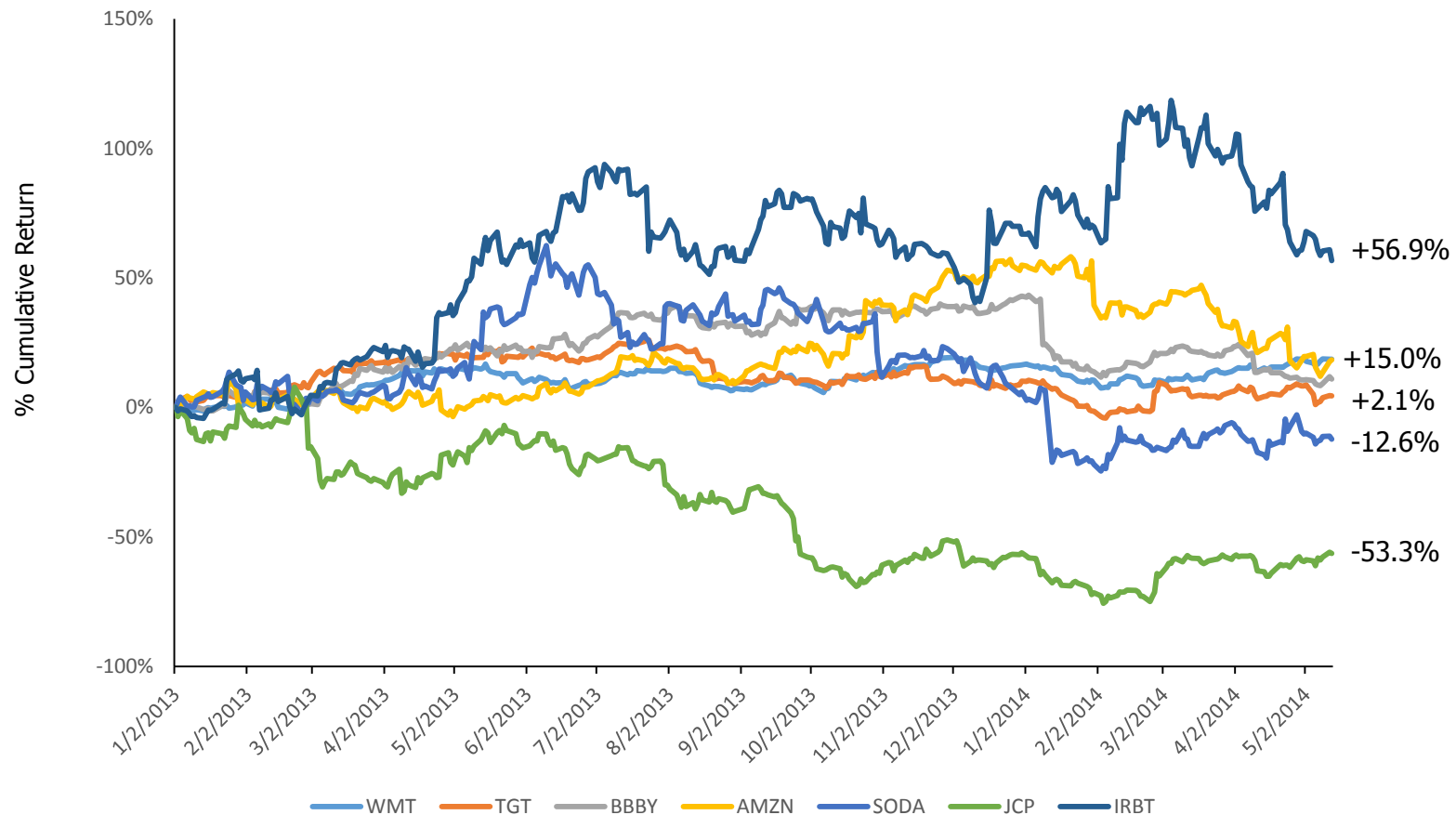




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# ***IRBT Outperforming The Retail Sector, But For How Long?***

How Long Can A Company With a Narrow Product Line  
Outperform The Entire Retail Sector?



Note: Not inclusive of dividends



# **Signs of a Robotics Bubble**



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# *What is a Robot Anyway..?*

Webster's Dictionary Defines a Robot as "*a machine that can do the work of a person and that works automatically or is controlled by a computer.*"

## What Do You Call a Robot of 30yrs Ago

### Science Fiction



### Reality



Toaster Oven



Washer

## Today's Reality > iRobot



### WHAT DOES THIS SYMBOLIZE?

1. AN ELECTRONIC DOUGHNUT?

OR

1. A COMPANY LACKING VISION?





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# *Bubble Sign #1: Everyone is a Pundit*

**When major/minor publications start writing about “revolutions,” this is often a signal of toppy sentiment:**

**The Economist:** “Rise of the Robots”

<http://www.economist.com/printedition/covers/2014-03-27/ap-e-eu-la-me-na-uk>

**US News and World Report:** “The Year of Robots at Apple, Google and Amazon”

<http://www.usnews.com/news/articles/2013/12/26/2014-the-year-of-robots-at-apple-google-and-amazon>

**USA Today:** “Ask Matt: How to Invest in Robots, Drones”

<http://www.usatoday.com/story/money/columnist/krantz/2013/12/04/invest-robots-drones-amazon/3816095/>

**The Robot Report:**

<http://www.therobotreport.com/>

**The Stock Gumshoe:** “What are the “Ride the Robot Revolution” stocks?”

<http://www.stockgumshoe.com/reviews/technology-opportunity/what-are-the-ride-the-robot-revolution-stocks/#comment-1048180>

**The Motley Fool:** “New Study on Robots Highlights Investing Opportunities”

<http://www.fool.com/investing/general/2013/09/28/new-study-on-robots-highlights-investing-opportuni.aspx>

**The Motley Fool:** “iRobot Is About to Introduce a New Era in Robotics”

<http://www.fool.com/investing/general/2014/05/01/irobot-is-about-to-lead-the-next-frontier-in-robot.aspx>

**Money Morning:** “Investing in the Robotics Revolution”

<http://moneymorning.com/2012/05/07/investing-in-the-robotics-revolution/>



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# Sign #2: Most SeekingAlpha Blogger Are Bullish

## Other Articles



[iRobot: How Young Home Owners Will Boost Sales, And Why You Should Buy In 2014](#)

AlphaTraderx • Thu, Mar. 13 • 7 Comments



[iRobot Should Trade Over \\$80 This Year, If It Is Not Acquired First](#)

NYSE Kid • Tue, Mar. 4 • 12 Comments



[iRobot Will Ride The Robotics Trend In 2014](#)

Andre Waldron • Thu, Jan. 9 • 24 Comments



[Can Robotic Companies Keep Soaring In 2014?](#)

Brett Moll • Dec. 27, 2013 • 11 Comments



[Robots On The Move](#)

The Focused Stock Trader • Sep. 17, 2013 • 16 Comments



[Bull Of The Day: iRobot](#)

Zacks Investment Research • Aug. 13, 2013



[iRobot Is Still Undervalued And Attractive - Buy Recommendation](#)

Timur Otunchiev • Jun. 24, 2013 • 12 Comments



[iRobot Will See Future Revenue Boost From Brazil Contract And IBM Technology](#)

Chris Katje • Jun. 10, 2013 • 6 Comments



[iRobot Bulls Clean Up As Shares Soar After Earnings](#)

Interactive Brokers • Apr. 24, 2013



[iRobot's Q1 Cleans Up](#)

Wall Street Strategies • Apr. 24, 2013 • 2 Comments



[iRobot Shares Still Undervalued With Earnings Beat And Telemedicine Segment](#)

Chris Katje • Apr. 24, 2013 • 1 Comment

Blogger "NYSE Kid"  
With 1 Article and 2  
Followers Makes a  
Bold Investment Call!!



**NYSE Kid**

[Articles](#) (1)

[StockTalks](#) (2)

[Comments](#) (3)

**Profile**

**2** Followers

**1** Following



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# Sign #3: Mutual Funds Targeting Retail Investors

## 3-D Printing Mutual Fund



**3D PRINTING AND  
TECHNOLOGY FUND**

A series of Outlook Funds Trust

**Institutional Shares (TDPIX)**

**A Shares (TDPAX)**

**C Shares (TDPCX)**

**PROSPECTUS**

**January 28, 2014**

Advised by:  
3D Printing Fund Advisers, LLC

Source:  
[http://3dpfund.com/\\_assets/pdf/3D\\_Printing\\_and\\_Technology\\_Fund\\_Prospectus.pdf](http://3dpfund.com/_assets/pdf/3D_Printing_and_Technology_Fund_Prospectus.pdf)

## T. Rowe Price Newsletters



**T. ROWE PRICE**  
**INVESTOR**  
INSIGHTFUL STRATEGIES FOR INFORMED INVESTORS

**CLOSING BELL**

## Is 3D Printing the Next Game Changer?

Manufacturing objects on demand is not a fantasy—it's a revolutionary technology that may soon alter the consumer experience.

Source:  
<http://individual.troweprice.com/public/Retail/Planning-&-Research/Connections/Robotics>  
<http://individual.troweprice.com/retail/pages/retail/applications/investorMag/2012/december/closing-bell/index.jsp>



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## *Sign #4: There's An ETF For That Too....*

- A good way to identify a bubble is to follow the ETF market. When an ETF is created...buyer beware!
- In October 2013, an ETF that tracks the ROBO-STOX Global Robotics and Automation Index was launched.<sup>1</sup>
- It should be no surprise that the creator of this index also writes The Robot Report<sup>2</sup>
- There are countless examples of ETFs being launched to track small slices of the investment universe, which foreshadowed a sharp and sudden decline in the value of the underlying shares

### THEN

Launch	ETF (Ticker)	Correction Yr
2007	Timber (CUT)	2008/2009
2007	Uranium (NLR)	2008/2009
2008	Solar (TAN/KWT)	2008/2009
2008	China Small Cap (HAO)	2008/2009
2010	Silver Miners (SIL)	2012/2013
2010	Copper Miners (COPX)	2012/2013
2011	Social Media (SOCL)	2014

### NOW



Source: <http://www.robostox.com/>

1) <http://www.reuters.com/article/2013/10/22/tx-robo-stox-launches-idUSnPnNYFckT+b9+PRN20131022>

2) <http://www.therobotreport.com/about>



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# ***Sign #5: The Media+Investors Blow Tiny News Out of Proportion, Stoke Speculation***

**Recent acquisition activity by large technology companies created massive media speculation. Bloggers suggest this speculation is a positive “trigger” for IRBT. The speculation was based on:**

- Google buys 8 robotics companies in 6 months, including Boston Dynamics, which were highlighted by a recent New York Times article<sup>1</sup>
- Amazon buys Kiva, a maker of robots for warehouse fulfillment, in 2012 for \$775m and more recently commented that it’s “experimenting” with drones, in a highly publicized and promoted 60 minutes TV segment<sup>2,3</sup>

**We believe investors are misinterpreting these companies intent and budget**

- AMZN is acquiring logistics companies for distribution center management
- We estimate GOOG has spent between \$50m and \$120m on its 8 acquisitions:
  1. The robotics acquisitions occurred in December 2013. The change in cash used for all acquisitions between GOOG’s 2013 10k filing and GOOG’s Q3’13 10Q filing is \$120m, which is the top end of our range and assumes all acquisitions were for robotics
  2. But since GOOG acquired more than just robotics companies, we can look over the last 6 months of 2013 to determine a more accurate scenario. GOOG’s total cash spent on acquisitions was \$147m in 2H’13
  3. If we back out Flexycore at \$23m, Flutter at \$40m, and Bump at \$35m, we estimate GOOG spent ~\$50m in robotics acquisitions in 2013. Having spent \$1.5 billion in total cash for acquisitions in 2013, GOOG’s robotics deals account for just 3-8% of its acquisition budget. In our opinion, this is hardly a major bet on the future of robotics by GOOG and suggests a large robotics acquisition the size of IRBT would be out of character

1) <http://www.nytimes.com/2013/12/04/technology/google-puts-money-on-robots-using-the-man-behind-android.html?adxnlnl=1&adxnlnl=1397565657-JKNa8xWma0jVn6CP7dbdgA>

2) <http://online.wsj.com/news/articles/SB10001424052702304724404577291903244796214>

3) <http://www.businessinsider.com/jeff-bezos-60-minutes-surprise-2013-12>



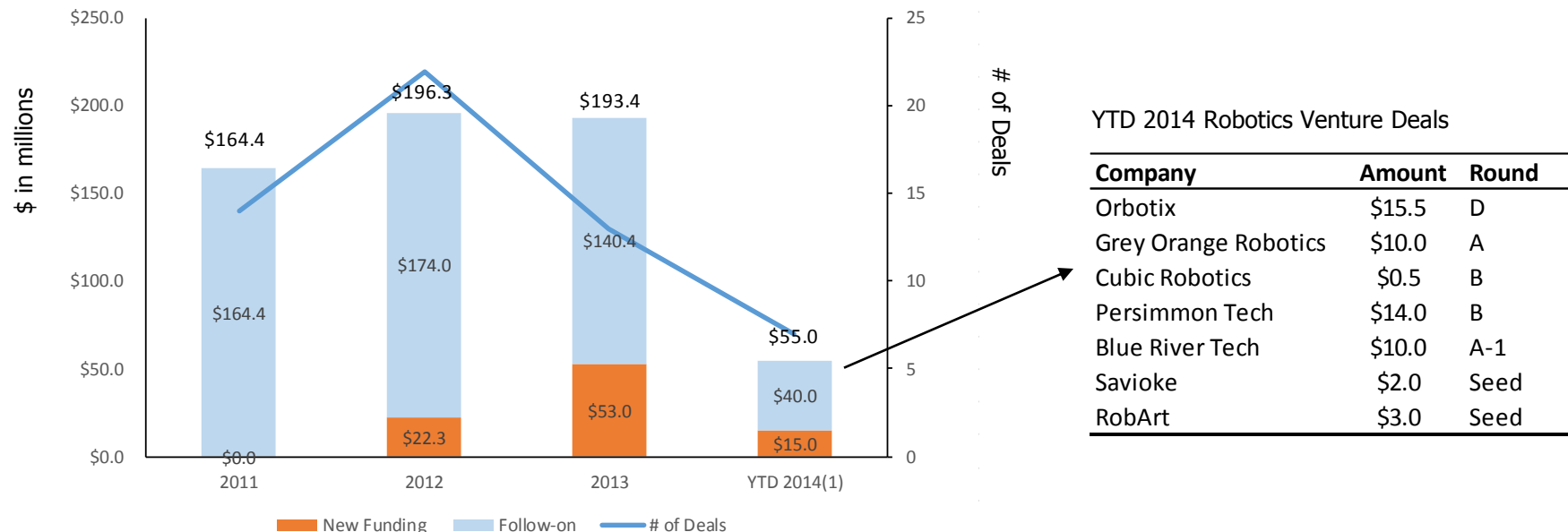


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# *Sign #6: Where Is All The Hot Venture Capital Money?*

## **Recent insights from venture capital trends doesn't suggest a rapid explosion of interest in robotics**

- Our analysis of publicly announced venture deals (debt+equity) illustrates that aggregate deal flow was stagnate at ~\$195m from 2012-2013. YTD through the end of April 2014, deal activity of \$55m implies a deceleration of venture financings (\$165m annualized, or -15% off trend)
- A majority of the capital has been deployed to fund follow-on Series B-D rounds. Funding for new robotics companies is approximately \$50m per annum
- Largest investments include Anki (2013: \$50m), Liquid Robotics (2013, \$45m), Restoration Robotics (2011: \$43m), MedRobotics (2013: \$34m), Rethink Robotics (2012, \$30m)
- Also, we note that two recent companies (CyPhy Works and Vgo) were started by former IRBT employees, apparently without the need to license any of IRBT's intellectual property to get started!



