

SIGNIFICANT UPDATE

iROBOT Corp. | NASDAQ: IRBT

INVESTMENT RESEARCH REPORT

"Shark Infested Waters"

RECOMMENDATION: *Strong Sell*



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Executive Summary

Spruce Point Has Re-Initiated A Short Position in iRobot (IRBT) and Sees 20%-50% Downside


In May 2014, Spruce Point made its first short recommendation of iRobot, noting fundamental struggles, signs of channel stuffing, bad governance practices, and failures to penetrate the Chinese market. For the following 2 years, iRobot's share price languished and significantly underperformed the Nasdaq technology index.

A majority of our criticisms and forecasts proved accurate.


With iRobot's share price up 300% since 2016, investors are cheering the re-acceleration of sales and earnings growth following years of disappointment, and ascribing a peak valuation to plateauing earnings. Spruce Point believes the financial improvement reflects temporary factors and may not be sustainable. We expect new competition to storm the market, and challenge iRobot's US market share dominance.




iRobot's recent financial performance reflects restocking of its supply chain after years of false starts, the removal of the struggling military business, and the acquisition boost from its Japanese distributor. We believe these factors will create very difficult comparisons for iRobot to lap in the future, and create headwinds for future share price appreciation. Furthermore, we believe recent gains are a result of lowering the price of its Roomba to move down market, which we believe is a long-term negative on margins for a technology hardware company with a narrow product focus



Investors are overlooking disruptive competition likely to enter iRobot's US market. Based on Spruce Point field research, we expect SharkNinja to launch a competing product at lower price points. SharkNinja outsold Dyson to claim market share in traditional vacuums. We believe they will partner with Ecovacs, the leader in the Chinese/Asia market which stole significant market share from iRobot. SharkNinja has a proven track record of disrupting numerous home appliance markets with dynamic market strategies, and superior products. With 88% US market share, iRobot's share can only go down from here



Investors are overlooking financial control issues tied to iRobot's recent acquisition of its Japanese distributor. The Company suspiciously retracted certain statements made about Japanese sales growth (reversing big gains to declines), and made revenue and earnings revisions which don't add up. Spruce Point has previously pointed out early warning signs at Sabre and Caesarstone, both which made related-party distributor acquisitions ahead of extreme financial revisions. Market observers will note that Valeant's attempt to buy Philidor was another canary in the coal mine



iRobot is trading at a peak valuation and 30% above its average analyst price target of \$77. Many of its long-term fundamental investors have been selling, while retail and index funds buy. Insiders also have been heavy sellers before its recent share price increase. Its valuation dwarfs best of breed technology consumer companies such as Apple. If iRobot were to trade closer to peers and its long-term valuation at 3x - 4x book value and 1.5x – 2.5x sales, we could see 20% – 50% downside risk










Timeline of Recent iRobot Events

In May 2014, Spruce Point made its first short recommendation in iRobot, noting fundamental struggles, signs of channel stuffing, bad governance practices, and failures to penetrate the Chinese market. For the following 2 years, iRobot's share price languished and significantly underperformed the Nasdaq technology index

Since the time of our report, the following developments have occurred:

- 2014-2015: iRobot misses revenue and earnings expectations multiple times after our report's warning
- April 2015: iRobot attracts the attention of another activist investment firm who wagers a proxy fight, criticizing the Company's poor capital allocation and governance
- Feb 2016: Under pressure, iRobot sells its struggling defense and security business and has received just \$23m in cash; the Company expands its share repurchase program by \$100m
- March 2016: Repurchases \$85m of its \$100m through an accelerated share repurchase
- Oct 2016: Raises guidance for second time, backs view of 15% consumer revenue growth
- Nov 2016: Pursues inorganic growth by acquiring its Japanese distributor Sales on Demand Corp for ~\$18m
- Feb 2017: Offers 2017 guidance of 17-19% revenue growth, but EPS to a wide range of -9% to +11%; restates earnings transcript to correct gross mischaracterization of Japanese performance +20% to -17%
- April 2017: Raises top end of 2017 revenue and EPS range by just \$5m and 0.05c, respectively. Revises Japanese distributor contribution. After years of promoting the value of its intellectual property, iRobot finally filed ITC Patent infringement complaint against robotic vacuum cleaner products sold by Bissell, Hoover and Black and Decker covering 6 patents

Many of Spruce Point's IRBT Criticisms In 2014 Have Proven Accurate

Our Criticisms in 2014	How It Played Out	Accuracy
Financials appeared strained, marked by rising DSOs, and riddled with accounting gimmicks such as warranty reversals. Evidence suggests channel stuffing	IRBT's stock price languished for 2yrs after our report + underperformed the Nasdaq. IRBT failed to meet analyst estimates multiple times during this period. Now strains are reappearing	
Vacuum robots becoming commoditized, pricing pressures would persist from competitors entering at lower price points	Evidence now that IRBT has been lowering prices and putting more emphasis on the Roomba 650 to compete in the \$200-\$399 segment, while now cutting prices on its newer 900 series	
IRBT's promotion of monetization strategies for its intellectual property portfolio would result in nothing	IRBT has still found no monetization strategies, and is resorting to patent defense to ward off competition	
Misallocation of R&D capital towards health telepresence and robotic lawn mowers would fail to realize value	These products have failed, and are not currently being promoted by the Company. IRBT is still dependent on the Roomba	
Speculation of IRBT as a takeover target was misplaced, and there would be no unsolicited buyers	No buyers emerged for IRBT's entire business, absent the sale of the struggling military business which fetched a measly \$23m	
IRBT's China promotion as a "big opportunity" bound to fail due to flawed market strategy, too much competition	IRBT is still changing its China strategy and it has lost significant market share in Asia Pacific by its own admission	
Poor governance marked by constant insider selling and milking of compensation	Our criticisms caught the attention of another activist who waged a proxy fight. IRBT insiders are still sellers of stock (while IRBT buys) and milking 20% of operating income in compensation	
Promotion of IRBT stock geared toward retail investors	Recent evidence that long-term institutional owners with a deep fundamental orientation are exiting their positions, while retail investors and index funds buy	
Dyson entry into the market a significant threat to IRBT	Dyson's entry failed to gain traction. The general consensus was that its price point of >\$1,000 per unit was too high, and it did not deliver any meaningful value advantage vs. Roomba	



SharkNinja/Ecovacs: Roomba's New Competitive Threat

Who is SharkNinja and Why We Believe They Pose A Serious Threat To iRobot

SharkNinja, headquartered in Newton MA fifteen miles from iRobot, is an innovative consumer home appliance company that has disrupted markets it enters with high performance products, at affordable price points. SharkNinja is a leader in vacuums and blenders, and targets consumers through infomercials. Based on our research, we believe they will enter the robotic vacuum market and challenge iRobot

