SIGNIFICANT UPDATE

iROBOT Corp. | NASDAQ: IRBT

INVESTMENT RESEARCH REPORT

"All Good Things Come To An End"

RECOMMENDATION: *Strong Sell*

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Executive Summary

Shark Set To Attack Roomba At The High End of The RVC Market: Reiterate Strong Sell On IRBT And 60% - 80% Downside Risk

Spruce Point has discovered new evidence that SharkNinja ("Shark") – a major competitor of iRobot (IRBT or "the Company") – is primed to release a new, high-end, smart, and home connected robot vacuum cleaner (RVC) priced at a 25% discount to the comparable Roomba i7. Another competitor has already begun selling a comparable product at close to half the price of the i7. Whereas Shark and other competitors have until now taken share primarily at the lower and middle tiers of the robot vacuum market, they now will compete at the premium tier. The consensus among bulls is that Roomba is a technologically superior product and the market leader at the premium tier, affording it some protection from pricing pressure. We believe that this narrative is no longer valid: iRobot will now face legitimate competition at the high end of the market.

Management has attempted to drum up investor confidence by pitching the potential of its non-Roomba products – specifically, its robot mop (Braava) and forthcoming robo-lawnmower (Terra) – but we believe that guidance is aggressive on the former (by management's own admission), and we are skeptical that the latter will meet with commercial success in the U.S. Investors should brace for significant disappointment.

Competition Intensifying At The High-End Of The Robot Vacuum Market, Impeding On Roomba's Core Market

- Release Of High-End RV950 Shark Robot Vacuum Appears Imminent: Spruce Point recently discovered that Shark is prepared to release the RV950 – a high-end robot vacuum with features comparable to those of the Roomba i7, but priced at a 25% discount. Product listings for the vacuum have already been prepared on Wayfair and Walmart's online stores. Shark's entry into the lower and middle tiers of the market in 2017 represented one of the first non-Roomba robot vacuum product launches by a recognizable and respected home appliance brand, and Shark has since competed aggressively with iRobot's mid-tier vacuums and has successfully taken market share. We believe that Shark will apply similar competitive pressure to the higher end of the robot vacuum market with the launch of the RV950.
- RV950 Representative Of Trend Of Heightened Competition At Top Tier Of The RVC Market: We see the impending release of the RV950, and other recent product launches, as evidence that iRobot competitors – once considered "off-brand" or "no-name" products occupying the lower end of the market – are rapidly closing the technological gap between themselves and Roomba, and that robovacs are thus becoming increasingly commoditized. Formerly-unknown brands are quickly gaining respect from the tech world and are seen as legitimate Roomba alternatives. Even then, competing products continue to be priced at a material discount to comparable Roombas. We estimate that pricing pressure at the high end of the market could cost iRobot ~12 points of gross margin on its Roomba segment.

Non-Roomba Products Unlikely To Move The Needle

- Aggressive Braava Projections Unlikely To Come To Fruition: Management is aiming for Braava to contribute 10% of FY19 total sales. Given iRobot's FY19 sales guidance, this implies that management expects Braava sales to grow by over 50% in FY19. This would be entirely out of line with historical growth rates and with Braava's recent performance in markets in which it has achieved some level of popularity – namely Japan. We believe that Braava sales will grow by no more than 20-25% in FY19 at the high end. Management's Braava guidance also implies that it expects Roomba sales to grow by just 14-17% in FY19, a meaningful step down from recent growth rates.
- Terra A Poor Fit For The U.S. Market: After nearly a decade of development, iRobot finally announced the launch of its robot lawnmower on the Q4 FY18 call. iRobot has a tremendously poor record of developing and selling products outside of its core Roomba line – particularly products meant for outdoor use. We believe that the Terra is a poor fit for the U.S., where lawns are large and difficult to navigate by global standards. In Europe, where the robot mower market is already developed, iRobot will compete with established, respected brands with technologically-advanced mowers, yet with sufficiently deep pockets to weather a price war. This stands in contrast to the conditions which led to Roomba's success in the U.S., where it came to dominate the market by establishing itself as a first mover and a relatively premium product.
- Valuation Makes Little Sense: IRBT shares have run up from $75 to as high as $130 through the recent bull market on little more than sporadic optimism regarding U.S.-China trade talks. We find it puzzling that IRBT shares reacted so positively to what was at best a mixed Q4 earnings call. We believe that increasing competition and downward pricing pressure will continue to weigh on top-line growth and margins, and that multiples are tremendously overextended – how else could every single sell-side price target be *below* current share prices? A potential tariff hike to 25% remains a material risk for iRobot, and could drive another ~15% downside to IRBT shares.