Sources: Hiszook.com and public information

1) YTD through 5/1/14



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## *Sign #7: A Speculative buy Buy BUY!*

### Cramer: Clean up with iRobot?

"There's not a lot of competition in the robotic cleaning products business"

**MAD MONEY**

**iRobot DO YOU?**

**MAD MONEY**

**Cramer: If Management Can Deliver On Its Guidance – I Think IRBT Is A Spec Worth Owning**

**DOW +42**

06:19 | 08:09

**Cramer's robot revolution**

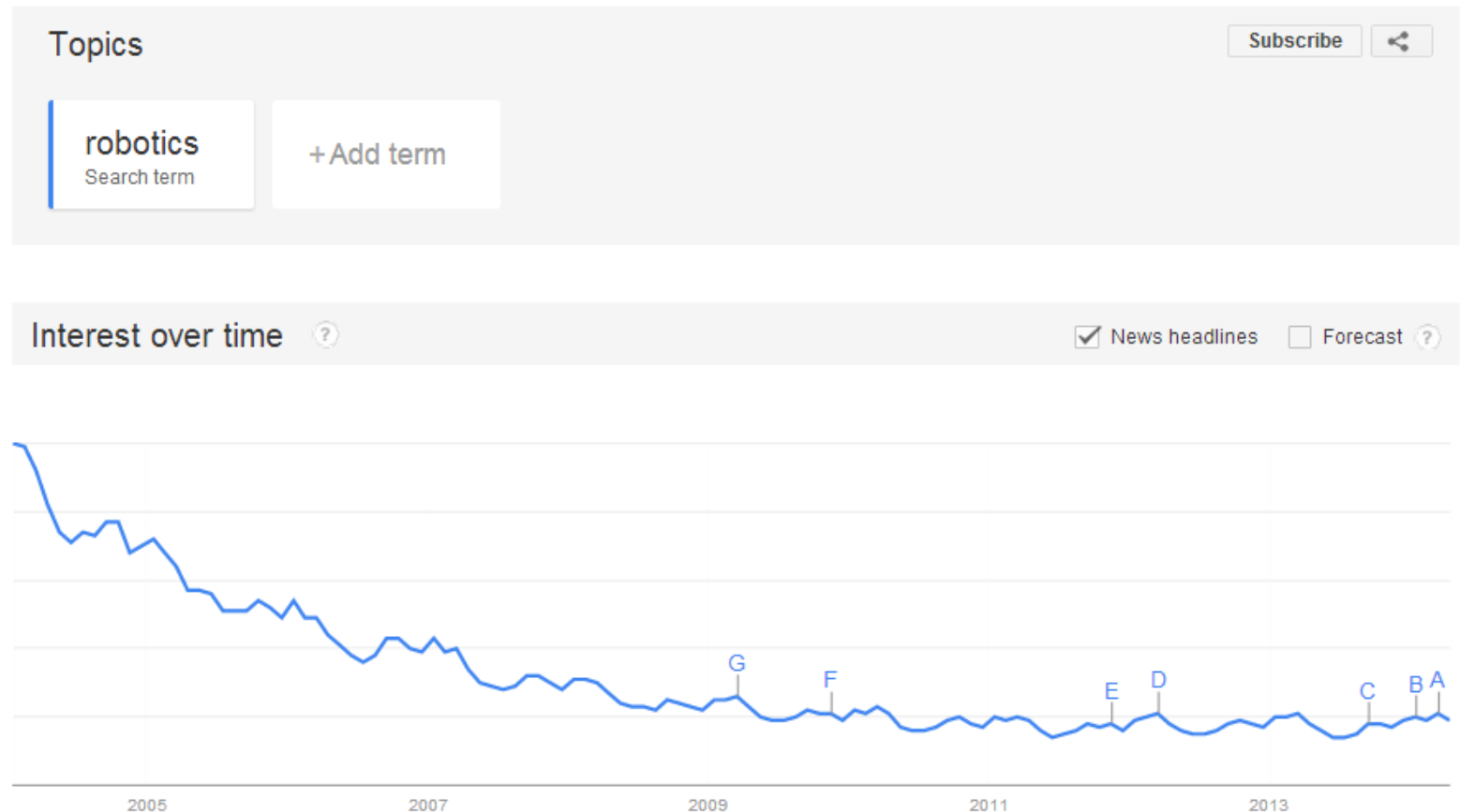
Friday, 17 Jan 2014 | 6:25 PM ET

<http://www.cnbc.com/id/101346261>



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# *According to Google Trends, Robotics is More Media Hype Than Actual Interest*



Source:  
<http://www.google.com/trends/explore#q=robotics>



# **Debunking the Bull Case for IRBT**



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# *The iRobot Investment Thesis*

## **The Company Says...**

### **Investment Thesis**

- 2014 revenue growth of 15 – 17%
- Home Robots will drive iRobot growth and profitability for the next couple of years
- Addressable markets are huge and growing
- Continued investment in high growth and emerging high potential remote presence business
- iRobot's foundational technologies enable significant & sustainable competitive advantage
- Commitment to generating profitable growth

March 2014

**iRobot**

21

Source: <http://investor.irobot.com/phoenix.zhtml?c=193096&p=irol-presentations>

## **...And The Cheerleaders Also Say**

- ▲ Remote presence growth is just starting
- ▲ Management is top notch and continues to execute for shareholders
- ▲ Intellectual property and patent portfolio is incredibly valuable
- ▲ IRBT is a takeover target; attractive to many potential acquirers
- ▲ Valuation is too cheap; average price target of \$44 in the next 12 months





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# *Powerful Housing Trends Are a Negative for IRBT's Home Vacuum Sales*

With the majority of IRBT's current and future success being tied to home robot sales, we believe it's important to monitor the trends in the US domestic housing sector. New home construction should stimulate demand for home cleaning supplies such as robotic vacuums. In the US, there's been a powerful trend towards more Multi-family vs. Single-family homes. On average, Multi-family homes are 40-50% smaller on a square-foot basis. Furthermore, the trend in the past six years has been for smaller Multi-family homes, with the average square-footage declining from 1,316 to 1,118 (15% decline). Overall, the trend of less housing square footage may reduce the implied demand for luxury home cleaning supplies such as robotic vacuums.

Housing Starts (% of Pre Recession Peak)

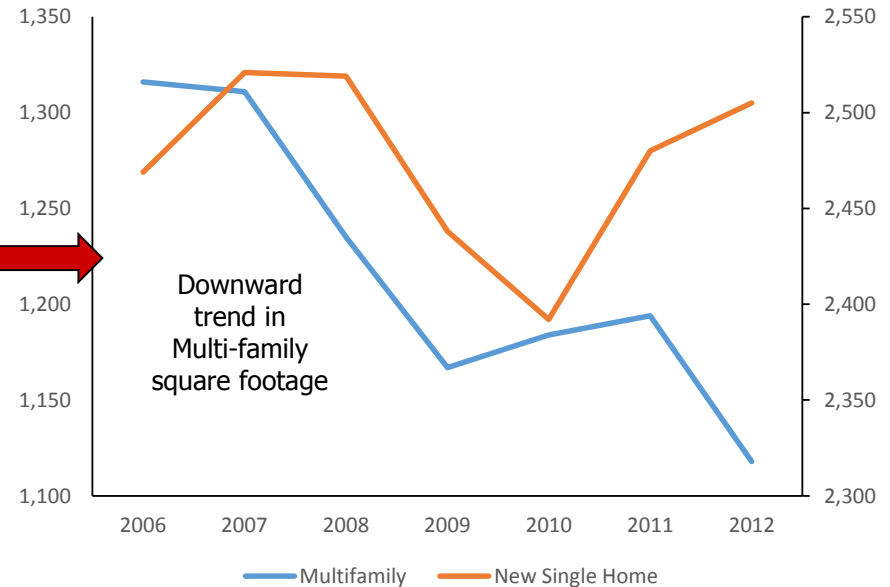
January 2006 - present  
(seasonally-adjusted index, January 2006 = 100)



Note: Shading indicates recession.

Source: Economics and Statistics Administration analysis of data from U.S. Census Bureau

Square footage (Multi-family vs. Single Family)



Source: <https://www.census.gov/construction/charts/highlights.html>



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# *New Consumer Research on Vacuums Has Negative Implications for IRBT*

In October 2013, Electrolux published a global survey on vacuuming. The study has profound implications for IRBT:

## 1. Robotic Vacuums Are the Least Popular Model

After a decade in existence, a 1% response rate is more indicative of failure than future opportunity

## 2. Brand Has Little Importance To Consumers

IRBT's increased ad spending may have little success

## 3. Brazilians Spend the Most Time Vacuuming

IRBT Has Had Limited Success in Latin America

### Most Important Factor When Making a Vacuum Purchase

- |                                |                          |
|--------------------------------|--------------------------|
| 1. dust pickup: 30%            | 9. clean exhaust air: 3% |
| 2. power (wattage): 16%        | 10. weight: 2%           |
| 3. quality/durability: 15%     | <b>11. brand: 2%</b>     |
| 4. easy handling: 9%           | 12. design: 1%           |
| 5. price: 9%                   |                          |
| 6. electricity consumption: 5% |                          |
| 7. sound level: 5%             |                          |
| 8. easy emptying: 3%           |                          |

### Which Cleaning Appliance Best Describes Your Primary Vacuum Cleaner?

- |                                     |           |
|-------------------------------------|-----------|
| 1. Bagged canister vacuum cleaner:  | 46%       |
| 2. Bagless canister vacuum cleaner: | 17%       |
| 3. Bagged upright vacuum cleaner:   | 6%        |
| 4. Bagless upright vacuum cleaner:  | 7%        |
| 5. Corded stick vacuum cleaner:     | 1%        |
| 6. Wet and dry vacuum cleaner:      | 4%        |
| 7. Steam cleaner:                   | 1%        |
| 8. Central vacuum cleaner:          | 3%        |
| <b>9. Robotic vacuum cleaner:</b>   | <b>1%</b> |
| 10. Does not own a vacuum cleaner:  | 9%        |

### Two countries that spend the most time vacuuming per session

- 1. In Brazil, 22% spend 1-2 hours cleaning with their vacuum, and another 3% spend 3-4 hours vacuuming**
2. In Portugal, 20% spend 1-2 hours cleaning with their vacuum, and another 3% spend 3-4 hours vacuuming.
3. Globally, an average of only 10% spend 1-2 hours vacuuming



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# Debunking IRBT's "Market Share Strength"

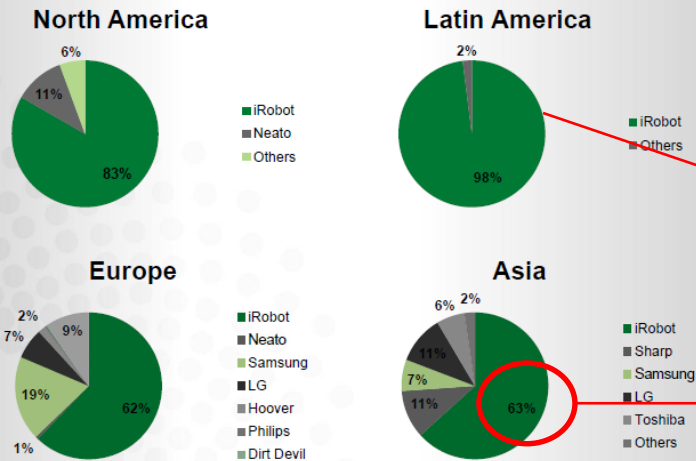
"IRBT owns its core product market (robotic vacuum cleaners) and will penetrate a huge addressable market."

- *Supporting Analyst*

In order for IRBT to fund its growth projects, management must convince investors that its core vacuum product is still relevant. In reality, we believe IRBT's market share is coming under pressure and it seems like IRBT isn't being transparent

## March 2014 Investor Presentation

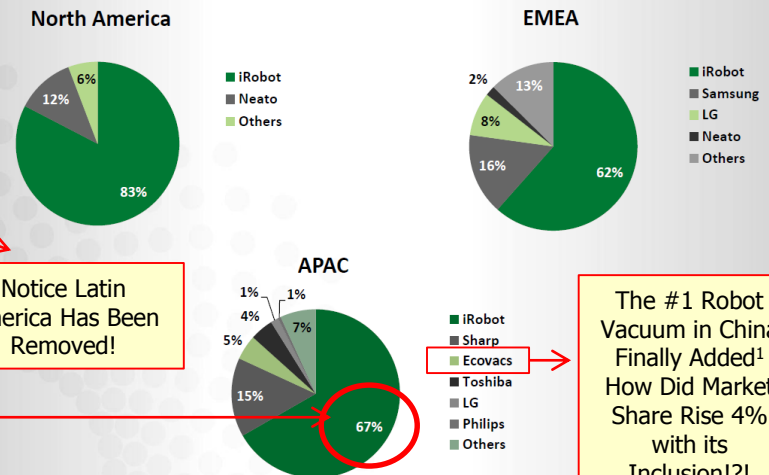
### Robotic Floor Care Global Market Share



\*Sources GfK & NPD  
 9/3/13 - Consumer Reports - Roomba 760 rated superior when compared with LG Hom-Bot Square LRV790R and Neato XV-21  
 March 2014  
 iRobot®  
 12

## May 2014 Analyst Day Presentation

### Robotic Vacuum Global \$ Market Share



Notice Latin America Has Been Removed!