From an article by Forbes entitled “*How Shark Ate Dyson’s Lunch In America*” – [Dec 2014](#)

- Formerly known as Euro-Pro, a 100-year old company that had a mere 1% of vacuum cleaner sales in 2008, SharkNinja now controls more than 20% of the US market
- Over the past seven years, its Shark vacuum cleaners and Ninja blenders and food processors, all manufactured in China, have increased sales at a compound annual growth rate of 25%, enabling the firm to triple its workforce from 250 to 800 employees
- This growth has been aided by an aggressive push on television shopping channels, with \$130m spent on TV advertising last year (examples: [1](#), [2](#), [3](#))
- The Company has doubled revenues from \$800 million to more than \$1.6 billion and usurped Dyson as leader of the US vacuum cleaner market since bringing in consultants Gap International two years ago

Channel checks show Shark Ninja already has key distribution partners: Home Depot, Bed Bath and Beyond, Target, Wal-Mart, Costco, Best Buy and Many More

- These key distribution outlets overlap with many of iRobot’s existing distribution partners
- In addition, SharkNinja is known for its extensive infomercials and television advertising. The Forbes article says it spent \$130m on TV advertising, whereas iRobot spent just \$64.4m on advertising in 2016 (not all TV)

Shark Ninja Recently Hired Goldman Sachs To Evaluate A Sale According To Reuters (April 2017)

- Sources suggest that private equity firms have expressed the most interest in SharkNinja
- Given that PE firms are financially motivated to grow their investments to achieve 15%+ p.a. returns, a financial buyer would be incentivized to grow SharkNinja through product and market expansion

Our Field Research on SharkNinja's Robotic Vacuum Ambitions

Our research suggests that SharkNinja is likely to enter the home robotic vacuum market as early as this fall with a product in the \$299 - \$399 and pose a direct challenge to iRobot's core 650 Roomba at mass merchants

- **We believe SharkNinja strives to be the #1 or #2 leader in markets it enters. Based on its track record in traditional vacuums and blenders, we believe SharkNinja is a credible threat to iRobot**
- **SharkNinja's displacement of Dyson in vacuums was a result of a laser-like focus on the consumer, and its ability to engineer a superior product at a value price point. As an organization, LinkedIn data shows that SharkNinja employs more engineers than sales or marketing people**
- **We believe Dyson failed to gain traction with its robotic vacuum because its price point of >\$1,000 was simply too high, and it did not deliver meaningful performance advantage to the customer. Simply stated, Dyson could not offer a compelling value proposition**
- **We believe SharkNinja will use a similar strategy it used to displace Dyson with its go to market with iRobot – deliver a high performing product at a lower price point, in this case in the \$299 - \$399 price range**
- **Given SharkNinja's marketing prowess stated to be \$130m annually (2014 figures), we wouldn't be surprised to see it spend at least 10% or more to broaden product awareness**
- **SharkNinja has many existing relationships with retailers such as Target, Walmart and Bed Bath & Beyond. We would not be surprised if they leverage these relations to distribute their robotic vacuum in addition to infomercial marketing**
- **Our research suggests that SharkNinja will partner with Ecovacs, the leading Chinese robotics maker and company that has gained significant share against iRobot in China**



SharkNinja Commands Significant Shelf Space At Leading Retailers

It's easy to see why retailers would want SharkNinja to enter the vacuum robotics market. Its current vacuums and blenders command significant shelf space and are very popular with customers.

Shark @ Bed Bath & Beyond



Shark @ Target



Shark @ Best Buy



While iRobot's Current Retailers Disregard Proper Model Placement

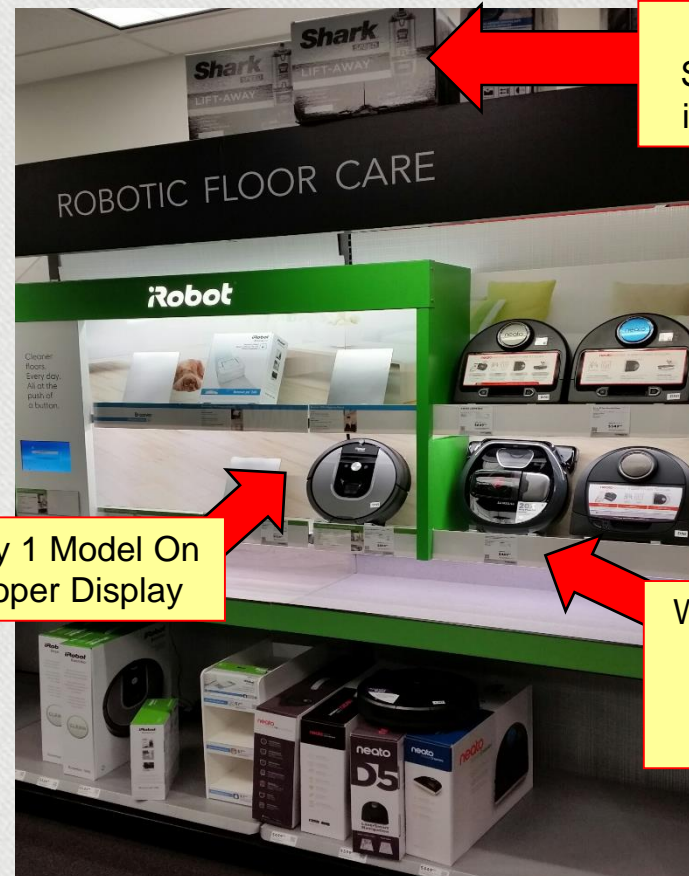
Two of our recent site visits demonstrated a disregard for iRobot's shelf space and proper product display. Is this indicative of retailers preparing to reduce its shelf space?

iRobot @ Target



More Bissell
Than iRobot
On Its Own
Display

iRobot @ Best Buy



Notice Shark
Storage Above
iRobot Display

Only 1 Model On
Proper Display

We believe Both
Neato and
Samsung Are
Gaining Share

SharkNinja's First Robotic Vacuum Patent Just Filed, Material To iRobot's Future

SharkNinja's filing of a robotic vacuum patent in April 2017 has gone unnoticed by sell-side analysts and investors, but Spruce Point believes it is a significant indicator of SharkNinja's ambition to leverage its success in traditional vacuums to compete in home vacuum robotics.