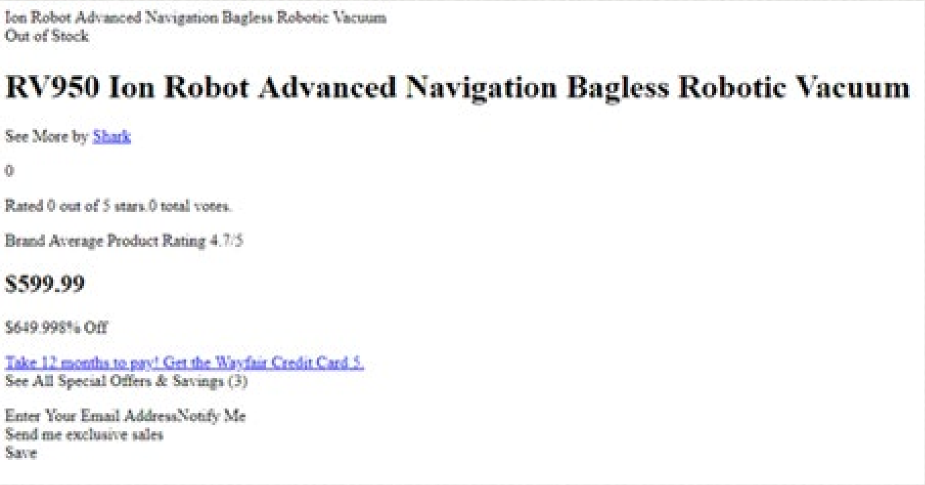
Low-End Competitors Starting To Crowd The High End Of The Market

SPRUCE POINT CAPITAL MANAGEMENT

Launch Of New SharkNinja Robot Vacuum Appears To Be Imminent

Through the close monitoring of retailer websites, Spruce Point has found evidence that SharkNinja ("Shark") is poised to release the RV950 Shark ION Robot Vacuum – a new, high-end robot vacuum which has yet to be announced by Shark or anyone else. Wayfair prematurely published a listing for the RV950 which was supposed to remain hidden from public view. The page was promptly taken down. Walmart also recently published a listing for the RV950. While the page has not been taken down, it is not searchable through Walmart's internal search engine, and the product is currently listed as "Out of stock." The page appears not to be meant for public consumption.

Wayfair


Ion Robot Advanced Navigation Bagless Robotic Vacuum
Out of Stock

RV950 Ion Robot Advanced Navigation Bagless Robotic Vacuum

See More by Shark

0

Rated 0 out of 5 stars.0 total votes.

Brand Average Product Rating 4.7/5

$599.99

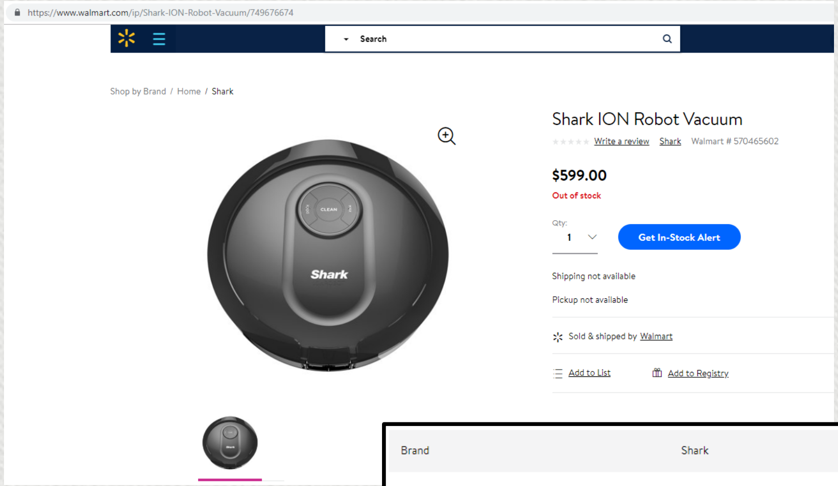
$649.998% Off

Take 12 months to pay! Get the Wayfair Credit Card 5.
See All Special Offers & Savings (3)