The #1 Robot Vacuum in China Finally Added<sup>1</sup>  
 How Did Market Share Rise 4% with its Inclusion!?!  
 →

Source: 2013 NPD, GfK, iRobot internal data, Robotic Vacuum Cleaners >\$200 retail prices  
 5/7/2014  
 iRobot®  
 37

Notice How IRBT Now Cites Its Own "Internal Data"



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# *Major Concerns w/IRBT's Asia Growth Story*

Based on our research, we believe IRBT will face market share headwinds, especially in Asia where it claims to have its largest growth opportunity

Source	IRBT's May '14 Investor Presentation	Observation
GFK – Asia (emerging and developed)	67%	<b>How did IRBT boost its market share in Asia while finally acknowledging ECOVACS, China's largest player? Many of the cheap new vacuum robots are manufactured in Asia. How will iRobot succeed in a market where it doesn't have a natural advantage?</b>
GFK - West/Central Europe	62%	IRBT has been open about European struggles
NPD - US Market	83%	Foreign competitors such as Miele and ECOVACS are now selling directly into the US market. How will IRBT fair in maintaining market share?

## **What does this tell us about IRBT and what questions does it raise?**

- Should we be concerned that IRBT now cites its own "internal data" as a source on its latest market share slide
- International growth (especially China and Asia) are a key part of IRBT's growth story. How can we have confidence in this story when IRBT is up against local competition?
- Should we be concerned that IRBT's Asia market share claim of 67% (up from 64% just 7 weeks ago) might be diverging meaningfully from reality after IRBT finally acknowledges Ecovacs is a major Chinese competitor?
- Should we be concerned that IRBT's main distributors in Hong Kong (Homertek), Taiwan, and Japan (Sales on Demand Corp), have not posted any iRobot news/product updates in 11, 7, 15 months respectively<sup>1,2,3</sup>

1. <https://www.facebook.com/pages/iRobot-HK/135163876563467>

[http://www.homertek.com/news\\_n\\_events.html](http://www.homertek.com/news_n_events.html)

2. <http://www.salesondemand.co.jp/en/news.html>

3. [http://www.roombavac.com.tw/news/news\\_1.html](http://www.roombavac.com.tw/news/news_1.html)



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# *Don't Bet On Asia/China To Save IRBT*

## **Deteriorating Macro Situation In China > Negative For Housing > Negative For Housing/Consumer Appliances**

China released April 2013 property market data and the latest results showed concern. Looking at the data, measured on a YTD basis, we find: (1) New residential housing starts (in terms of floor-space) fell -24.5% YoY (this follows -27.2% YoY in March), suggesting weakness has only recently begun to take hold; (2) property sales fell -8.6% YoY (vs. -5.7% YoY in March), resulting in record inventories and declines in average prices; (3) land-area sold fell -15.8% YoY (vs. -10.2% YoY in March). Separately, the government released statistics on April's social lending, from which we observe credit grew slower than last year (aggregate lending was down -25%/-12% MoM/YoY in April) in another sign the Chinese government is intent on refraining from large stimulus packages constraining growth in the shadow banking sector

Source: <http://www.bloomberg.com/news/2014-05-18/china-home-price-growth-slows-in-more-cities-even-as-curbs-ease.html>

### **Electrolux (Sweden) – Declining Operating Profit in Asia**

MAJOR APPLIANCES ASIA/PACIFIC



Source: <http://group.electrolux.com/en/financial-data-355/>

### **Whirlpool – Struggling to Grow in Asia**

“Whirlpool Asia reported first-quarter net sales of \$166 million compared to \$187 million in the same prior-year period.

**Excluding the impact of currency, sales decreased approximately 4 percent.”**

Source: <http://investors.whirlpoolcorp.com/releasedetail.cfm?ReleaseID=842590>



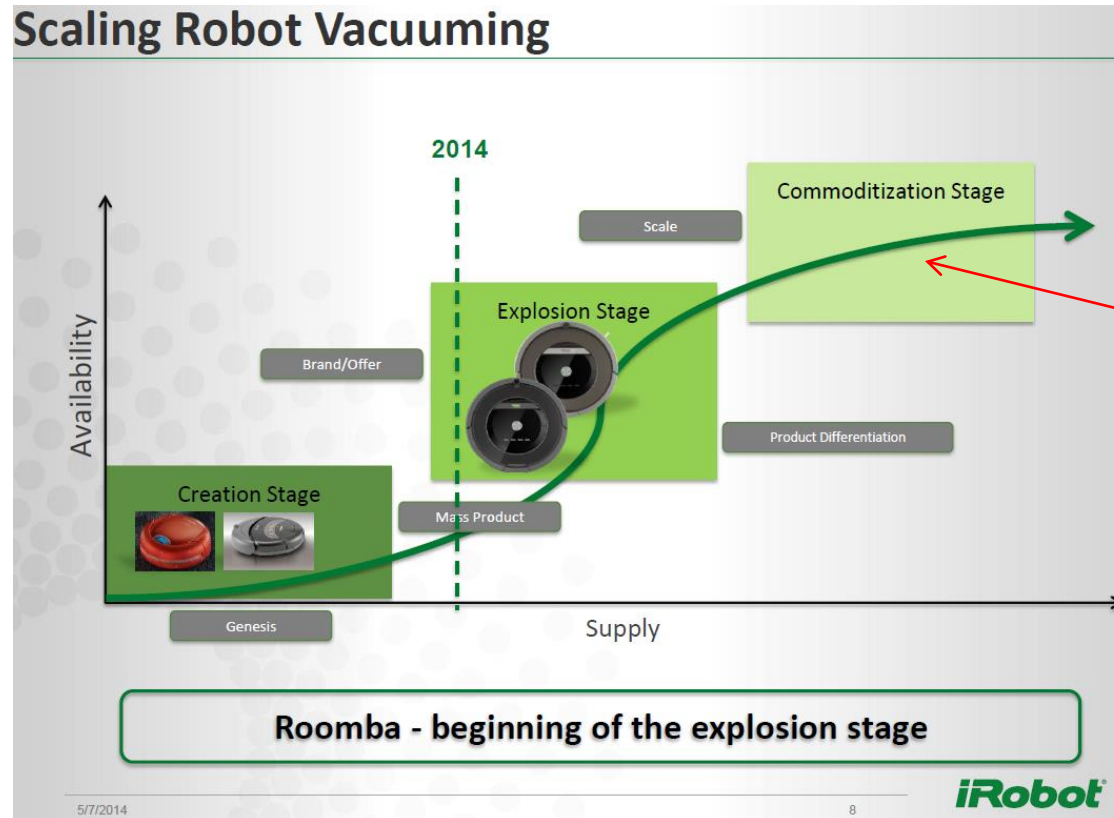


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# *Explosion or Commoditization Stage?*



IRBT would like you to believe they are in an “explosion” stage. However, with robotic vacuum cleaners now having been on the market for over a decade, our opinion is that its products are really in the commoditization stage.



Spruce Point  
Thinks The  
Robotic  
Vacuum  
Market is Here



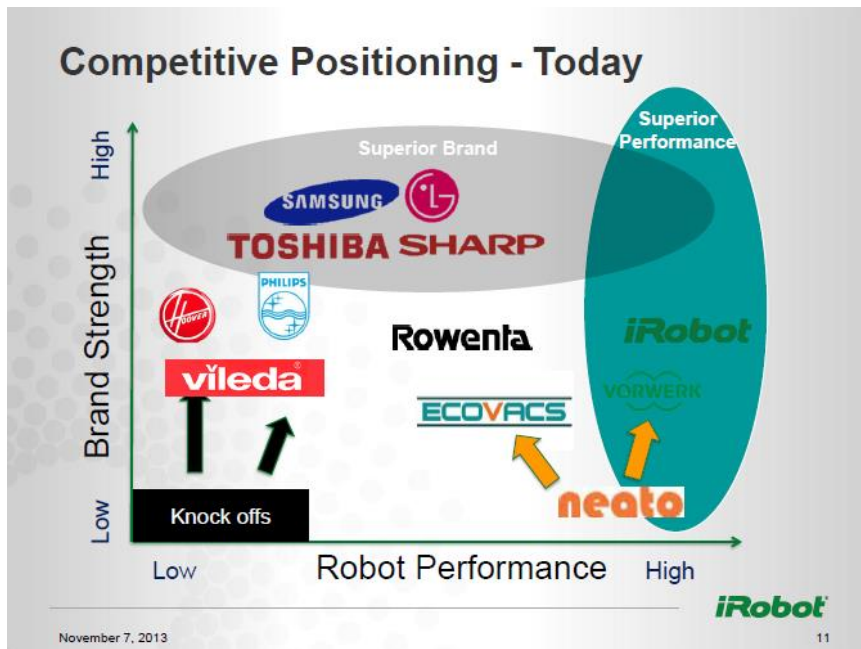
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# *IRBT's Competitive Landscape...?*



A key slide on IRBT's competitive positioning last seen its Dec 3, 2013 investor presentation has entirely disappeared from recent investor presentations.

## **Prior to December 3, 2013**



## **Afterwards > Removed Slide**

**Did the competition disappear?**

**Oh and what about these guys!!**

- |              |                |
|--------------|----------------|
| 1. Lilan Bot | 7. Techko Maid |
| 2. Klinsmann | 8. iTouchless  |
| 3. Laquilto  | 9. iClebo      |
| 4. Moneual   | 10. Infinuvo   |
| 5. Miele     | 11. Vorwerk    |
| 6. Ariete    | 12. AGAiT      |
| 7. Aztech    | 13. MyGenie    |



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# *More Competition Coming in a (*Explosive*) Rapidly Saturating Market*

**Within the US, robotic vacuum cleaners have been around for more than a decade, but the distribution channel and category appears to be getting even more crowded with lower cost alternatives**

- We believe large retail partners are more likely to have a greater product offering on their shelves in the robotic vacuum category; this is a big negative for IRBT
- In Jan 2013, Maneual USA announced it would enter the US market with a variety of carpeted/hard surface robotic vacuum cleaners<sup>1</sup>
- In Feb 2014 Dyson (approx \$2 billion in revenue) announced a joint venture with Imperial College London to ramp their vacuum robotics research<sup>2</sup>
- In March 2014, Miele announced it would enter the robot vacuum cleaner market with its Scout RX1 product<sup>3</sup>
- In April 2014, Neato announced it would introduce its new BotVac series, with prices currently in the \$400 range vs. IRBT's Roomba 880 in the \$700 range<sup>4</sup>
- Best Buy recently started carrying China's most popular model, ECOVACS, which is an addition to several others such as the Neato, Moneual and iTouchless. Amazon also carries ECOVACS<sup>5</sup>
- Other mass retailers such as WalMart, Target and Amazon sell a variety of other low cost robotic vacuums such as the Techko Maid, iClebo, Infinuvo and V-Bot at prices under \$100!

1) <http://www.businesswire.com/news/home/20130110005331/en/CES-2013-Moneual-USA-Launches-Rydis-Robot#.U2174fldWrM>

2) <http://mashable.com/2014/02/12/dyson-robot-vacuum-vision/>

3) [http://press.miele.com/de/en/press/article/artikel\\_058\\_2014.aspx](http://press.miele.com/de/en/press/article/artikel_058_2014.aspx)

4) <http://www.businesswire.com/news/home/20140314005160/en/Neato-Robotics-Announces-BotVac%E2%84%A2---Powerful-Intelligent#.U22ATfldWrM>

5) <http://www.bestbuy.com/site/ecovacs-robotics-deebot-3d-vacuuming-robot-gold/2750418.p?id=1219077230060&skuId=2750418>



Spruce Point Capital

# *Here's What Happens When Retailers Aren't Selling Your Product....*

From: "Bed Bath & Beyond" <[bedbathandbeyond@bedbathandbeyond.com](mailto:bedbathandbeyond@bedbathandbeyond.com)>

Date: May 2, 2014 at 7:57:50 AM EDT

Subject: Hurry, your 20% offer is waiting. Roomba® 780 does the cleaning for you. Dirt doesn't stand a chance.

Reply-To: "Bed Bath & Beyond" <[bedbathandbeyond.4608622@bedbathandbeyond.com](mailto:bedbathandbeyond.4608622@bedbathandbeyond.com)>

## **Our Opinion:**

Mid-Quarter  
Discounting  
Cannot Be  
Good! How  
Much Old  
Inventory In  
the Channel?

The image shows a promotional email from Bed Bath & Beyond. At the top is the Bed Bath & Beyond logo and navigation links: "Shop for College | Wedding & Gift Registry". Below this is a horizontal menu with categories: BED & BATH, KITCHEN, DINING, HOME DECOR, STORAGE & CLEANING, BABY & KIDS, SEASONAL, WHAT'S NEW, and CLEARANCE. A banner below the menu states "FREE SHIPPING ALL ORDERS OVER \$49" with a note "LIMITED TIME OFFER. VIEW DETAILS." The main content area features a large image of a black iRobot Roomba 780 vacuum robot on a light-colored wooden floor. To the left of the robot, text reads "REVOLUTIONIZE HOW YOU CLEAN" in green and black, followed by "ROOMBA® 780 DOES THE CLEANING FOR YOU. DIRT DOESN'T STAND A CHANCE." in black. To the right of the robot, a red circular badge says "20% OFF" in large white letters, with "ONE SINGLE ITEM ONLINE." and "OFFER EXPIRES 5/4/14" in smaller white text, and "VIEW DETAILS" at the bottom. A small blue badge above the robot says "DON'T FORGET IF YOU HAVEN'T ALREADY REDEEMED--". At the bottom left, the product name "iRobot® Roomba® 780 Vacuum Robot" is listed with the price "599.99" in green and "FREE SHIPPING" in red below it.




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# *New Consumer Robot Products Are Just Hype*

**IRBT frequently talks about more consumer electronics products like robotic lawn mowers and new robots that to clean clothes, to puff its product pipeline to investors**

But major OEMs like John Deere and Husqvarna already sell robotic mowers. And it appears no cares about laundry robots.

In our opinion, these product hypes are used by management and Street analysts as a  to keep investors interested

We note that the robotic lawn mower market appears small, over 5 years old, and already has a variety of competitors

John Deere



Husqvarna



Robomow



- 1) [https://www.deere.com/wps/dcom/en\\_INT/products/equipment/autonomous\\_mower/tango\\_e5/tango\\_e5.page](https://www.deere.com/wps/dcom/en_INT/products/equipment/autonomous_mower/tango_e5/tango_e5.page)
- 2) <http://www.husqvarna.com/us/products/robotic-mowers/husqvarna-robotic-mowers-for-homeowners/>
- 3) <http://www.robomow.com/>





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# Big Expectations For (*Growth*) In The Telepresence Market

**IRBT also promises to be a dominant player in the telepresence market with its RP-Vita and Ava 500 products (see below) in what are large (but unproven) addressable markets.**

**Immediate Market Focus**

RP- VITA  
Health Care Telepresence  
InTouch Health



Ava 500  
Video Collaboration  
Cisco



Annual video telemedicine market is expected to grow to \$1B by 2016\*. iRobot estimates that 10% will be robotic telemedicine.