Coincidentally iRobot announced its patent complaints two days earlier on April 18, 2017 against Bissell, Hoover, b0bsweep, iLife, Black& Decker and three Asian companies. In our opinion, we believe IRBT's recent patent claims are defensive, and it is clearly worried about its competitive position

SHARK ION ROBOT

Word Mark	SHARK ION ROBOT
Goods and Services	IC 007, US 013 019 021 023 031 034 035. G & S: VACUUM CLEANERS, ROBOTIC VACUUM CLEANERS AND ROBOTIC FLOOR CLEANING MACHINES, AND STRUCTURAL AND REPLACEMENT PARTS, FITTINGS AND ACCESSORIES THEREFOR, NAMELY, BELTS, BRUSHES AND DUST FILTERS, ALL FOR HOUSEHOLD USE
Standard Characters Claimed	
Mark Drawing Code	(4) STANDARD CHARACTER MARK
Serial Number	87419034
Filing Date	April 20, 2017
Current Basis	1B
Original Filing Basis	1B
Owner	(APPLICANT) SharkNinja Operating LLC LIMITED LIABILITY COMPANY DELAWARE 180 Wells Avenue, Suite 200 Newton MASSACHUSETTS 02459
Attorney of Record	Lawrence W. Greene
Disclaimer	NO CLAIM IS MADE TO THE EXCLUSIVE RIGHT TO USE "ION ROBOT" APART FROM THE MARK AS SHOWN
Type of Mark	TRADEMARK
Register	PRINCIPAL
Live/Dead Indicator	LIVE

SharkNinja Employees Recruited From iRobot

SharkNinja has recruited various former iRobot employees, giving it institutional knowledge about the robotic vacuum market

Employee	Now At SharkNinja	Formerly At iRobot
Brandon Maxon	Senior Test Engineer	Systems Engineer
Allan Neville	Director of Electrical Engineering	Lead Electrical Engineer
Patty Cho	VP of Brand Marketing	Senior Director, Brand Marketing
Toby Gaerin	Sales Director	National Sales Manager

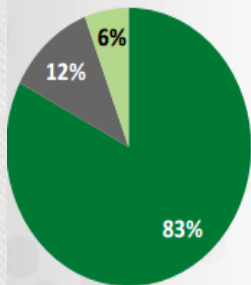
Source: LinkedIn

Ecovacs Has Grown Market Share Against IRBT in Asia, Now Expanding Into the US

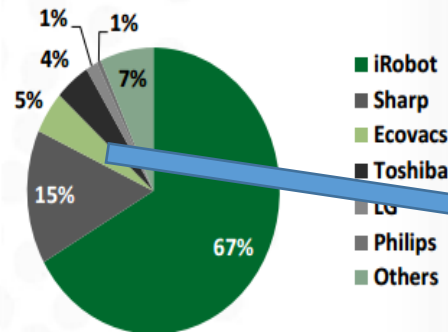
Ecovacs is taking clear steps to invade iRobot's US market share. An IPO will raise capital and give it a public currency to continue its market share gains. We believe SharkNinja will partner with Ecovacs (next slide)

In 2013, iRobot Asia Market Share Was 67% and
Ecovacs was just 5%
It's US market share was 83%

North America



APAC

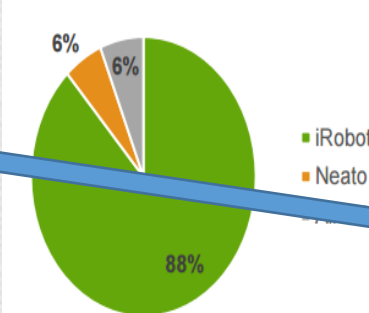


Source: 2013 NPD, GfK, iRobot internal data, Robotic Vacuum Cleaners >\$200 retail prices

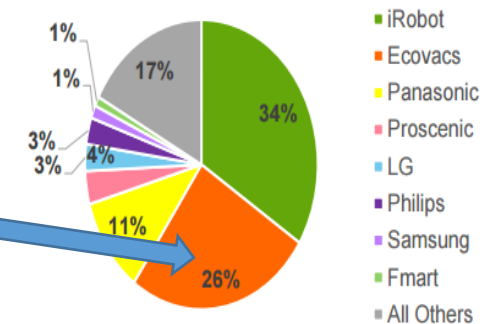
Source: 2014 [IRBT Analyst Day](#)

iRobot US/Asia Market Share – 2017
Ecovacs now 26% APAC market share
At 88% - US market share nowhere to go but down

North America - \$441M



APAC - \$538M



Source: June 2017 [IRBT Baird Presentation](#)

- Aug 2016:** ECOVACS plans to introduce seven new home cleaning robots in the US in 2016: five clean bare-floors and carpets, and two wipe glass doors and clean windows
- Feb 2017:** Ecovacs Expands U.S. Footprint, Smart Home Technology; as part of its continuing global expansion plan, Ecovacs Robotics will move into its new 3,000-square-foot North American headquarters in San Francisco. The location of the new headquarters itself was chosen with the company's expansion plans in mind and in large part due to its growing focus on smart home technology development.
- March 2017:** Chinese robot vacuum maker ECOVACS to IPO on Shanghai Stock Exchange



SharkNinja + Ecovacs = Trouble For IRBT

Spruce Point believes that SharkNinja and Ecovacs are likely to partner together to enter the robotic vacuum market. Below we have sourced a recent bill of lading shipping record from June 2017 showing a relationship exists between the two firms. It makes sense to us that SharkNinja's market and distribution expertise in the US would be matched with the manufacturing and technology capabilities of Ecovacs.

Shipment

Bill of Lading Number	KKLUSZH478348
Bill of Lading Type	Simple
Master Bill of Lading Number	
Arrival Date	Jun 14, 2017
Shipment Origin	China
Shipment Destination	Port of Long Beach, Long Beach, California
Port of Unlading	Port of Long Beach, Long Beach, California
Port of Lading	Shanghai, China
Place of Receipt	SHANGHAI
Transport Method	Maritime
Vessel	HENRY HUDSON BRIDGE
Is Containerized	yes
Volume (TEU)	10.0
Volume (TEU) v2	10.0
Quantity	5427 PKG
Measurement	315 X
Weight (kg)	39,929
Weight (t)	39
Weight (Original Format)	39929 K
Value of Goods (USD)	
FROB	no
Manifest Number	000001
Inbond Code	
Number of Containers	5
Has LCL	no

Company

Consignee	Sharkninja Operating Llc employee contacts
Consignee (Original Format)	TO THE ORDER OF SHARKNINJA OPERATIN 16300 FERN AVENUE CHINO, CALIFORNIA 91708 ATTN. TED SIMKO EMAIL TSIMKO SHARKNINJA.COM TEL CHINO CA
Consignee Global HQ	
Consignee Domestic HQ	
Shipper	Ecovacs Robotics Co., Ltd.
Shipper (Original Format)	ECOVACS ROBOTICS CO., LTD NO.108 SHIHU WEST ROAD WUZHONG DISTRICT SUZHOU, JIANGSU, CHINA TEL 0512-65251865 SUZHOU
Shipper Global HQ	
Shipper Domestic HQ	
Carrier	KKLU - Kawasaki Kisen Kaisha Ltd
Notify Party	SHARKNINJA OPERATING LLC, 4400 BOIS FRANC, ST. LAURENT, QUEBEC, CANADA, H4S 1A7, ATTN AMBER ZUO DIRECT PHONE 514-228-4668 FAX ST LAURENT QC
Notify Party SCAC	