Enter Your Email AddressNotify Me
Send me exclusive sales
Save

Source (Link no longer directs to page – page has been taken down)

Walmart


https://www.walmart.com/ip/Shark-ION-Robot-Vacuum/749676674

Search

Shop by Brand / Home / Shark

Shark ION Robot Vacuum

Write a review Shark Walmart # 570465602

$599.00

Out of stock

Qty: 1

Get In-Stock Alert

Shipping not available

Pickup not available

Sold & shipped by Walmart

Add to List Add to Registry

Brand	Shark
Recommended Surface	Carpet
Model	RV950
Assembled Product Dimensions (L x W x H)	12.83 x 12.14 x 4.92 Inches

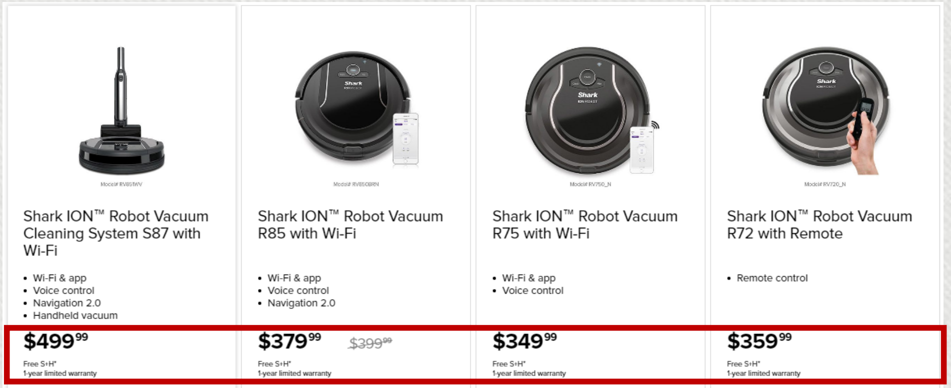
Source
Archived Source (Mar 6, 2019)

As of March 6, 2019, a Google search for "'RV950' Shark Ion" ("RV950" in quotes) yields only eight results: the (now dead) Wayfair page, the Walmart page, and six copycat bot sites which scan and publish content from Walmart's website. Shark has made no public mention of the forthcoming RV950, and neither the public nor the press appear to be aware of the product.

RV950 Shark ION Will Play At The High End Of The Market

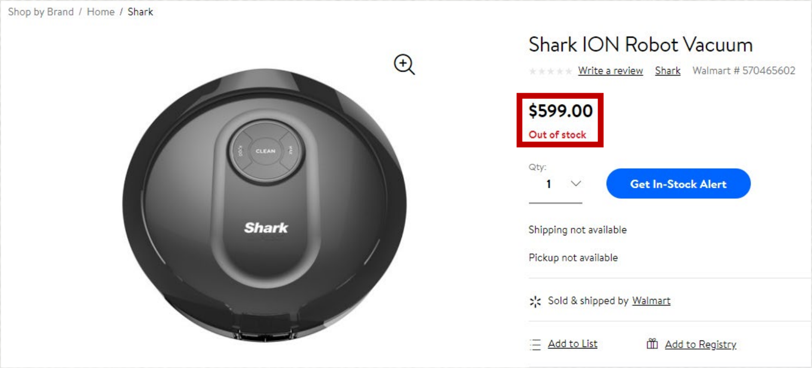
Through our last several updates on iRobot, we have highlighted the unique threat posed by Shark: whereas most iRobot competition historically came from unrecognizable Chinese companies which sell largely or exclusively online, SharkNinja is a recognizable brand in the small appliance space with established relationships with big box distributors. Since Shark introduced its first robot vacuum in September 2017, it has mostly played in the middle tier of the robot vacuum market. However, the forthcoming RV950 appears to be a high-end product almost a year in the making.

Current Shark ION Lineup: Mid-Tier



Source

RV950: Higher-End



Source
Archived Source (Mar 6, 2019)

In May 2018, SharkNinja filed a trademark for "Multi Room IQ," the name of the RV950's new advanced navigation system. This suggests that Shark has been developing this system for at least a year. Based on descriptions of this system, we believe that it is at least comparable with the navigation system employed by the high-end Roomba i7, iRobot's most advanced vacuum to date.