Annual Personal Video market is expected to reach \$1.1B by 2017\*\*. iRobot estimates that Video Collaboration market will be 10%.

\* 2011 report from InMedica – unit of IMS Research

\*\* IDC

**Partnering to address broad market opportunity**

**iRobot**

March 2014

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**Note:**  
Citing a 3yr  
Old Report  
Why?

**Note:** Previous  
Presentations  
Called this  
"Enterprise  
Telepresence"

+

**Note:**  
No Date on  
Research  
Citation



**Why the  
Changes? Keep  
Scrolling Fwd to  
Find Out!**

Source: <http://investor.irobot.com/phoenix.zhtml?c=193096&p=irol-presentations>



Spruce Point Capital

# *What IRBT Doesn't Tell Investors About Its (*Growth*) Telepresence Market*

## **Cheaper competitive products placed in healthcare, education and enterprise channels already exist**

- They may not be as advanced (i.e. need for remote control), but are cheaper
- VGo offers a solution for 1/10th of the cost of IRBT's solution. Cost of IRBT's AVA is \$69,500 vs. VGo at \$6,995 (which includes \$5,995 ASP + \$100 annual subscription fee + \$900 embedded 4G LTE connection)<sup>1</sup>
- VGO was founded by a former IRBT officer, has been in existence for 7 years, and has sold more than 1,500 robots into the healthcare, education and enterprise channels. We believe customers find the VGo robot a better value proposition with more personal functionality vs. IRBT
- A recent lawsuit between VGo and InTouch found that InTouch's patent to be invalid. This is important because InTouch distributes IRBT technology... the very technology that IRBT claims to be patent proof<sup>2</sup>
- Double Robotics also offers a solution for \$2,499<sup>3</sup>

### **VGo**



### **Double Robotics**



1) <http://www.vgocom.com/how-much-does-vgo-cost>

2) <http://www.vgocom.com/vgo-prevails-robotic-telepresence-patent-lawsuit-brought-intouch-health>

3) <http://www.doublerobotics.com/>



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# *What IRBT Doesn't Tell Investors About its (**Growth**) Telepresence Market (cont'd)*

## Enterprise Video+Telepresence w/Cisco

### The Enterprise Video and Telepresence Market is Contracting<sup>1</sup>

- According to IDC, the very source IRBT references, the worldwide enterprise videoconferencing and telepresence market **shrank by 18.9% in from 2012 to 2013**
- Cisco's 4Q13 results showed a 2.1% quarter-over-quarter revenue increase, **but a -20.8% year-over-year decline in video equipment revenue**
- IDC believes that among the challenges customers are currently trying to work through are a market transition and determining exactly when and how to provision their video deployments as more software-centric and cloud-based service offerings become part of the enterprise video market landscape

## Healthcare Telepresence

### IRBT Cites a 2011 inMedica/IHS Report; Recent Updates Point To A More Sober View

- According to a 2013 IHS press release, "*US telehealth revenues, will jump from \$174.5 million last year to \$707.9 million in 2017,*" and "*the United States leads telehealth growth worldwide, and has 75% of the world's telehealth patients*"<sup>2</sup>
- **Recall:** IRBT's recent presentation claims \$1 billion of revenue by 2016. Thus, it appears the forecasts produced in the 2011 report have proven overly optimistic
- Moreover, the abstract to IHS's 2014 Telehealth Report starts with a sober intro, "*The World Market for Telehealth has yet to reach its tipping point. Poor implementation, low reimbursement levels, and lack of physician support are some of the barriers that have held telehealth penetration at a slow rate.*"<sup>3</sup>

1) IDC, Feb 2014: <http://www.idc.com/getdoc.jsp?containerId=prUS24700514>

2) IHS, Feb 2013: <http://mobihealthnews.com/20322/inmedica-predicts-six-times-as-many-us-telehealth-patients-by-2017/>

3) IHS, Dec 2013: <http://technology.ihs.com/449217/telehealth-report-2014>

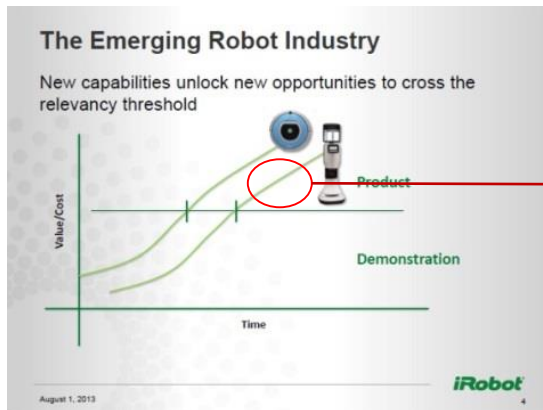


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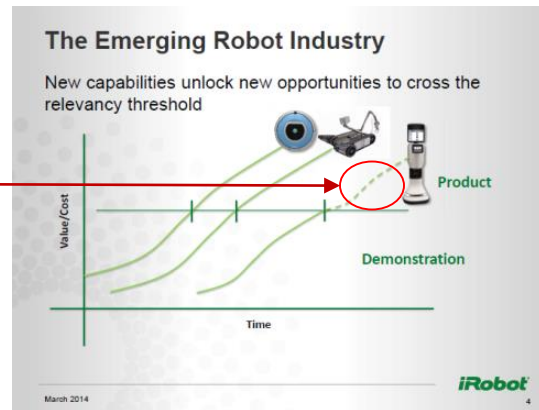
# *Sleightness of Hand....?*

- IRBT has been telling investors about their telepresence opportunity for over 2 years. Thus far, they've produced limited unit sales and in March 2014 subtly changed its investor presentation. This month, IRBT omitted it!

## August 2013



## March 2014



## May 2014 Analyst Day

**Slide Removed:  
Does IRBT Not Want  
To Be Held  
Accountable To A  
Timeline Anymore?**

- Telepresence needs an infrastructure that is decades from being built. For telepresence to work, a location needs to be on an integrated network (which conveniently allows IRBT to participate in the Internet of Things hype)
- The gimmick is that like the vacuum cleaner, Ava can use a combination of 3D cameras, laser, and sonar to create a virtual map of its environment after which, it can then make its own way around (vs. requiring direct remote control). How does it open doors or use stairs?
- We encourage analysts and investors to monitor app downloads for Ava 500 as a proxy for customer interest levels. There are sources such as appannie.com that can be used for this purpose. To date, we find a very limited download history of only a few thousand, mainly from European sources. Our result is at odds with what IRBT has told investors that Ava 500 had been launched in the "US, Canada and limited European markets"<sup>1</sup>



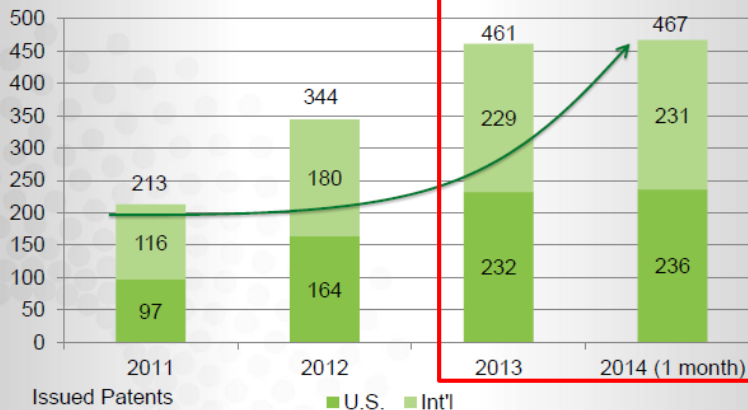
Spruce Point Capital

# *IRBT's Intellectual Property (IP) Number Fudging and Hidden Value?*

- Recently, IRBT began touting its “formidable” patent portfolio, and referencing the accolades it received from The Patent Board™ for its Top 5 ranking within the electronics and instruments sector. To date, there has not been a comprehensive patent portfolio analysis done by the sell side, and IRBT has never publically quantified the value of its portfolio
- While we agree that The Patent Board™ is a high quality, independent provider of patent scoring information, we believe investors would be served to purchase the report for further granularity behind the ranking
- **We also caution investors that IRBT does not appear to have good internal controls on its patent portfolio:**  
To illustrate, the company recently backdated its 2013 patent total by +64 (461 to 525) and increased its YTD 2014 total by 91 (467 to 558) in just seven weeks. The majority of the discrepancy is accounted for in the international patent portfolio

## March 2014

### Formidable Patent Portfolio



iRobot ranked #5 by the Patent Board™ for having one of the top patent portfolios within the electronics and instruments industry

iRobot

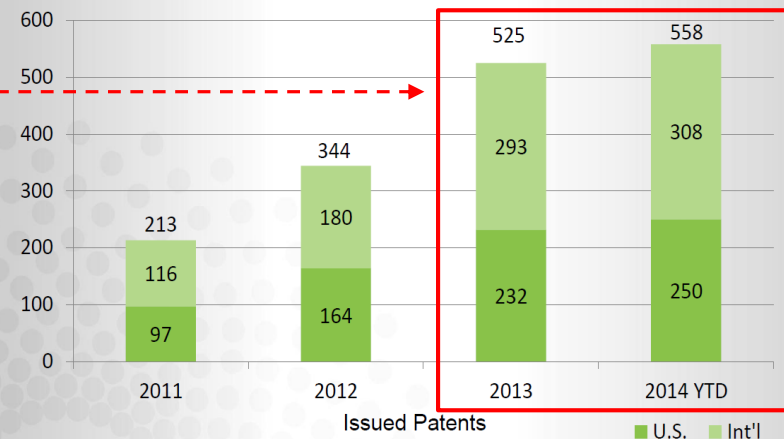
March 2014

6

## May 2014 Analyst Day

### Patent Portfolio

Creating patents out of thin air??



iRobot ranked 5<sup>th</sup> overall by the Patent Board™ for having one of the strongest patent portfolios in electronics and instruments industry

iRobot

5/7/2014

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# *A Closer Look At The Patent Board's Analysis*

## **About the Patent Board:**

The Patent Board provides analytics that can be useful in providing insights into assessing the patent quality and overall strength of patents and patent portfolios. The Patent Board does not do patent valuations and makes no claim that the quality or strength of a patent portfolio is directly or indirectly related to a patent portfolio's value.

## **The Analysis Says That:**

- IRBT has a fairly small portfolio compared with many electronic and instrument companies. IRBT acquired patents from its acquisition of Nekton Research (2008) and Evolution Robotics (2012). They were also assigned 2 patents from Umagination Labs (2012) for gutter cleaning. IRBT's portfolio is young and growing and has received numerous citations. IRBT's peak patent filing and issuance years were 2007 and 2013, respectively
- The strongest part of the portfolio is in Home Cleaning (which may be evidenced by the large number of internal citations), while IRBT is writing more patents in Defense (there are more external citations in Defense)

## **However We Should Note:**

- A majority of the total citations are internal (meaning IRBT cites its own patents), and started increasing in 2012-2013 along side an increase in the company's patent issuance trend
- The Patent Board's analysis did not include foreign issued patents

## **Our Own View:**

- A large patent portfolio is good, but a majority of IRBT's patents are tied to home cleaning / consumer electronics, an industry that is always innovating. We believe companies with greater financial resources will be able to "out-innovate" IRBT in the long-run, which would make current patents obsolete
- A large number of citations is generally good, but a preponderance of internal citations undermines its importance. It should be pointed out that a high degree of internal citations are indicative of having a stronghold on the area or areas to which the patents relate. Since international growth is key to the bull case, it is yet determined how successful IRBT will be defending itself in foreign geographies





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# *A Few Other Thoughts on IRBT's IP*

## **There are other indirect signs that IRBT lacks influential and highly prized IP in its portfolio**

- If its patents were so valuable, wouldn't IRBT:
  1. Need to defend itself with litigation frequently against its mounting competitors?
    - IRBT spent almost nothing on litigation expense: \$155k and \$1.2m in 2012 and 2013<sup>1</sup>
    - Why did the company wait until late 2013 to defend itself and tout the defense through first ever press releases against a Chinese company<sup>2</sup>
  2. Look to monetize its IP?
    - IRBT currently has zero licensing revenue, and doesn't appear to have a strategy to extract any near term value
    - Numerous former IRBT employees have left to join new robotics start-ups, yet it doesn't appear that any have required licensing its patents
- Is IRBT the next great hidden patent value stock like Eastman Kodak or the next Motorola Mobility? Time will tell, but as we have suggested, having over 200 patents internationally has not prevented European market share losses. The same results may occur in both North America and Asia
- At its May 2014 Analyst Day, investors were looking for a pathway to monetize the portfolio. However, IRBT appeared to be unable to communicate a clear strategy, and cited high 'costs' as an excuse

1) <http://investor.irobot.com/phoenix.zhtml?c=193096&p=irol-newsArticle&ID=1897317&highlight=>

2) <http://investor.irobot.com/phoenix.zhtml?c=193096&p=irol-newsArticle&ID=1852644&highlight=>



# **Organizational Turmoil and Milking the Cow**



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# *Organizational (Dys)Function?*

## **iRobot Changes Leadership in Government and Industrial Robots Division**

Feb 16, 2012

Robert (Knob) Moses is leaving iRobot to pursue other interests. Moses will remain with iRobot through a transition period.

IRBT has named Tim Trainer as interim general manager of its Government and Industrial Robots division

## **iRobot Aligns for the Next Stage of Growth**

Feb 28, 2012

Home Robots President, Jeffrey Beck Named Chief Operating Officer (**note**: resigned in Nov 2013); Joseph Dyer Named Chief Strategy Officer (**note**: resigned in October 2013, noted in proxy statement)

## **iRobot Acquires Evolution Robotics, Inc, Names New CTO**

Sept 17, 2012

Paolo Pirjanian, CEO of Evolution Robotics, will be joining iRobot as Chief Technology Officer, continuing to be based in the Pasadena office.