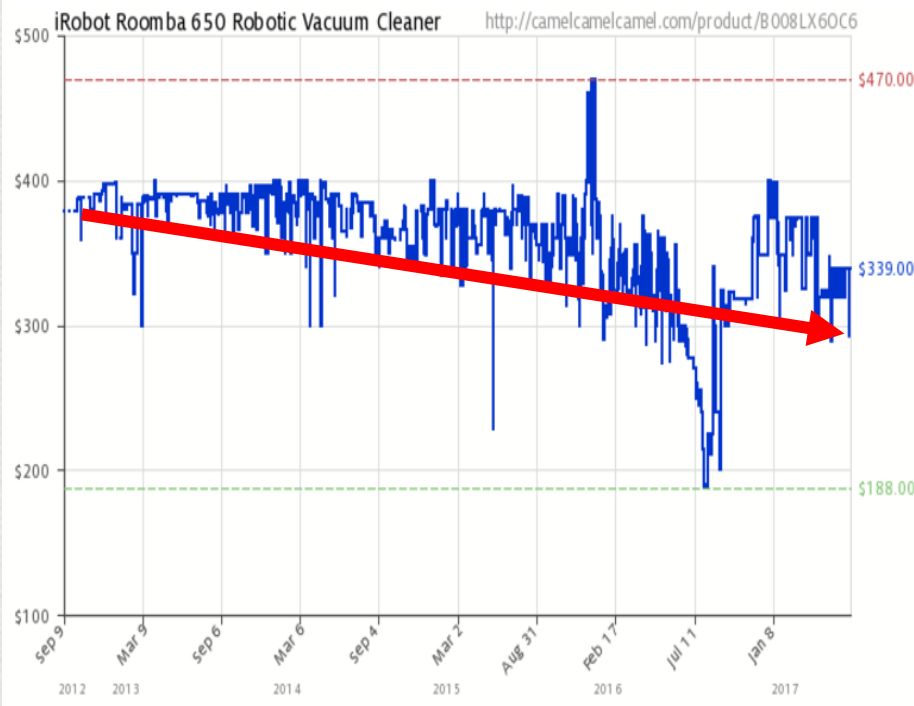


Recent iRobot Performance A Result of Going Down Market, Deflating Prices

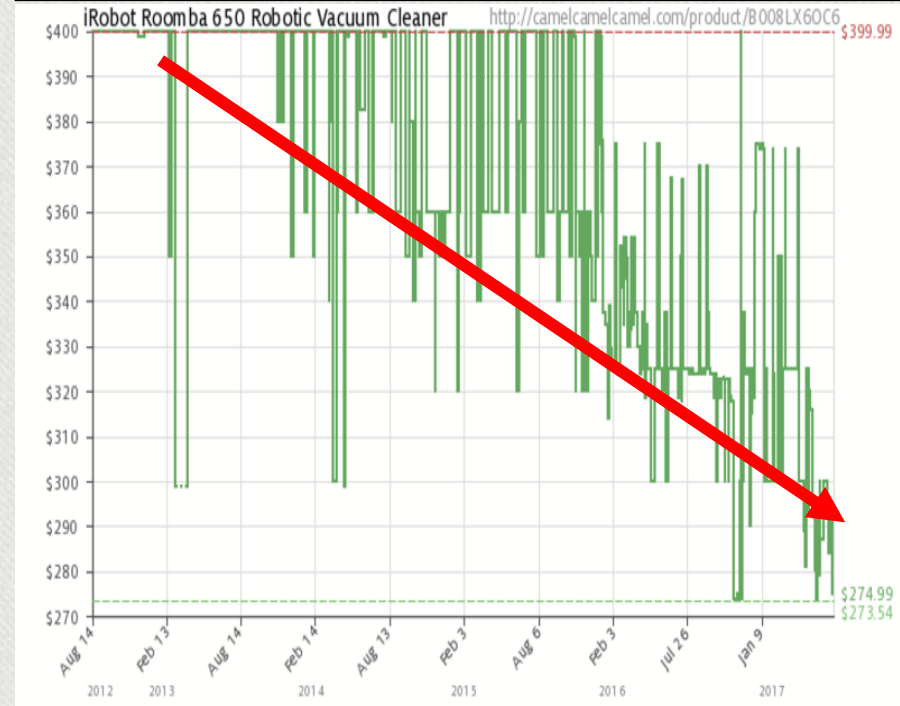
Based on our field research, we believe that iRobot has experienced the greatest growth by moving down market and selling into the \$200 - \$299 and \$300 - \$399 price segments. We believe it has used the IRBT 650 series to be aggressive on price, and get market share gains.

The pricing data below confirms our field research that. In the long run, we view this as a negative that iRobot, a retailer of a hardware consumer product, has to erode its brand value by lower prices. We expect margin pressure to result in the coming quarters, especially because iRobot has no more meaningful product introductions planned for next year.

New Third Party Roomba 650



Amazon Listed Roomba 650



iRobot Obfuscating its Price Deflation?

Look carefully at iRobot's "Supplemental Information" and you will notice they stopped providing "average gross selling prices for consumer robots" – Is iRobot trying to obfuscate its price deflation?

Q1'17 Supplemental Data

	For the three months ended	
	April 1, 2017	April 2, 2016
Revenue: *		
Consumer	\$ 168,248	\$ 127,687
Domestic	\$ 84,789	\$ 63,158
International	\$ 83,459	\$ 64,529
Defense & Security	\$ —	\$ 3,075
Gross Margin Percent	51.8%	47.4%
Consumer units shipped*	704	550
Vacuum	582	478
Mopping	121	67
Other	1	5
Consumer revenue**	168	128
Vacuum***	151	118
Mopping***	17	9
Other	—	1
Days sales outstanding	26	24
Days in inventory	64	86
Headcount	636	633

Source: IRBT Q1'17 [Press Release](#)

Q4'16 Supplemental Data

	For the three months ended	
	December 31, 2016	January 2, 2016
Revenue: *		
Consumer	\$ 212,096	\$ 175,197
Domestic	\$ 123,969	\$ 84,317
International	\$ 88,127	\$ 90,880
Defense & Security	\$ —	\$ 30,504
Gross Margin Percent:		
Consumer	52.6%	49.2%
Defense & Security	0.0%	50.7%
Total Company	50.2%	46.2%
Units shipped - Consumer *	940	771
Average gross selling prices for robot units - Consumer \$	268	\$ 262
Days sales outstanding	31	46
Days in inventory	42	51
Headcount	607	622

Source: IRBT Q4'16 [Press Release](#)

iRobot Now Cutting High End Products

- The Company often promotes its latest iteration of essentially the same Roomba product every year. In [2016](#), the 960 series was introduced for \$699 and in [2015](#) the 980 starting at \$899
- iRobot said in Q1 that *"The \$40.6 million increase in revenue from our consumer business for the three months ended April 1, 2017 was driven by a 28.0% increase in total units shipped and increased sales of our higher-priced Roomba 900 series robots as compared to the three months ended April 2, 2016"*
- Why all the sudden demand for products that have been on the market since 2015/16? If demand is as robust as IRBT claims, why did it just cut prices by \$100 on each product

June 2017 Roomba 900 Discounting Just After Increased Demand?