MULTI ROOM IQ

Word Mark	MULTI ROOM IQ
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	87936619
Filing Date	May 25, 2018
Current Basis	1B
Original Filing Basis	1B
Published for Opposition	March 19, 2019
Owner	(APPLICANT) **SharkNinja** Operating LLC LIMITED LIABILITY COMPANY DELAWARE 89 A Street, Suite 100 Needham MASSACHUSETTS 02494
Attorney of Record	Lawrence W. Greene
Disclaimer	NO CLAIM IS MADE TO THE EXCLUSIVE RIGHT TO USE "MULTI ROOM" APART FROM THE MARK AS SHOWN
Type of Mark	TRADEMARK
Register	PRINCIPAL
Live/Dead Indicator	LIVE

Source

Spruce Point Capital Management

RV950 Matches The Newest, Most Advanced Features Of The Roomba i7

The newest, most advanced features of the Roomba i7 which iRobot has been keenest on marketing are its navigation system and smart mapping capabilities. Visual localization allows the Roomba to better avoid obstacles and to keep track of its cleaning path, while smart mapping allows users to instruct the Roomba to clean specific rooms or virtual zones, which can be labelled and called out using Amazon Echo or Google Assistant.

Per its product description on Walmart's website, the RV950 Shark ION appears to match both of these features.

iRobot Roomba i7 – Product Description

Imprint™ Smart Mapping: Clean and Schedule by Room

"Roomba®, clean my kitchen"

Enjoy hands-free control with Alexa-enabled devices and the Google Assistant. Learns your home, remembers your rooms, and adapts to determine the best way to clean with Imprint™ Smart Mapping.

Knows your kitchen from your living room-choose which rooms are cleaned and when in the iRobot HOME App.

Amazon, Echo, Alexa, and all related logos are trademarks of Amazon.com, Inc. or its affiliate.

Google Home is a trademark of Google LLC.

iAdapt® 3.0 Navigation with Visual Localization

Guided by serious smarts.

Patented iAdapt® 3.0 Navigation with vSLAM® technology allows the robot to map its surroundings to seamlessly and efficiently clean an entire level of your home. The robot creates visual landmarks to keep track of where it's been and where it has yet to clean.

Source

RV950 Shark ION – Product Description (Walmart Page)

- Multi-Room IQ Navigation learns, remembers, and refines your home's layout, allowing for thorough coverage of an entire level of your home
- Customize your clean with the 'Shark ION ROBOT' app, or voice control with Amazon Alexa & Google Assistant – select which rooms to clean, where not to clean, and schedule cleaning by day and time
- Advanced object detection and avoidance – forward facing sensors identify objects in the cleaning path and adjusts to clean around the object and continue on the cleaning path
- During big jobs the robot will clean, recharge and resume exactly where it left off to ensure cleaning is finished every time
- Self-Cleaning Brushroll captures short and long hair, dust, dander, and allergens to prevent everyday buildup in your home
- Dual Edge and Corner Spinning Brushes effectively pulls in dust, debris, and pet hair

Source
Archived Source *(Mar 6, 2019)*

iRobot has pitched itself as the "connectivity play" and the "smart home play" in the robot vacuum market: until recently, it was the only robot vacuum which users could instruct to clean specific rooms through Amazon Echo or Google Assistant. It is clear that the RV950 will also have this feature.

With competitors matching iRobot's connectivity capabilities so quickly, just how unique of a "smart home play" is iRobot?

Peers Are Competing At The Premium Tier And Quickly Closing Technological Gaps

In each of our reports on iRobot, the entry of new competitors and the commoditization of the robot vacuum have been major pillars of our short thesis. While the market has indeed been flooded with low-end robot vacuums since we first published on iRobot in 2014, bulls argue that iRobot still reigns at the premium end of the spectrum, where low-cost Chinese competitors supposedly cannot compete with iRobot's top-flight technology. However, with the impending introduction of the RV950 Shark ION, none of iRobot's most advanced technological features will be unique to its own products – and each will be available in a product sold at a lower price.