## **iRobot Appoints Christian Cerda and Alison Dean as CFO**

March 6-11, 2013

Cerda to lead global sales, marketing and product development for fast-growing consumer robots business; Dean succeeds John Leahy, who is stepping down after four years to join a late-stage private company

## **iRobot Streamlines Leadership for Operational Efficiency**

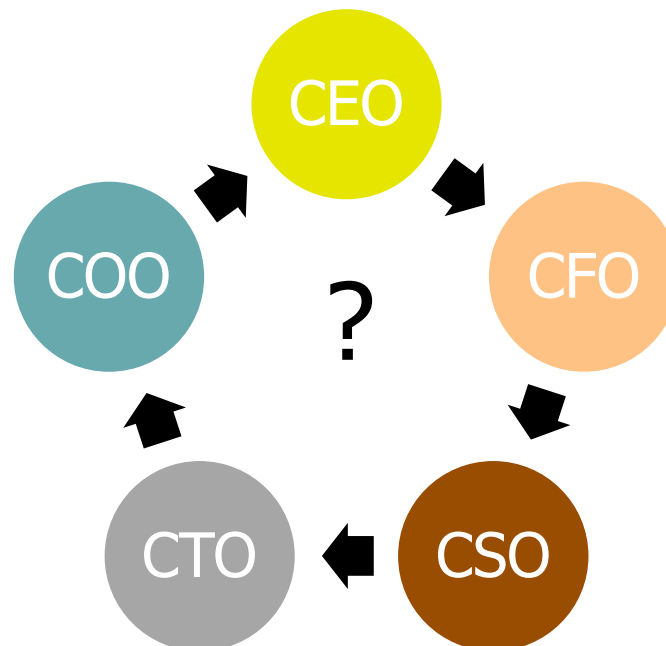
Nov 25, 2013

Christian Cerda, Frank Wilson and Youssef Saleh, iRobot's business unit leads, now report directly to Colin Angle

Paolo Pirjanian, CTO, will now lead the engineering force in addition to focusing on strategic tech development

Alison Dean, EVP and CFO, will now oversee manufacturing and supply chain in addition to leading the company's financial and information technology operations.

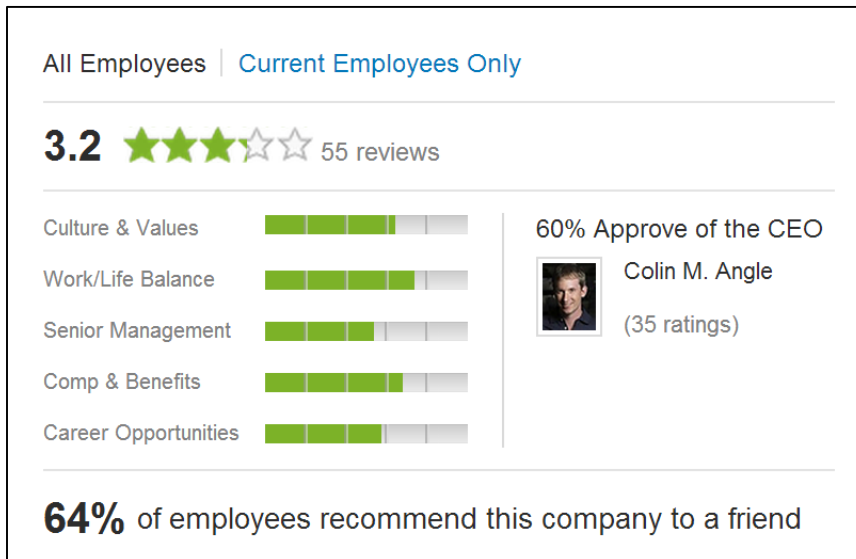
Jeff Beck resigning immediately as COO and will participate in a transition period through the end of 2013.





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# Leads to Mediocre Glassdoor Reviews



*"Super political. **Constant lies from management. Lots of random layoffs. Stagnant product line.** Unappreciated employees. Glass ceiling once you've been there a few years." – March 15, 2014*

*"Too many processes force low value work. Lots of management changes & re-organizations. **Unrealistically aggressive program timelines** without sufficient resources causes unnecessary stress and sets teams up for failure. Too many programs planned for available resources." – Feb 4, 2014*

*"Constant exodus of highly skilled engineering talent due to poor management. **Major issues with management include: lack of honesty, poor decision making, constant reorganizations and layoffs, and absence of career growth for skilled engineers with proven track records.** I also find iRobot to be a high anxiety workplace.." – Sept 28, 2013*

*"**Constant misinformation and lies coming from the Engineering management team** (C3 and Hiten S.). Numerous, highly talented, engineers quitting. Constant layoffs, moves and reorganizations. **Product line is stagnant.**" – Nov 16, 2013*



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# *What Incentives Does Management Have; Insiders Are Selling Stock Hand-Over-Fist*



Since coming public in 2005, insider ownership has declined dramatically from heavy liquidations in almost every single year. Meanwhile, iRobot's diluted share count has increased ~3.0% per annum. The Company has announced two share repurchase programs of \$25m and \$50m in 2013 and 2014, yet has never repurchased a single share!

## Beneficial Ownership of iRobot Insiders

million of shares

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Common Stock Owned	13.5	12.7	9.2	7.2	6.2	5.2	3.7	2.2	2.3	0.8
Options & Restricted Stock	0.6	0.7	0.4	0.5	0.6	1.0	1.0	0.9	1.1	0.7
<b>Total Insider Ownership</b>	<b>14.1</b>	<b>13.3</b>	<b>9.6</b>	<b>7.8</b>	<b>6.8</b>	<b>6.2</b>	<b>4.8</b>	<b>3.1</b>	<b>3.4</b>	<b>1.5</b>
Common Shares Outstanding	23.3	23.4	24.2	24.6	24.9	25.2	26.3	27.4	28.0	29.4
Options & Restricted Stock	0.6	0.7	0.4	0.5	0.0	0.0	0.0	0.0	1.1	0.7
<b>Total Diluted Shares</b>	<b>23.8</b>	<b>24.1</b>	<b>24.6</b>	<b>25.1</b>	<b>24.9</b>	<b>25.2</b>	<b>26.3</b>	<b>27.4</b>	<b>29.1</b>	<b>30.1</b>
<b>Insider Holdings / Total Dil. Shares</b>	<b>59.1%</b>	<b>55.3%</b>	<b>39.0%</b>	<b>31.0%</b>	<b>27.1%</b>	<b>24.5%</b>	<b>18.1%</b>	<b>11.4%</b>	<b>11.8%</b>	<b>4.9%</b>

Source: iRobot Proxy Statements, ownership period as of end of March

CEO's ownership down  
65% since 2009;  
Down 24% in past 2yrs

Recently large decline  
in ownership



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# *With Little Equity At Risk...Milk The Cow!*



<http://www.modernbutlers.com/wp-content/uploads/2009/05/cashcow.jpg>





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# Milk The Cow: Gaming The Comp Targets?

Adjusted EBITDA bonus targets fell by 25-30% in 2013 from the range of \$77-\$103m to \$53 - \$77m in 2012. However, the corresponding revenue range fell by just 3-5% over the same period. The Company also increased its weighting to Adj. EBITDA from 60% to 70%. This financial presdigation appears to have allowed management to increase its cash incentive compensation by 469% on lower goals!!

## 2013 Goals

Performance Measure	Weighting	Performance Goal		
		Threshold	Target	Maximum
Adjusted EBITDA	70%	\$53.2 million	\$59.1 million	\$76.8 million
Revenue	30%	\$391.5 million	\$489.4 million	\$636.2 million

Notice Increased Weighting to Adj. EBITDA

Notice the Dramatically Lower EBITDA Goals in 2013

2013 Result	Bonuses Paid
Revenue: \$487.4m	\$2.72m
Adj EBITDA: \$75.3m	

Remember this EBITDA number!!

## 2012 Goals

Performance Measure	Weighting	Performance Goal		
		Threshold	Target	Maximum
Adjusted EBITDA	60%	\$76.9 million	\$85.4 million	\$102.5 million
Revenue	40%	\$404.4 million	\$505.5 million	\$606.6 million

## 2012 Result

Revenue: \$436.2m  
Adj EBITDA: \$52.5m

## Bonuses Paid

\$0.47m

Note: Adj EBITDA excludes cash incentive comp

2014 Proxy: <http://www.sec.gov/Archives/edgar/data/1159167/000115916714000012/a2014proxy.htm>

2013 Proxy: <http://www.sec.gov/Archives/edgar/data/1159167/000115916713000007/a2013proxy.htm>



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# Milk The Cow: Making Up EBITDA Too?



On the previous slide, we observed that management paid itself on \$75.3m of 2013 Adj. EBITDA (near the maximum goal target), yet its own calculation was \$62.2m. Management does not explain this \$13.1m of Adj. EBITDA discrepancy used to reap \$2.7m of bonuses. We will also show later that IRBT's Adj. EBITDA has been artificially enhanced through one-time warranty adjustments which management appears to have also generously compensated itself for at shareholders' expense!

## Exhibit A

### iRobot Corporation Adjusted EBITDA Reconciliation to GAAP (unaudited, in thousands)

For the twelve months ended

	December 28, 2013	December 29, 2012
Net income	\$ 27,641	\$ 17,297
Interest income, net	(660)	(1,016)
Income tax expense	4,774	8,310
Depreciation	8,077	9,898
Amortization	4,092	1,774
EBITDA	43,924	36,263
Stock-based compensation expense	13,409	10,983
Merger and acquisition expense	400	1,404
Net intellectual property litigation expense	1,202	155
Restructuring expense	3,296	3,679
Adjusted EBITDA	\$ 62,231	\$ 52,484

**Figure is \$13.1m  
Lower Than 2013  
Compensation Target**

**Figure matches 2012  
Adj EBITDA  
Compensation Target**



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# *Milk the Cow: Executive Compensation Spiraling Out of Control*



**We calculate that 35-50% of Adjusted Operating Income (EBIT) has gone to IRBT's executive management in the past two years, whereas it was only 15% in 2011. We view this as a warning sign of executive compensation becoming disconnected from operating performance.**

Executive	Role	2011	2012	2013
Colin Angle	CEO	\$2,736,457	\$3,333,680	\$3,496,074
Alison Dean	CFO	--	--	\$1,523,563
R. Campanello	SVP. HR	\$508,050	\$1,018,736	\$973,852
P. Pirjanian	CTO	--	--	\$971,343
Glen Weinstein	Chief Legal	--	\$1,133,221	\$998,003
John Leahy	Fmr CFO	\$1,324,186	\$1,326,100	\$116,513
Jeff Beck	Fmr COO	\$1,106,971	\$2,081,041	\$1,875,057
Joe Dyer	Fmr CMO	\$1,345,631	\$1,201,033	--
Robert Moses	Fmr G&I President	\$958,530	--	--
<b>Total Executive Compensation (1)</b>		<b>\$7,979,825</b>	<b>\$10,093,811</b>	<b>\$9,954,405</b>
Reported Operating Income (EBIT)		\$53,323,000	\$25,172,000	\$32,618,000
Less: Warranty Reversal Gain		\$0	(\$11,000,000)	(\$7,900,000)
Add: Restructuring Charge		\$1,015,000	\$3,679,000	\$3,296,000
Add: Merger Expense		\$41,000	\$1,404,000	\$400,000
<b>Adjusted EBIT</b>		<b>\$54,379,000</b>	<b>\$19,255,000</b>	<b>\$28,414,000</b>
<b>Total Executive Comp (% of Adj EBIT)</b>		<b>15%</b>	<b>52%</b>	<b>35%</b>

Source: IRBT proxy and financial statements

1) Includes base salary, cash incentive bonus, stock/option expense and perks

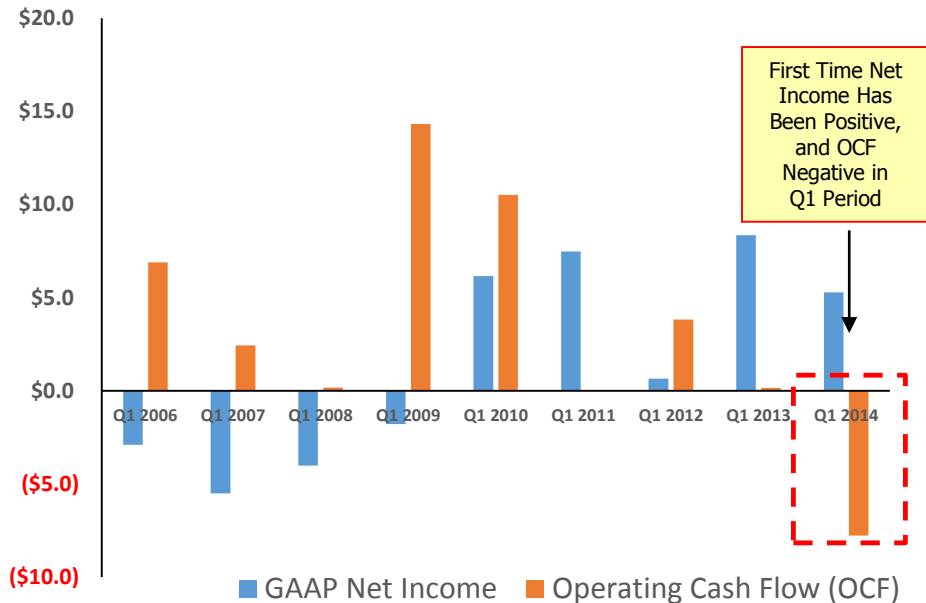


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# Milk the Cow: Fat Compensation Drives First Q1 Cash Flow Burn in 8 Years!



IRBT has historically reported positive operating cash flow (OCF) in its first quarter results. However, in Q1 2014, IRBT reported its first ever Q1 OCF burn in over 8 years (and the only time its GAAP Net Income has been positive, while its OCF has been negative!) Not surprisingly, one of the biggest drivers for this change is accrued compensation payments, which increased by \$7.0 million year-over-year. However, it is entirely possible the compensation rise is just a cover for bigger problems lurking in inventory and accounts receivables, which we'll explore in the coming slides.



Source: Company 10Q filings

	March 29, 2014	March 30, 2013
<b>Cash flows from operating activities:</b>		
Net income	\$ 5,280	\$ 8,355
<b>Adjustments to reconcile net income to net cash</b>		
Depreciation and amortization	3,142	3,284
(Gain)/loss on disposal of assets	(10)	182
Stock-based compensation	3,078	2,929
Deferred income taxes, net	1,912	(449)
Tax benefit of excess stock-based compensation deductions	(2,231)	(43)
Non-cash director deferred compensation	11	11
<b>Changes in operating assets and liabilities — (use) source</b>		
Accounts receivable	2,808	2,133
Unbilled revenue	(75)	(1,056)
Inventory	4,080	4,805
Other assets	(3,588)	(983)
Accounts payable	(7,924)	(12,711)
Accrued expenses	(1,399)	379
Accrued compensation	(11,862)	(4,867)
Deferred revenue and customer advances	(665)	(2,628)
Long term liabilities	(319)	815
Net cash provided by (used in) operating activities	(7,762)	156

Note: Almost No Change In AR+Inventory Despite a 17% YoY Inc in Home Robots (7.5% YoY inc in Total Sales)



# **Fuzzy Accounting**



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# *Fuzzy Inventory Accounting*



In 2010, IRBT made a change to its inventory valuation section to make it appear as if there are no seasonal factors or short product life cycles that would lead to an inventory write-down for its consumer products. As we'll show in the coming slides, IRBT has made a number of unusual transfers from its inventory accounts that peaked in 2010, are starting to occur again, and could be used to avoid taking inventory write-downs.