Roomba® 980
Vacuuming Robot

SAVE \$100

\$799.99
Reg. \$899.99

Buy now



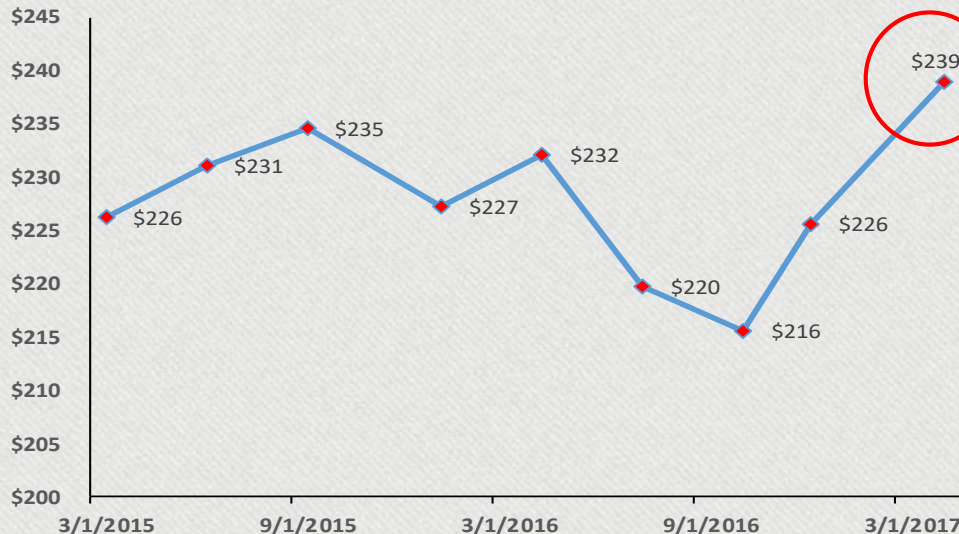
Roomba® 960
Vacuuming Robot

SAVE \$100

\$599.99
Reg. \$699.99

Buy now

Consumer Revenue Per Unit Shipment In General Decline Until Recent Increase





Date	Consumer Revenues \$mm	Consumer Units Shipped
3/28/2015	\$111.1	491,000
6/27/2015	\$136.8	592,000
9/26/2015	\$136.5	582,000
1/2/2016	\$175.2	771,000
4/2/2016	\$127.7	550,000
7/2/2016	\$148.1	674,000
10/1/2016	\$168.0	779,000
12/31/2016	\$212.1	940,000
4/1/2017	\$168.2	704,000



Warning Signs From Recent Japanese Distributor Acquisition

Distributor Acquisitions Can Be Major Early Warning Red Flags

Investors would be well cautioned to closely evaluate iRobot's acquisition of Sales on Demand Corp, its related-party Japanese distributor. There are numerous examples of early warning signs when companies acquire their distribution partners or related-party entities.

Date	Company	Distributor	Note	Spruce Point Successful Call
11/21/16	iRobot / IRBT	Sales on Demand	IRBT's largest Japanese distributor accounting for 12.9% of sales in 2016	
10/26/15	Valeant / VRX	Philidor	Valeant disclosed an option to buy its distributor for \$100m. This would be the trigger for the downfall of Valeant	
May 2011	Caesarstone / CSTE	U.S. Quartz	CSTE acquired U.S. Quartz pre-IPO. Now its CEO is competing against CSTE with Vadara Quartz	
7/15/15	Sabre Corp / SABR	Abacus	Related party acquisition included Abacus distribution agreement with other Asian airlines	
11/25/14	3D Systems / DDD	Robotec	Announced deal to acquire Robotec to access Latin America and create 3D Systems Latin America.	

New Signs Suggesting IRBT Is Gaming The Financials From Its Distributor Acquisition

There are clear signs of financial control issues at IRBT and “not getting its story straight”

Notice That IRBT's CFO Issues Corrective Statements About Japan's Performance in Q4'16:

- **Original CFO Comment on Japan (Q4'16)** “Austin just to circle back on your initial question on Japan and China in the fourth quarter, so without getting too specific, Japan was up probably about 20% in the fourth quarter year-on-year and China's a fairly difficult comp just based on the timing both last year and this year. So don't read too much in to this, but it was over 200% growth in the fourth quarter on China. But again we encourage everybody to really focus on the full year growth rates for all of those regions versus Q4 specifically.”
- **Revised CFO Comment on Japan (Q4'16)** “Austin just to circle back on your initial question on Japan and China in the fourth quarter, so without getting too specific, Japan was [down 17%] (corrected by company after the call) in the fourth quarter year-on-year [because we wanted to make sure the channels were clear ahead of our acquisition and China was down 50% from Q4 last year as expected. As you may recall we received an \$11M order in Q3 2016 from China that we were expecting in Q4 so China was up 140% in Q3 and then down year-over-year in Q4] (corrected by company after the call). But again we encourage everybody to really focus on the full year growth rates for all of those regions versus Q4 specifically.”
- **Then Following Quarter (Q1'17):** “We have reduced our Japan expectations versus those provided in February due to our analysis of inventory at retailers in Japan at the end of Q1, which was higher than we would typically like to see. We have lowered the level of incremental revenue post acquisition as we work through this channel inventory.”

Revision of Deal Terms and Financials Suggest More Inventory Acquired: The purchase price of the acquisition increased from earlier estimates. The purchase price is mostly inventory. The higher the purchase price, the more inventory acquired.