Feature	iRobot Roomba i7[1]	RV950 Shark ION[2]	ECOVACS DEEBOT OZMO 930[3]	Neato Botvac D7[4]
Auto Charge and Resume	Yes	Yes	Yes	Yes
Wi-Fi Connected	Yes	Yes	Yes	Yes
Virtual No-Go Zones	Yes	Yes	Yes	Yes
Side Brush	Yes	Yes	Yes	Yes
Multiple Floor Planning Map	Yes	?	No	Yes
Zone Cleaning	Yes	Yes	Yes	Yes
Manual Drive Remote Control	Yes	?	Yes	Yes
Laser Vision	No	?	Yes	Yes
Integrated Mop	No	No	Yes	No
Obstacle Detection Technology	Yes	Yes	Yes	Yes
Price	**$799.99[1]**	**$599.99[2]**	**$449.99[5]**	**$829.99[4]**
Discount to i7	**-**	**25%**	**44%**	**-4%**

iRobot competitors no longer reside exclusively at the bottom tier of the market – but are still significantly cheaper than comparable iRobot vacuums.

As it did when it first entered the middle tier of the market with its first generation of robot vacuums, Shark could put unique pressure on iRobot as the first recognizable brand to compete with the Company at the higher end of the market in North America.

Sources
1. *iRobot Roomba i7*
2. *RV950 Shark ION (Walmart Page)*
3. *ECOVACS DEEBOT OZMO 930*
4. *Neato Botvac D7*
5. *ECOVACS DEEBOT OZMO 930 (Amazon Page)*

Pricing Pressure At High End Will Bring Material Margin Compression

Heightened pricing pressure on iRobot's premium products could weigh heavily on company-wide margins.

	Roomba i7			Roomba i7+[1]		
	Current Price	RV950 Price Match	DEEBOT OZMO 930 Price Match	Current Price	RV950 Price Match	DEEBOT OZMO 930 Price Match
Retail Price	$799.99	$599.99	$449.99	$1,099.99	$899.99	$749.99
Margin to Retailer	25%	25%	25%	25%	25%	25%
Price to iRobot	$599.99	$449.99	$337.49	$824.99	$647.99	$562.49
COGS per Unit	$150.00	$150.00	$150.00	$250.00	$250.00	$250.00
Gross Profit per Unit	$449.99	$299.99	$187.49	$574.99	$424.99	$312.49
Gross Margin per Unit	**75.0%**	**66.7%**	**55.6%**	**69.7%**	**63.0%**	**55.6%**

High-end vacuum margins could fall by as much as 20 points if iRobot is forced to match competitor prices

	Segment-Wide Margins Without High-End Price Matching			Segment-Wide Margins After High-End Price Matching		
	High End (Average)	Mid Tier (Average)	Low End (Average)	High End (Average)	Mid Tier (Average)	Low End (Average)
Retail Price	$950	$450	$300	$600	$450	$300
Margin to Retailer	25%	25%	25%	25%	25%	25%
Price to iRobot	$713	$338	$225	$450	$338	$225
COGS per Unit	$150	$125	$110	$150	$125	$110
Gross Profit per Unit	$563	$213	$115	$300	$213	$115
Gross Margin per Unit	**79%**	**63%**	**51%**	**67%**	**63%**	**51%**
% of Units Sold	**15%**	**15%**	**70%**	**15%**	**15%**	**70%**
Segment-Wide GM		**57%**			**45%**	

Product-wide gross margins could fall by as much as 12 points if iRobot is forced to match competitor prices

1. Roomba i7+ price includes $300 price gap to account for the i7+ tower

Formerly Low-End Competitor Leveling The Playing Field

As recently as December 2018, iRobot management labeled Shark ION robot vacuums as "low-end" Chinese products, and defended iRobot's positioning in the market by emphasizing its unique caché as the leading premium brand. With Shark set to release a robot vacuum technologically equivalent to iRobot's top-tier vacuums, but priced at a 25% discount, Roomba's perception as a uniquely premium product will continue to be challenged, and the Company will experience pricing pressure not only among its more basic offerings, but among its top-tier vacuums as well.