## Prior to Feb 2010

We value our inventory at the lower of the actual cost of our inventory or its current estimated market value. We write down inventory for obsolescence or unmarketable inventories based upon assumptions about future demand and market conditions. **Because of the seasonality of our consumer product sales and inventory levels, obsolescence of technology and product life cycles, we generally write down inventory to net realizable value based on forecasted product demand.** Actual demand and market conditions may be lower than those that we project and this difference could have a material adverse effect on our gross margin if inventory write-downs beyond those initially recorded become necessary. Alternatively, if actual demand and market conditions are more favorable than those we estimated at the time of such a write-down, our gross margin could be favorably impacted in future periods.

## Today

We value our inventory at the lower of the actual cost of our inventory or its current estimated market value. We write down inventory for obsolescence or unmarketable inventories based upon assumptions about future demand and market conditions. Actual demand and market conditions may be lower than those that we project and this difference could have a material adverse effect on our gross margin if inventory write-downs beyond those initially recorded become necessary. Alternatively, if actual demand and market conditions are more favorable than those we estimated at the time of such a write-down, our gross margin could be favorably impacted in future periods.





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# Fuzzy Accounting: Reclassifying Inventory to PP&E

In our opinion, IRBT has made unusual supplemental disclosures in its Cash Flow Statement. IRBT has reclassified “inventory” to “property, plant and equipment.” In its recent 2011-2013 10K filings, we also observe that IRBT appears to be covering-up these past transfers by marking prior year movements through 2011 at zero! A possible motivation for these inventory transfers would be to overstate gross margins by moving high cost inventory to PP&E, or eliminate the need to write-down obsolete/slow-moving inventory in the current period, and instead depreciate the expense over a 3-5 year period. The net effect from either of these moves would be to overstate current period earnings.

## 2013 10K Annual Report (1)

### Supplemental disclosure of cash flow information

	Fiscal Year Ended		
	December 28, 2013	December 29, 2012	December 31, 2011
	(In thousands)		
Cash paid for income taxes	\$ 7,235	\$ 11,663	\$ 8,046
Non-cash investing and financing activities:			
Transfer of inventory to property and equipment	223	—	—
Additions of property and equipment included in accounts payable	572	—	—

← What is this?

We observe that IRBT’s 2012 and 2011 10K Annual Reports both show zero movements from inventory to PP&E (2, 3). However....

## Q3 2011 10Q Financial Filing (4)

### Supplemental disclosure of cash flow information:

Cash paid for income taxes

### Supplemental disclosure of noncash investing and financing activities:

During the nine months ended October 1, 2011 and October 2, 2010, the Company transferred \$847 and \$1,945, respectively, of inventory to fixed assets.

Source:

1. 2013 10K: <http://www.sec.gov/Archives/edgar/data/1159167/000115916714000007/irbt-12282013x10k.htm>
2. 2012 10K: <http://www.sec.gov/Archives/edgar/data/1159167/000144530513000226/irbt-12292012x10k.htm>
3. 2011 10K: <http://www.sec.gov/Archives/edgar/data/1159167/000119312512067977/d264376d10k.htm>
4. Q3’11 10Q: <http://www.sec.gov/Archives/edgar/data/1159167/000095012311095243/b87817e10vq.htm>

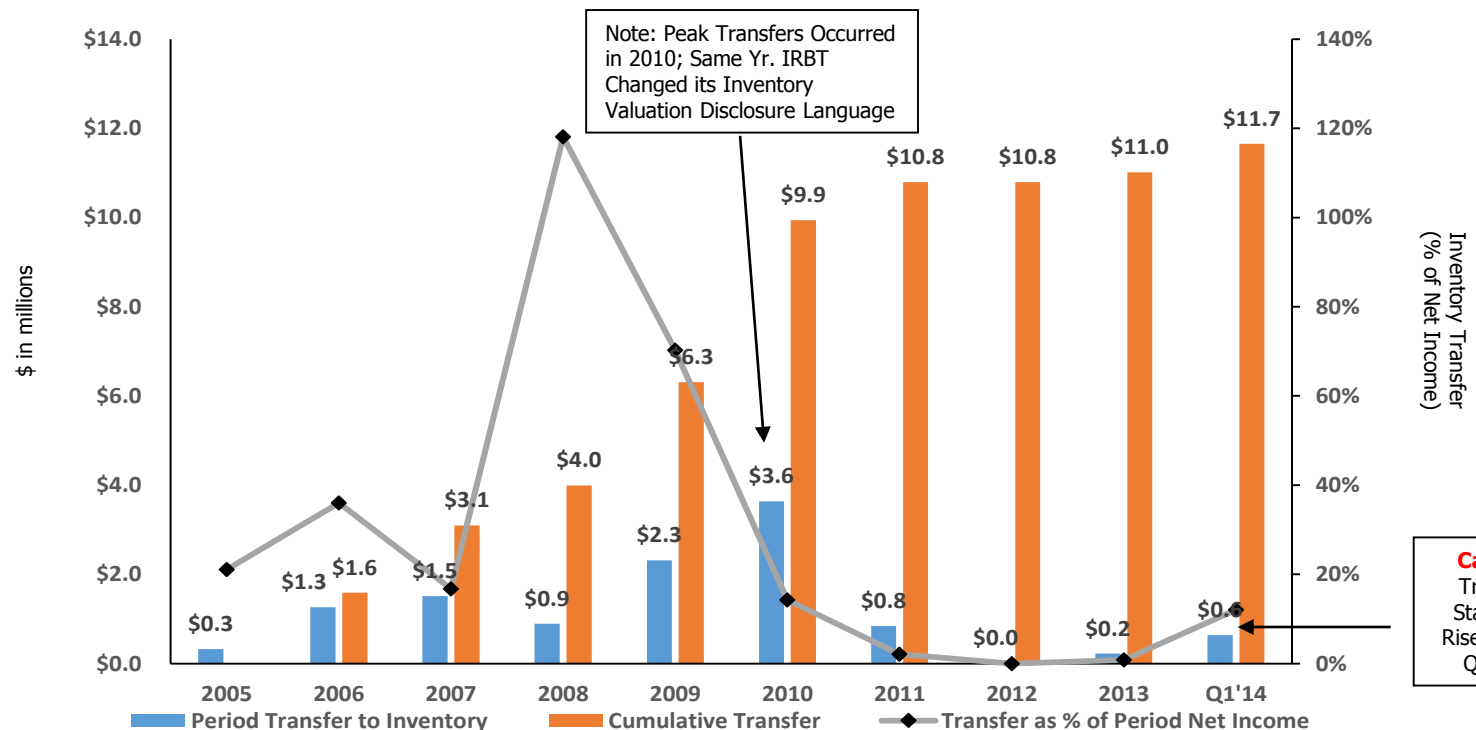


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# ***Suspicious Inventory Reclassifications***

## ***Highly Material to Past Earnings Statements***

IRBT has made a total of \$11.7m of inventory transfers since coming public with no explanation in its filings for investors to understand why. In our opinion, IRBT may be in a rush to cover-up prior transfers. In the chart below, we've plotted the period transfer amounts vs. current period Net Income. For example, in 2008 when IRBT reported Net Income of \$0.76m, it transferred \$0.90m of inventory to PP&E (118% of Net Income). If this were actually impaired inventory and written-down in the current period, IRBT's Net Income would have been wiped out!



Source: IRBT Financial Filings



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# *Fuzzy Accounting: Frequent Reclassifications Boosting Gross Profit Margins*



If we are correct that IRBT is experiencing inventory problems and market share losses, the problems would most likely appear through gross margin contraction. Coincidentally, we observe that IRBT has made several expense reclassifications to boost its gross margin by shifting COGS to operating expense. IRBT has never explicitly listed all of the adjustments, but we believe reclassifications of stock-comp have occurred. We will also demonstrate how aggressive warranty reversals have artificially boosted gross margins.

\$ in millions

	Fiscal Year Ended			
	2009	2010	2011	2012
Total Revenues	\$298.6	\$401.0	\$465.5	\$436.2
Gross Profit (GP) margin	\$91.2 30.5%	\$145.4 36.3%	\$192.1 41.3%	\$179.7 41.2%
Reclassified GP (1) margin	\$99.8 33.4%	\$158.8 39.6%	\$202.0 43.4%	\$191.6 43.9%
GP Margin Enhancement	<b>2.9%</b>	<b>3.3%</b>	<b>2.1%</b>	<b>2.7%</b>
Add'l reclassification (2) margin	\$104.5 35.0%	\$164.1 40.9%	\$207.7 44.6%	\$194.3 44.6%
GP Margin Enhancement	<b>4.5%</b>	<b>4.6%</b>	<b>3.3%</b>	<b>3.4%</b>

Note: In our opinion, the Second classification was not made readily transparent to investors.

## Reclassification of Expenses Due to Reorganization

In FY 2012, the Company initiated a reorganization that resulted in, among other things, the centralization of all of the Company's engineering and operations activities. This reorganization was completed at the beginning of fiscal year 2013. In conjunction with this reorganization, the Company reviewed the financial statement classification of its costs and expenses. As a result of this review, the Company decided to classify certain expenses differently than had been classified and presented in prior periods to provide a more clear understanding of the Company's financial performance. As part of this review, the Company also evaluated the impact of the reorganization on its segment reporting and determined that certain modifications were necessary to present the segment information as now viewed by the Company's chief operating decision maker... This reclassification of costs and expenses did not impact previously reported net income or earnings per share as the changes only impacted the categorization of costs within the consolidated statements of income for the periods in question. Consequently, the classification changes did not impact previously presented consolidated balance sheets, statements of cash flow or statements of stockholders' equity.

Source: IRBT Financial Filings

- 1) April 2013 Reclassification, 8K filing: <http://www.sec.gov/Archives/edgar/data/1159167/000115916713000009/reclassification.htm>
- 2) Feb 2014: 2013 10K Annual Report: <http://www.sec.gov/Archives/edgar/data/1159167/000115916714000007/irbt-12282013x10k.htm>



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# Fuzzy Accounting: Warranty Reversals Also Aimed At Improving Gross Margins

IRBT had not been completely transparent about warranty reversals that tremendously benefited gross margins until an SEC comment letter in 2013 pointed a microscope on the matter.<sup>1</sup> These one-time reversal gains benefit reported revenue and carry a 100% gross profit margin contribution. In the table below, we've adjusted IRBT's financials for the distortive effect, and believe the company may face challenges in 2014 as YoY comparisons become more difficult to achieve from these non-recurring adjustments.

\$ in millions

	2012				FY 2012	2013				FY 2013
	Q1	Q2 (2)	Q3 (2)	Q4		Q1	Q2 (3)	Q3	Q4 (3)	
Revenues	\$97.8	\$111.4	\$126.3	\$100.7	\$436.2	\$106.2	\$130.4	\$124.5	\$126.3	\$487.4
<b>Warranty Reversal</b>	--	<b>\$3.3</b>	<b>\$7.7</b>	--	<b>\$11.0</b>	--	<b>\$3.5</b>	--	<b>\$4.4</b>	<b>\$7.9</b>
Adj. Revenues	\$97.8	\$108.1	\$118.6	\$100.7	\$425.2	\$106.2	\$126.9	\$124.5	\$121.9	\$479.5
Gross Margin	\$38.6	\$52.8	\$58.5	\$44.5	\$194.3	\$46.5	\$61.6	\$54.1	\$59.0	\$221.2
% margin	39.4%	47.4%	46.3%	44.2%	44.6%	43.8%	47.2%	43.4%	46.7%	45.4%
Adj Gross Margin	\$38.6	\$49.5	\$50.8	\$44.5	\$183.3	\$46.5	\$58.1	\$54.1	\$54.6	\$213.3
% margin	39.4%	45.8%	42.8%	44.2%	43.1%	43.8%	45.8%	43.4%	44.8%	44.5%
Operating Income	\$0.7	\$10.6	\$22.7	(\$8.9)	\$25.2	\$9.0	\$7.9	\$11.0	\$4.7	\$32.6
% margin	0.7%	9.5%	18.0%	-8.8%	5.8%	8.4%	6.1%	8.9%	3.7%	6.7%
Adj Operating Income	\$0.7	\$7.3	\$15.0	(\$8.9)	\$14.2	\$9.0	\$4.4	\$11.0	\$0.3	\$24.7
% margin	0.7%	6.8%	12.7%	-8.8%	3.3%	8.4%	3.5%	8.9%	0.3%	5.2%

- 1) <http://www.sec.gov/Archives/edgar/data/1159167/0000000000013031751/filename1.pdf>
- 2) <http://www.sec.gov/Archives/edgar/data/1159167/000119312513270602/filename1.htm>
- 3) Reported on investor conference calls