- 11/21/16 ([press release](#)): iRobot will acquire the business for a cash amount equal to the book value of the acquired assets at close, primarily inventory, estimated to be between \$14m-\$16m, subject to exchange rates in effect on the date of acquisition.
- 5/5/17 ([Q1'10Q](#)): On April 3, 2017, the Company closed its previously-announced acquisition of the iRobot-related distribution business of Sales On Demand Corporation for approximately \$18 million in cash, equal to the book value of the acquired assets. The acquisition price is subject to adjustments and will be finalized no later than May 18, 2017.
- **Why does IRBT need 6 months to accurately account for and value inventory it acquired from its distributor? How hard is it to count the number of unsold Roombas sitting in a warehouse and at retailers?**

Financial Impact Revision From Distributor Acquisition Very Questionable

- Original sales increase from Japanese acquisition of \$20-\$25m and **(\$0.25)** to **(\$0.35)** EPS dilution (Q4'16 [Press Release](#))
- Later sales cut in half to \$10-\$12m and losses double **(\$0.50)** to **(\$0.60)** (Q1'17 [Press Release](#))

Warning: Distributor Contribution Revision

The distributor acquisition closed on schedule, yet is now expected to have a negative contribution to Q2? IRBT says it has to sell through acquired inventory.

Japan Distributor Impact By Quarter

Fiscal year 2017

	Three Months Ending April 1	Three Months Ending July 1	Three Months Ending September 30	Three Months Ending December 30	Twelve Months Ending December 30
Revenue	-	-	\$10 - \$12	\$10 - \$13	\$20 - \$25
Net income (loss) per share	-	(\$0.40 - \$0.50)	\$0.00 - \$0.05	\$0.05 - \$0.15	(\$0.25 - 0.35)

* expected to close at the beginning of Q2-17.

Source: Q4'16 [Press Release](#)

Original
Japanese
Distributor
Contribution
Schedule

Revised
Japanese
Distributor
Contribution
Schedule

Fiscal year 2017

	Three Months Ending April 1	Three Months Ending July 1	Three Months Ending September 30	Three Months Ending December 30	Twelve Months Ending December 30
Revenue		(\$12) - (\$10)	\$10 - \$15	\$5 - \$10	\$10 - \$12
Net income (loss) per share	(\$0.02)	(\$0.60 - \$0.55)	(\$0.05) - \$0.00	\$0.05 - \$0.10	(\$0.60 - 0.50)

* Closed 4/3/17; 45 days to finalize purchase price

Source: Q1'17 [Press Release](#)

Irrefutable Evidence of IRBT's Financial Control Concerns

iRobot's Japanese forecasts simply aren't adding up.

Recall that it revised its sales contribution from \$20 - \$25m to \$10 - \$12m between Q4'16 and Q1'17

This revision amounts to between \$10 - \$13m lower sales

However, based on other statements made directly from management the expected revision should have been just \$4.7m - \$7.0m.

Therefore, we believe this is irrefutable evidence of financial control issues.

Financial Discrepancies From iRobot's Guidance Change

\$ in mm	2014	2015	2016	Initial Q4'16 2017E	Revised Q1'17 2017E	Delta
Total IRBT Sales	\$556.8	\$616.8	\$660.6	\$770.0 – \$785.0	\$780.0 – \$790.0	+\$10.0 to +\$5.0m
% to Japanese Distributor	17.0%	13.3%	12.9%	15.0% (1)	14.0% – 14.2%	-100bps to -80bps
Total Japanese Distributor Sales	\$94.7	\$82.0	\$85.2	\$115.5 - \$117.8	\$110.8	(\$4.7) to (\$7.0)
YoY Growth	N/A	-13.3%	3.9%	35.5% - 38.2%	30.0% (2)	--

Source: IRBT Annual Report

(1) [Q4'17 Earnings Call](#): As our largest international market, Japan is estimated to comprise roughly 15% of this year's total revenue.

(2) [Q1'17 Earnings Call](#): For the full year, we expect revenue in the U.S. to grow from 18% to 20%, China and Japan to grow approximately 30% each, and EMEA to grow mid-teens over 2016.



iRobot's Extreme Valuation Disconnect

IRBT At Irrational Premium To Price Targets, Recent Brokers Are Negative

iRobot is trading at 30% above the average analyst price target; what do current investors know that its seasoned analysts don't? We caution that Canaccord downgraded IRBT recently from Buy to Hold.

Canaccord Rationale For Downgrade 5/30/17: *We are downgrading IRBT to HOLD from Buy following nearly a 70% appreciation for the stock YTD, and 50% PE expansion on consensus NTM earnings. While we remain positive on growth prospects for the company (healthy momentum in the U.S. as connectivity is driven deeper into the Roomba portfolio and accelerating international growth), we expect only modest upside to our estimates for the balance of the year and see little additional room for valuation expansion from present all-time highs. **Further, the lack of a new flagship product in 2017 could heighten uncertainty ahead of the holiday season and drive multiple compression.** Our price target remains \$90 and our estimates are unchanged.*

Broker	Recommendation	Target
Canaccord Genuity	Hold 	\$90.00
Sidoti	Neutral	\$87.00
Dougherty	Buy	\$85.00
Piper Jaffray	Neutral	\$68.00
JP Morgan	Underweight	\$57.00
	Average Price Target	\$77.40
	% Downside From Current (1)	-23%