Operating margins would have been near 0 w/out the benefit

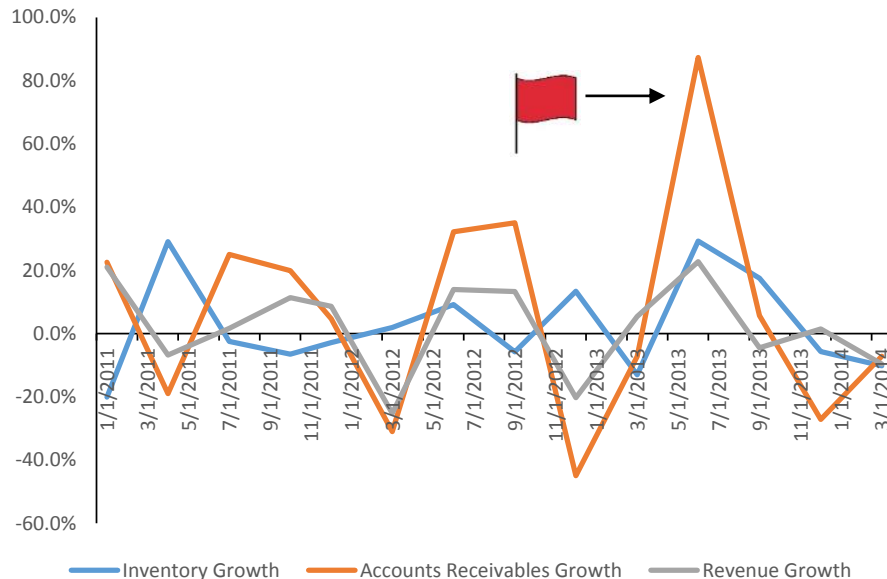


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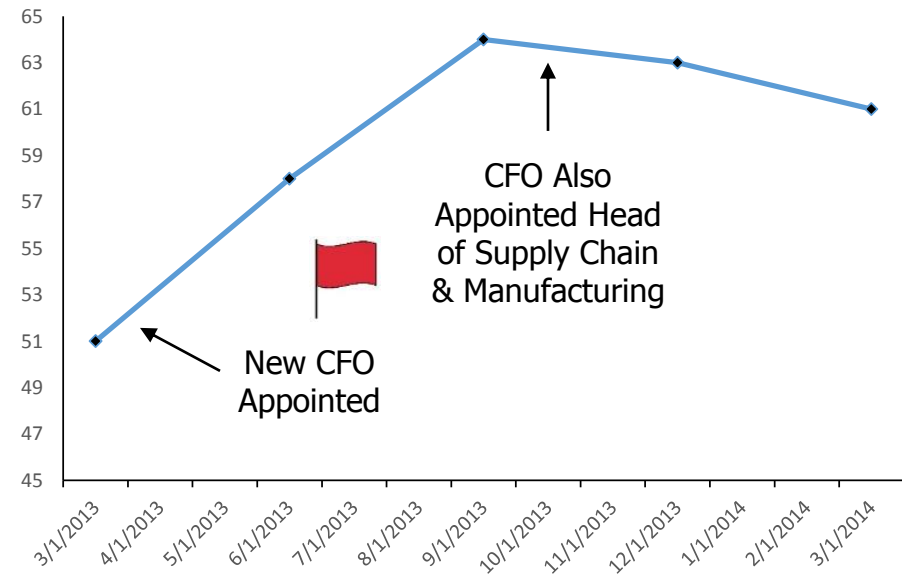
# Classic Warning Signs IRBT's Financial Statements Are Becoming Unraveled

**IRBT's financials are littered with warning signs:** For example, we observe a large and unexplained quarterly surge in accounts receivables in the middle of 2013. Meanwhile, IRBT's Days Sales in Inventory (DSI), or a measure of days to turnover its inventory, steadily rose in 2013 and has remained elevated. Lastly, we note IRBT replaced its long-time CFO early in March 2013. Later in November 2013, IRBT took the unusual step of placing its new CFO in charge of Supply Chain and Manufacturing.<sup>1</sup>

Quarter-Over-Quarter Growth



Days Sales in Inventory



Source: IRBT Financial Filings

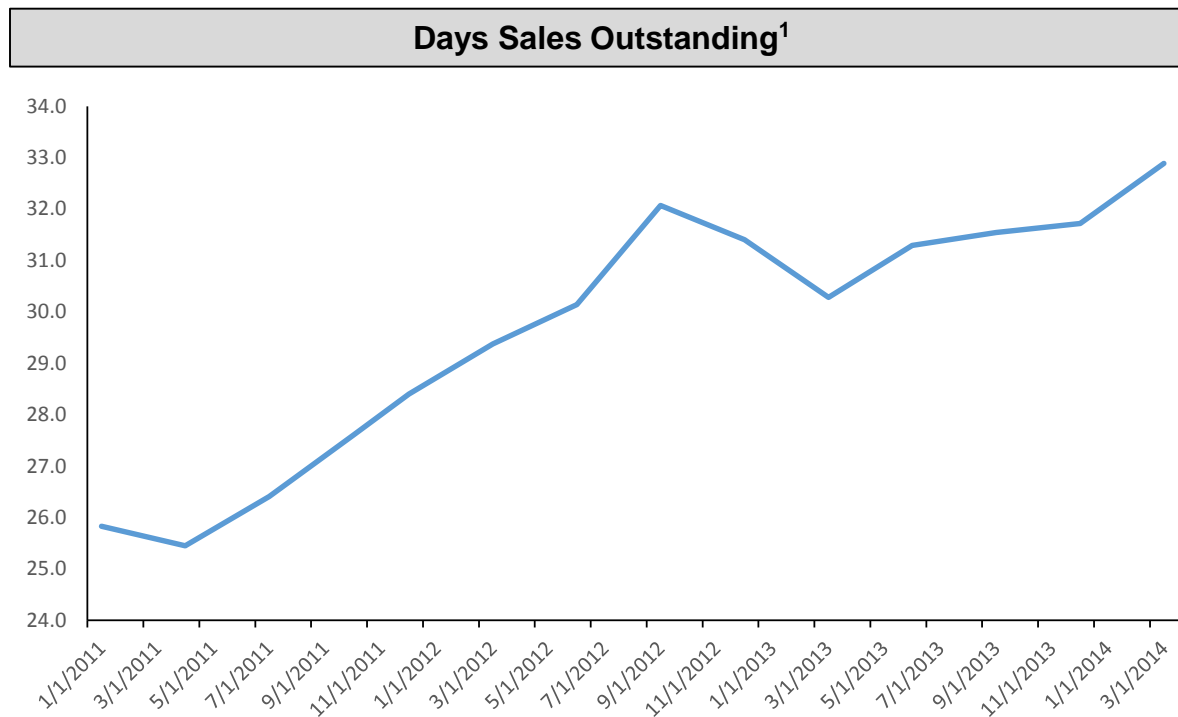
1) <http://investor.irobot.com/phoenix.zhtml?c=193096&p=irol-newsArticle&ID=1879828&highlight=>



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# *IRBT's Days Sales Outstanding Exploding*

For a closer look at IRBT's receivables, we analyze its Days Sales Outstanding (DSO), a measure of the average number of days that it takes to collect revenue after a sale has been made. **A surge in DSO is often a red flag signaling a host of potential problems.** IRBT's DSO has been rising for 3 years and could be a result of any/all of the following: 1) Products have been oversold, and customers refuse to pay until the unfulfilled promises have been met; 2) Extended payment terms may be offered that allow the buyer to delay full payment long after everything necessary has been done for the vendor to earn the revenue; 3) Channel stuffing; 4) Aggressive revenue recognition policies



1) Calculated as Average LTM Accounts Receivables / [ (LTM Trailing Sales) / 360 ]

Source: IRBT Financial Filings





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# *Insult to Injury: Errors, Errors, Errors*



**In our opinion, investors should be cautious of companies that have accounting reclassifications and frequent errors. In light of our previous concerns about potential problems with its financials, we observe that IRBT noted two discrete errors in 2013. While each individual error is listed as immaterial, we wonder if in aggregate, all of the issues we've presented are material to the integrity of the financial statements.**

## **Out of Period Adjustment**

During the third quarter of 2013, the Company identified an immaterial error to previously reported depreciation expense due to the use of an incorrect useful life on a leasehold improvement asset. The recorded out of period adjustment to cost of revenue and operating expenses resulted in a \$0.6 million increase in third quarter 2013 net income. The adjustment did not have a material impact on the reported financial position or results of operations for the quarter ended September 28, 2013. Additionally, had this adjustment been recorded in the prior periods to which it relates (fiscal 2011, 2012 and the six month period ended June 29, 2013), the impact would not have been material to the reported financial position or results of operations for those periods.

## **Revision of Balance Sheet as of December 29, 2012**

During the three month period ended March 30, 2013, the Company identified a classification error related to its reserves for uncertain tax positions on its December 29, 2012 consolidated balance sheet. The Company had recorded a gross income tax receivable in current assets and a gross uncertain tax positions liability against that receivable in current liabilities as of December 29, 2012. In addition, the Company misclassified certain liabilities for uncertain tax positions in current and long-term liabilities. The impact of the errors on the December 29, 2012 consolidated balance sheet was a decrease in Other Current Assets of \$2.7 million, an increase in Other Assets of \$0.2 million, a decrease in Accrued Expenses of \$2.9 million, and an increase in Long-term Liabilities of \$0.4 million. These adjustments were not considered to be material, individually or in the aggregate, to previously issued financial statements. The Company has revised its December 29, 2012 consolidated balance



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# *Who Is Controlling IRBT's Financials and Supply Chain?*

With many questionable financial issues (warranty reversals, exploding DSO/DSI, reclassifications, errors, and more), we believe a closer look into IRBT's CFO is justified. We find its CFO worked at 3Com in various financial capacities at a time when shareholder litigation claimed both 3Com and US Robotics (a company it merged with) perpetuated a scheme to mislead investors about its financial condition (**charges included Channel Stuffing**).<sup>1</sup> The case was settled for \$259 million in 2000 (a near record amount for that time period), and its executives avoided acknowledging any wrong doing.<sup>2</sup>

## **IRBT's Current CFO Worked at 3Com During a Tumultuous Period<sup>3</sup>**

Ms. Alison Dean has been the Chief Financial Officer, Executive Vice President and Treasurer of iRobot Corporation since April 5, 2013 and serves as its Principal Accounting Officer. Ms. Dean served as the Senior Vice President of Corporate Finance at iRobot Corporation from February 2010 to April 5, 2013 and also served as Principal Accounting Officer from March 19, 2007 to February 2012. Ms. Dean served as Vice President of Financial Controls & Analysis at iRobot Corporation from March 19, 2007 to February 2010. **From 1995 to August 2005, she served at 3Com Corporation as Vice President and Corporate Controller** from 2004 to 2005 and Vice President of Finance Worldwide Sales from 2003 to 2004.

## **Shareholder Litigation Against 3Com and US Robotics (USR) Alleged Channel Stuffing + Other Issues**

### Key Allegations Made in the Complaint

- Deferred the date of the 3Com / USR merger to hide disastrous results of USR
- USR customers had substantial inventories of older models that would become obsolete that they covered under a price protection to make its customers whole with a rebate when prices on the old products were discounted
- To inflate its revenue, USR induced customers to take quantities of new modems substantially in excess of their needs with unlimited return privileges (rebates), and failed to accrue any reserves, other expenses and take inventory write-downs
- Defendants issued false and misleading statements about the company's financial health and levels of inventory in the distribution channels
- Defendants sold more than 4m shares of 3Com stock at prices as high as \$58 3/8 per share, realizing gross proceeds from these sales of >\$200m

1. [http://securities.stanford.edu/filings-documents/1009/COMS97/2000331\\_r06c\\_97CV21083.pdf](http://securities.stanford.edu/filings-documents/1009/COMS97/2000331_r06c_97CV21083.pdf)

2. <http://abcnews.go.com/Business/story?id=89101>

3. Note: ITBT's CFO was not named directly in the shareholder litigation complaint, nor should it be implied or assumed she facilitated any wrong-doing



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# *IRBT Apparently Agrees It Needs More Help In Its Audit Area*

IRBT doesn't have many jobs openings, but a currently advertised job for a Senior Auditor caught our attention!

## Senior Internal Auditor

Category	Finance and Administration	Job Location	US-MA
Requisition ID	2074	Posted Date	4/7/2014

### More information about this job:

We seek an **Senior Internal Auditor** for our Corporate Division.

#### Essential Functions/ Job Duties:

- Prepare and develop audit programs and test plans and perform comprehensive operational, financial and compliance audits of varied complexity. This will also include performing testing of internal controls and executing on established test plans.
- Lead major projects ensuring work stays on scope and schedule.
- Perform all facets of audits and consulting projects in areas outside of their expertise and prior experience.
- Prepare narrative descriptions, flowcharts, and other audit related documentation identifying control points within business processes.
- Analyze data obtained for evidence of possible deficiencies in controls, duplication of effort, fraud, or lack of compliance with laws, government regulations, and management policies or procedures.
- Develop and assist in implementing recommendations to improve internal controls and operational processes providing well thought out risk versus cost analysis.
- Interact with all levels of management within the company.
- Identify causes or contributing factors relating to potential issues and/or concerns.
- Monitor findings to their resolution and ensure management action plans are implemented and adjust as necessary action plans as control environment changes occur.
- Draft Internal Audit reports (with minor input) identifying project scope, issues identified, recommendations and management action plans.
- Assist the Internal Audit Director and Manager in completing the annual internal audit plan
- Act as lead tester and documenter of SOX compliance work and as the initial liaison with the external auditors.
- Assist the Internal Audit Director and Manager in developing department strategies, policies and procedures. This will also include enhancing capabilities in marketing the departments' services throughout the organization.



# **Analyst Misperceptions and Valuation**



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# *iRobot Appears To Be Ramping Up Its Investor Marketing In A Last Ditch Effort*



With an average lofty price target of \$44 (implying +35% upside), and signs of a struggling business, IRBT has ramped up its investor marketing campaign. YTD 2014, IRBT has already presented at 5 conferences vs. 3 conferences over the same period last year.