1) Based on \$101 share price

Retail and Index Funds Driving IRBT's Share Price, Not Fundamental Institutions

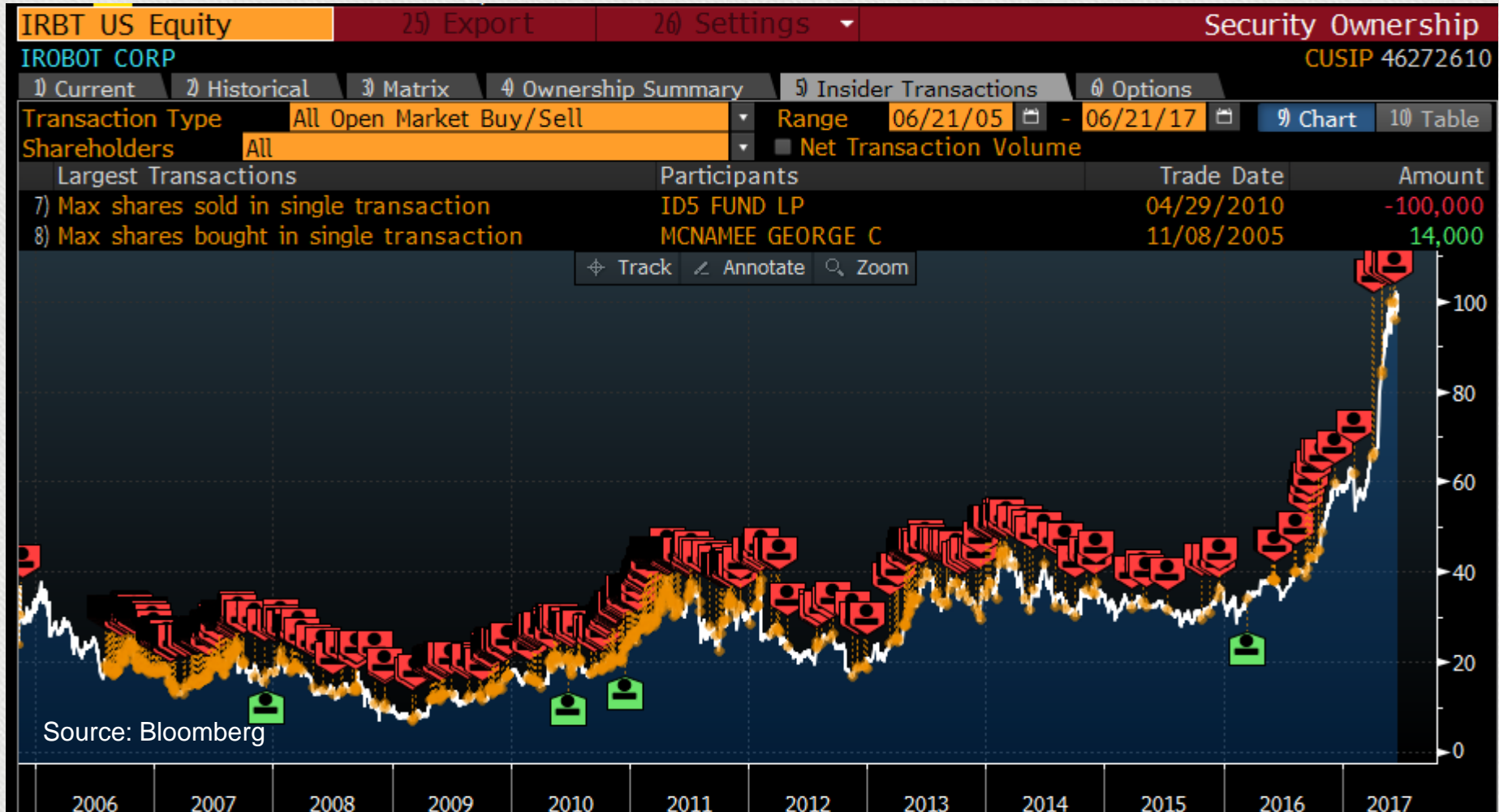
Long-time fundamental owners such as Fidelity, Lord Abbett and Oppenheimer are selling, while IRBT is increasingly being owned by passive investors and retail investors bidding up its share price.

Asset Manager	Share Ownership / % of Total	Recent Change In Shares	% Change In Shares	Orientation
Blackrock	3,303,315 / 12.0%	264,590	8.71	Index/Quant
Vanguard	2,964,760 / 10.8%	637,890	27.41	Index/Quant
Columbia Wagner	1,378,409 / 5.0%	131,030	10.5	Fundamental mutual fund, purchased in Q4'15
Oppenheimer	1,114,526 / 4.1%	8,824	0.8	Fundamental-Has been selling down over time. Once owned 10% of the company or 2.5m shares back in 2009
Dimensional Fund	948,086 / 3.5%	56,545	6.34	Index/Quant
Picet Asset	932,876 / 3.4%	470,347	101.69	European asset manager
Lord Abbett & Co	706,562 / 2.6%	-731,690	-50.87	Fundamental- owned 1.5m shares since 2014 and just recently exited half its position
Ballie Gifford	661,647 / 2.4%	46,047	7.48	Foreign growth investor
State Street	637,260 / 2.3%	47,583	8.07	Index/ETF driven
Fidelity	571,027 / 2.1%	-168,147	-22.75	Fundamental-Once owned 3.8m shares or 14.5% of the company in 2011 . Has Been selling off



IRBT Insiders Always Sell

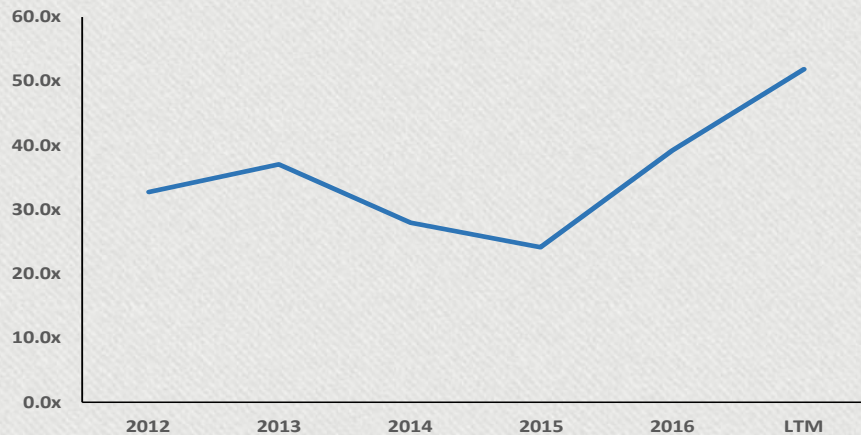
We expect more insider sales in 2017 as management takes advantage of record share prices.



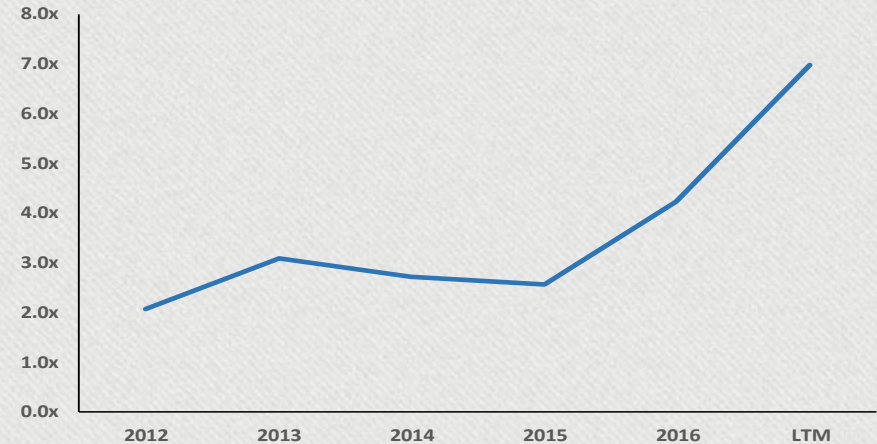
Peak Valuation For Fundamentally The Same Vacuum Company

Rarely is it a good investment idea to pay a peak valuation for a hardware company experiencing temporary growth and when a major new competitor is expected to enter the market.

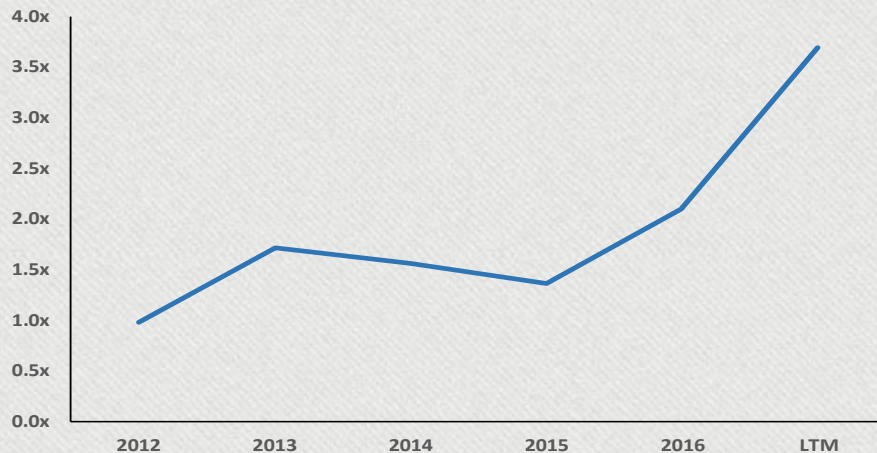
Price / Diluted EPS



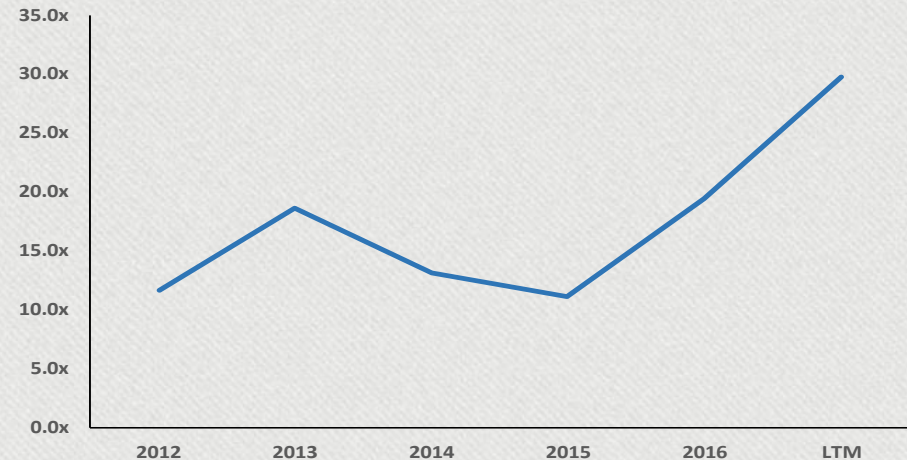
Price / Book Value



EV / Sales



EV / EBITDA



IRBT At Irrational Premium To Peers

iRobot is trading at a steep multiple to peers on temporarily inflated numbers due to re-stocking the inventory channel, flattering of its financials from selling its strained military defense business, and boost from acquiring its Japanese distributor. Spruce Point believes none of these factors are sustainable and will result in very difficult comps in the future. iRobot is best viewed as stagnant technology hardware company with limited growth or innovation opportunities. As we've illustrated before, many of its previous product introductions such as health telepresence or lawn robots have failed to gain traction. For comparison, iRobot's current valuation exceeds Apple (AAPL), which many would argue is the primer consumer technology company

\$ in mm, except per share estimates

Name	Ticker	Stock	% of	Ent.	'17E-'18E		P/E		Enterprise Value				Price/ Book
		Price	52-wk		Revenue	EPS	2017E	2018E	EBITDA		Sales		
		6/26/2017	High						Growth	Growth	2017E	2018E	
Diversified Home/Tech Products													
Apple	AAPL	\$145.82	93%	\$791,342	12.0%	18.2%	16.3x	13.8x	11.0x	9.7x	3.5x	3.1x	5.7x
Newell Brands	NWL	\$53.34	96%	\$36,261	1.2%	13.5%	17.2x	15.1x	12.5x	11.2x	2.5x	2.4x	2.1x
Whirlpool	WHR	\$190.72	94%	\$18,187	4.2%	15.1%	12.6x	11.0x	7.5x	6.8x	0.8x	0.8x	2.9x
Spectrum Brands	SPB	\$126.85	87%	\$11,102	3.5%	12.1%	21.7x	19.3x	11.3x	10.8x	2.2x	2.1x	4.2x
Logitech	LOGI	\$36.88	96%	\$5,441	7.9%	11.8%	25.6x	22.9x	20.3x	18.2x	2.3x	2.1x	7.0x
Fadish Home/Tech Products													
SodaStream	SODA	\$53.06	92%	\$1,039	7.1%	6.7%	20.8x	19.5x	NM	NM	2.0x	1.9x	2.8x
GoPro	GPRO	\$8.19	46%	\$802	3.8%	NM	NM	51.2x	18.1x	7.4x	0.6x	0.6x	3.2x
FitBit	FIT	\$5.44	32%	\$281	7.2%	NM	NM	NM	NM	NM	0.2x	0.2x	1.3x
Max					12.0%	18.2%	25.6x	51.2x	20.3x	18.2x	3.5x	3.1x	7.0x
Average					5.9%	12.9%	19.0x	21.8x	13.5x	10.7x	1.8x	1.6x	3.6x
Min					1.2%	6.7%	12.6x	11.0x	7.5x	6.8x	0.2x	0.2x	1.3x
iRobot	IRBT	\$101.00	97%	\$2,578	16.6%	52.1%	60.5x	39.8x	27.1x	19.4x	3.3x	2.8x	7.0x

Source: Company financials, Wall St. estimates.

Normalized Price Target For IRBT's Shares

\$ in millions, except per share amounts

Valuation	Low Price	High Price	Note
Revenue Multiple <u>2017E Sales</u> Enterprise Value Plus: Cash Less: Debt <u>Dil. Shares</u> Price Tgt. % Downside	1.5x <u>\$789.4</u> \$1,184 \$275.6 (\$0) <u>28.3</u> \$51.60/sh -49%	2.5x <u>\$789.4</u> \$1,974 \$275.6 (\$0) <u>28.3</u> \$79.50/sh -21%	Sales is the cleanest metric to value IRBT given our various concerns about earnings quality. For the sake of argument, we'll assume IRBT can hit its 2017 sales, which we view as a cyclical peak, and apply a normalized valuation multiple range. iRobot has no new product introductions in the near term to drive revenues higher and we expect SharkNinja can achieve 10% market share when it enters robotics
Multiple of Book Value Book Value Shares <u>BV / Share</u> Price Tgt. % Downside	3.5x \$408.4 28.3 <u>\$14.43</u> \$50.50/sh -50%	4.5x \$408.4 28.3 <u>\$14.43</u> \$65.00/sh -36%	Currently at 7x Price / Book for a commodity hardware provider whose IP is being challenged by competitors. We do not see a rationale for IRBT to receive the same multiple as Apple. The chosen range incorporates IRBT's cyclical P/BV range and current company valuations