Broker	Rating	Price Target
Sidoti	Buy	\$55
Benchmark	Buy	\$55
Susquehanna	Positive	\$44
Ray James	Strong Buy	\$44
Needham	Buy	\$43
CRT Capital	Buy	\$40
CM Research	Fairly Valued	\$40
JP Morgan	Neutral	\$33
	<b>Average Price % Implied Upside</b>	<b>\$44 30%</b>

Date	Conferences Presented
1/13/14	ICR Conference
1/14/14	Needham Growth
3/12/14	UBS Global Consumer
3/18/14	Sidoti Conference
5/7/14	Analyst Day
2013	Needham (Jan), Analyst Day (May), JPM Tech Day (May), Jefferies Consumer Conf (June), InvestMNT (July), Needham (Aug), Cannacord (Aug), Morgan Stanley Industrials (Sept), Morningstar Moat (Nov), Nasdaq (Nov)
2012	Needham (Jan), JP Morgan (May), Jefferies (June), Wedbush (Dec)
2011	Morgan Keegan (Aug), Morningstar (Nov)
2010	Needham (Jan), Ray James (Mar), JP Morgan (May), Jefferies (June), Morgan Keegan (Aug), Merriman (Nov)



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# *..To Convince Investors It Deserves A Dramatically Higher Stock Price*

**Analysts and investors have difficulty finding a correct peer set to value IRBT because they suggest that it has no pure play robotics competitors. During its recent May 2014 Analyst Day, IRBT tried to define a peer set. Not surprisingly, IRBT believes a peer set with an average enterprise value of \$5 billion and sales multiple of 4x is most appropriate...clearly IRBT is undervalued! However, just a month earlier in its Proxy Statement filed on April 2014, IRBT used a vastly different peer set to measure its performance!!<sup>1</sup>**

## A Selection of iRobot Defined Peers

<b>Trimble Navigation</b>	Designs and distributes positioning products and applications enabled by GPS tech
<b>3D Systems Corp</b>	Manufactures and markets 3D printers and print materials for professionals and consumers
<b>Garmin</b>	Portable GPS enables navigation devices for automotive, outdoor, fitness, marine, aviation markets
<b>Polycom</b>	Video, voice and content management/sharing
<b>Synaptics</b>	Develops human interface touch based solutions for consumer electronics (smartphones, tablets, touchscreen apps, and GPS)
<b>AeroVironment</b>	Design and production of unmanned aircraft systems
<b>Stratasys</b>	Designs desktop 3D printers for idea and design development
<b>Dolby Labs</b>	Content creation and playback technologies for entertainment industry
<b>Hologic</b>	Diagnostic, medical imaging systems and surgical products for women
<b>FLIR Systems</b>	Designs and manufactures thermal imaging systems for variety of applications worldwide

**iRobot**

5/7/2014

45

## Spruce Point Believes These Comps Are Weak

**Trimble:** \$10bn market caps, diversified across industries  
**Garmin** benefiting from wearable tech hype

**3D Systems:** Bubble stocks in 3D Printing down 50% from highs  
**Stratasys**

**Polycom:** We agree, PLCM is a secular loser like IRBT

**Synaptics:** Human interface solutions (touchpads) no relation to robotics

**Dolby:** A software licensing model, not comparable

**Hologic:** Medical products not relevant to consumer products

**Flir Systems:** A decent comp, but 25% of revenue from US Gov't

**AeroVironment:** Focus on unmanned aerial systems related to IRBT, but sells predominately into US Gov't entities

Source: 2014 Analyst Day Presentation

1. <http://www.sec.gov/Archives/edgar/data/1159167/000115916714000012/a2014proxy.htm>



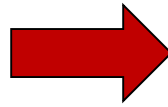


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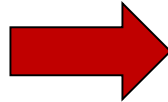
# *Analysts' Have Been Duped By Incorrect Investment Views*

## Wall St. Analyst Views of iRobot

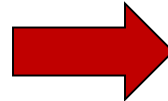
"Leader in Home Care Robotics;  
Growing Int'l Revenue Opportunity"



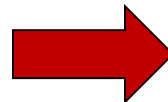
"Formidable Intellectual Property /  
Patent Portfolio"



Telepresence Represents Large and  
Growing Market



Solid Management, Attractive Financial  
Model and Valuation



## Spruce Point Believes

Market share appears overstated in Asia, and competition in its core US vacuum market appears to be intensifying. IRBT is ramping up its sales and marketing campaigns in an apparent attempt to fight market share erosion. Guidance that sales and orders are 'back half of year' weighted appears to be an attempt to kick the can down the road

IRBT has spent almost nothing to defend its IP and has not found a way to monetize its benefit through licensing arrangements. Furthermore, a majority of IRBT's patents are mostly in the area of vacuuming, and include many self-citations, which help create the appearance of importance

Telepresence opportunity for healthcare and enterprise video have issues. Market research suggests a shrinking enterprise video market, and a very slow ramp in telehealth since health professionals appear hesitant to embrace it. These opportunities are at high risk of not panning out for investors

IRBT uses a variety of suspicious accounting gimmicks to boost EPS, while executive comp appears to be draining shareholder wealth. Valuation at 24x P/ '15E and 9.5x '15E EV/EBITDA does not incorporate our concerns of aggressive accounting, flawed governance and above avg. risk of earnings disappointments



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## ***Variant View: IRBT A One Trick Pony In Consumer Electronics***

**With a shrinking government and industrial business, we believe IRBT is better viewed as a narrowly focused consumer discretionary product company, with:**

1. Powerful headwinds created in the housing market that may be restraining demand
2. A limited and faddish product offering due to its robot association, with a decaying moat
3. Rapidly intensifying competitive landscape
4. Limited to no pricing power
5. Almost no levers to drive a product replacement cycle
6. Products with rapid technology changes that increase the risk of product obsolescence

Furthermore, we believe investors should view IRBT's opportunities in the enterprise and health telepresence market as nothing more than deeply out-of-the-money call options



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# Variant View: A Consumer Marketing Company, Not A High-Tech Company

IRBT would like analysts and investors to believe that it is a high-tech company worthy of a premium valuation. However, we observe that IRBT is now spending more on sales and marketing than actual research and development costs! In 2013, advertising campaigns caused sales and marketing expenses to exceed 17% of total revenues.

\$ in millions

	FY 2011	FY 2012	FY 2013				FY 2013
			Q1	Q2	Q3	Q4	
Total Revenues	\$465.5	\$436.2	\$106.2	\$130.4	\$124.5	\$126.3	\$487.4
R&D Expense	\$58.8	\$50.4	\$13.9	\$15.2	\$14.5	\$17.3	\$60.9
<i>% of sales</i>	12.6%	11.6%	13.1%	11.7%	11.7%	13.7%	12.5%
Sales/Marketing Expense	\$49.8	\$67.4	\$10.3	\$22.2	\$16.0	\$21.8	\$70.3
<i>% of sales</i>	10.7%	15.4%	9.7%	17.0%	12.8%	17.2%	14.4%

Source: IRBT financials. Note: Excludes stock-comp expense



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# Our View on IRBT's Peer Set

**We believe a relevant publically traded peer set to compare IRBT should include small cap consumer electronic and household product companies such as: Sodastream (SODA), Leapfrog (LF), Skullcandy (SKUL), Zagg (ZAGG), NetGear (NTGR), Voxx (VOXX), Universal Electronics (UEIC) and Select Comfort (SCSS)**

(\$ in millions, except per share figures)

Name	Ticker	Stock	% of	Ent.	'14E-'15E		LTM		Price/EPS		Enterprise Value /				Price/
		Price Open	52-wk		Revenue	EPS	Gross	EBITDA			EBITDA		Sales		Tang.
		5/19/2014	High	Value	Growth	Growth	Margin	Margin	2014E	2015E	2014E	2015E	2014E	2015E	Book
NetGear	NTGR	\$33.04	91%	\$992	7.6%	13.2%	29.2%	9.8%	13.6x	12.0x	5.7x	5.1x	0.7x	0.6x	2.1x
Select Comfort	SCSS	\$18.91	68%	\$914	4.8%	14.5%	61.5%	11.6%	17.2x	15.0x	6.8x	6.2x	0.9x	0.8x	4.8x
Sodastream	SODA	\$40.92	53%	\$831	11.5%	18.6%	41.9%	13.0%	21.8x	18.3x	12.4x	11.0x	1.3x	1.2x	2.9x
Universal Electronics	UEIC	\$39.82	88%	\$543	6.3%	14.9%	28.6%	10.6%	16.9x	14.7x	8.3x	7.3x	1.0x	0.9x	2.7x
Voxx Int'l	VOXX	\$7.87	44%	\$317	4.6%	10.1%	28.4%	5.7%	7.1x	6.5x	6.0x	4.8x	0.4x	0.4x	2.1x
Leapfrog	LF	\$7.05	59%	\$322	4.6%	85.7%	39.0%	11.9%	33.6x	18.1x	6.9x	5.0x	0.6x	0.6x	1.2x
Skullcandy	SKUL	\$7.28	64%	\$154	8.0%	76.9%	44.7%	3.7%	56.0x	31.7x	10.3x	7.9x	0.7x	0.6x	1.7x
Zagg	ZAGG	\$4.54	77%	\$131	5.0%	32.1%	40.1%	15.8%	16.2x	12.3x	4.1x	3.9x	0.6x	0.6x	1.6x
<b>Max</b>					11.5%	85.7%	61.5%	15.8%	56.0x	31.7x	12.4x	11.0x	1.3x	1.2x	4.8x
<b>Average</b>					6.6%	33.3%	39.2%	10.3%	22.8x	16.1x	7.5x	6.4x	0.8x	0.7x	2.4x
<b>Min</b>					4.6%	10.1%	28.4%	3.7%	7.1x	6.5x	4.1x	3.9x	0.4x	0.4x	1.2x
<b>iRobot</b>	<b>IRBT</b>	<b>\$32.69</b>	<b>68%</b>	<b>\$847</b>	<b>14.1%</b>	<b>27.9%</b>	<b>45.6%</b>	<b>12.6%</b>	<b>29.5x</b>	<b>23.0x</b>	<b>11.4x</b>	<b>9.6x</b>	<b>1.5x</b>	<b>1.3x</b>	<b>3.7x</b>

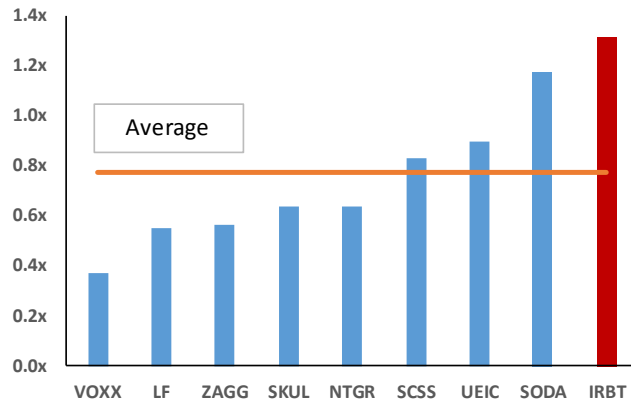
Source: Company financials, Wall St. estimates.



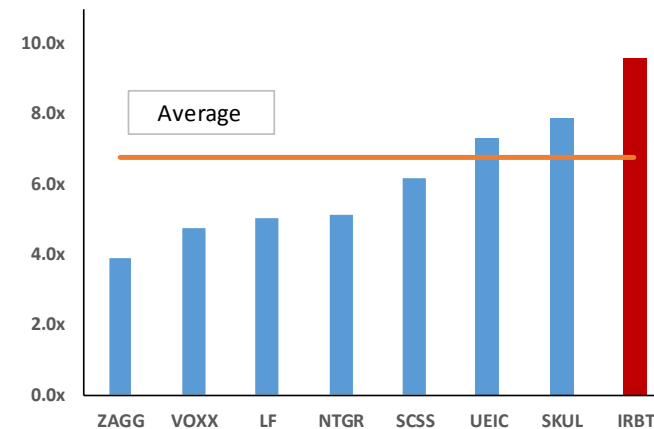
Spruce Point Capital

# *Valuation Premium Predicated on Revenue/EPS Growth That's At High Risk of Not Materializing*

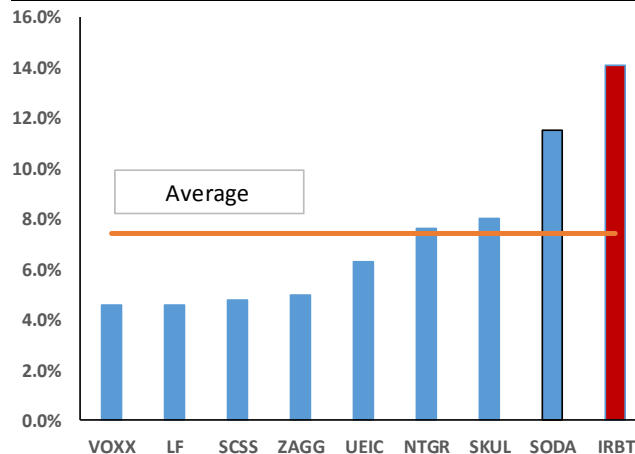
Enterprise Value / 2015E Revenues



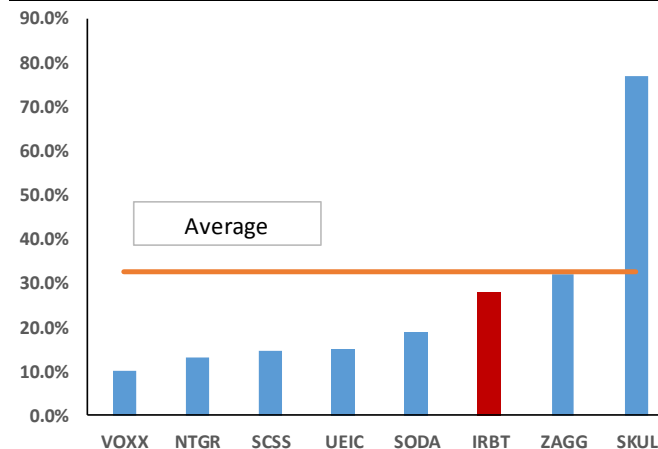
Enterprise Value / 2015E EBITDA



2015E Revenue Growth



2015E EPS Growth



Source: Company financials, Wall St. Estimates



Spruce Point Capital

# Forward Looking Valuation: Dramatically Lower Price Scenarios

We arrive at a price target range of \$20 - \$25 per share (20 – 40% downside). By applying an industry average P/E range of 14-16x 2015E EPS of \$1.42 we arrive at a \$20 - \$23 per share range. On enterprise value to revenue and EBITDA valuation multiples (to current Wall St. estimates which we believe will prove overly optimistic), we derive a price range scenario of \$21 - \$28 per share. Our valuation even optimistically assumes IRBT's patents have a value a \$50 - \$100m (\$1.60 - \$3.20/share) using a rule-of-thumb valuation of 5-10% of the home robotic's total addressable market.<sup>1</sup>

\$ in millions

	2015E EV/Revenue Multiple		
	0.7x	--	0.9x
2015E	\$645	--	\$645
Enterprise Value	\$451	--	\$580
Less: Cap Lease Debt	(\$15)	--	(\$15)
Plus: Cash	\$185	--	\$185
<b>Equity Value</b>	<b>\$621.8</b>	--	<b>\$750.7</b>
Patent Value	\$50.0	--	\$100.0
<b>Adj. Value</b>	<b>\$671.8</b>	--	<b>\$850.7</b>
Shares o/s	31.1	--	31.1

Price Target	\$21.58	--	\$27.33
% Downside	-34%	--	-16%

	2015E EV/EBITDA Multiple		
	5.0x	--	7.0x
2015E	\$88	--	\$88
Enterprise Value	\$442	--	\$618
Less: Cap Lease Debt	(\$15)	--	(\$15)
Plus: Cash	\$185	--	\$185
<b>Equity Value</b>	<b>\$612.1</b>	--	<b>\$788.7</b>
Patent Value	\$50.0	--	\$100.0
<b>Adj. Value</b>	<b>\$662.1</b>	--	<b>\$888.7</b>
Shares o/s	31.1	--	31.1

Price Target	\$21.27	--	\$28.55
% Downside	-35%	--	-13%

1. IRBT estimates a \$7bn global vacuum market, with robots penetrating 15% of the market