Raymond James Tech Conference – December 2018

*"**Over the last several years, we've had more competition coming in from what we call our entry price points or the low end of our range.** A lot of those are products that are **coming from China either directly under Chinese brands** or occasionally where you'll find well-established brands OEM-ing Chinese products. So, for example, **there's a product on the market from Shark; it's actually an Ecovacs Chinese product that they've put their name on**. So, the type of competition has changed over the years and – but there's always a lot of it and I expect that there will continue to be more and more. I think a lot of these companies see this as – they see the growth opportunity that we see, they see our success in this market, and they want to have a piece of that pie."*

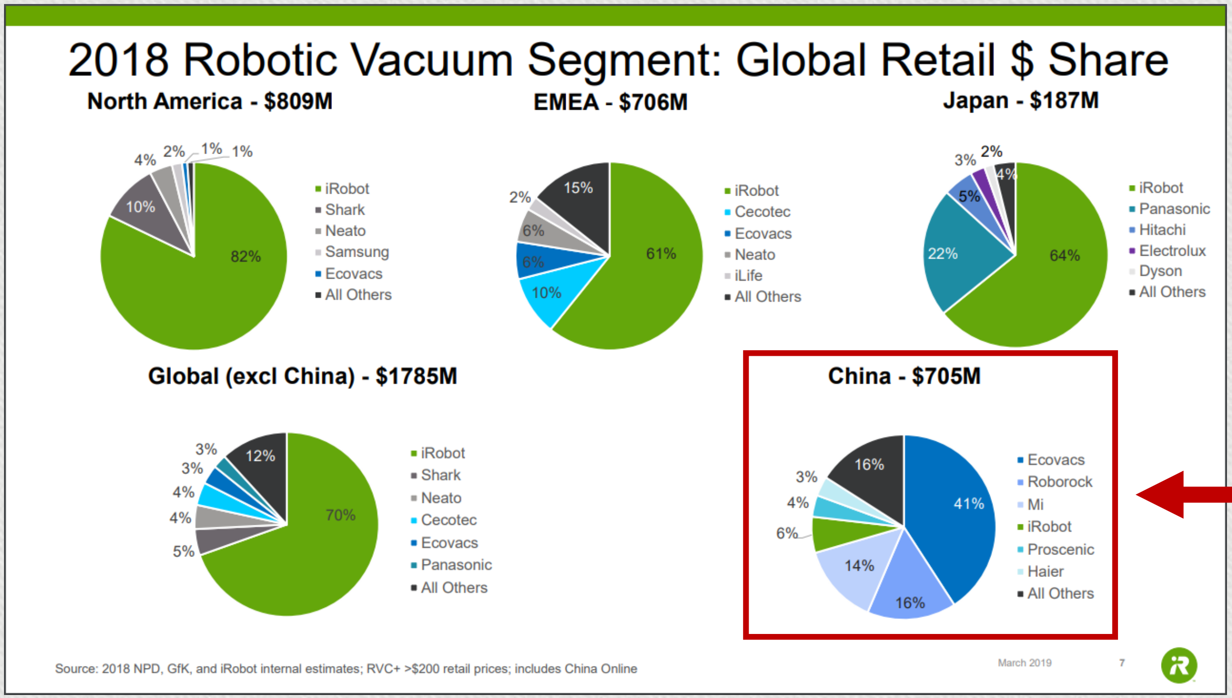
- Alison Dean – CFO, iRobot

Formerly low-to-mid tier brands are set to enter the high end and compete with iRobot on its own ground.

This will produce immediate pricing pressure and, over time, will further erode iRobot's market share.

Management Erroneously Believes That It Is Alone At The Top – In China, It Is Just Another Robot Vacuum

The Chinese robot vacuum market provides interesting insight into just how competitive the global market could become through the coming years. Whereas iRobot has a dominant (though declining) share in most markets – a product of its first-mover advantage – the Company has only 6% share in what is a much more fragmented Chinese marketplace. CEO Colin Angle recently expressed that iRobot will be making a push to grow share in China through the near-term, believing that it has an opportunity to establish itself at the high end of the market. However, whereas Chinese robot vacuums suffer from poor brand recognition abroad, Chinese consumers appear more comfortable with these brands, as reflected by their relatively strong market share in China. As these brands have grown more recognizable internationally, global consumers have become more willing to see them as legitimate Roomba competitors at the high end of the market rather than as cheap "off-brand" alternatives.



Source: iRobot Investor Presentation, March 2019

*"**We see an opportunity to grow our market share in China, especially in the high-end segment.** Our team in China has been working to optimize our market strategies. China is the largest [market], but not for iRobot…. We believe we're on the right growth path now. China will be our largest market."*

- Colin Angle – CEO, iRobot – China Daily

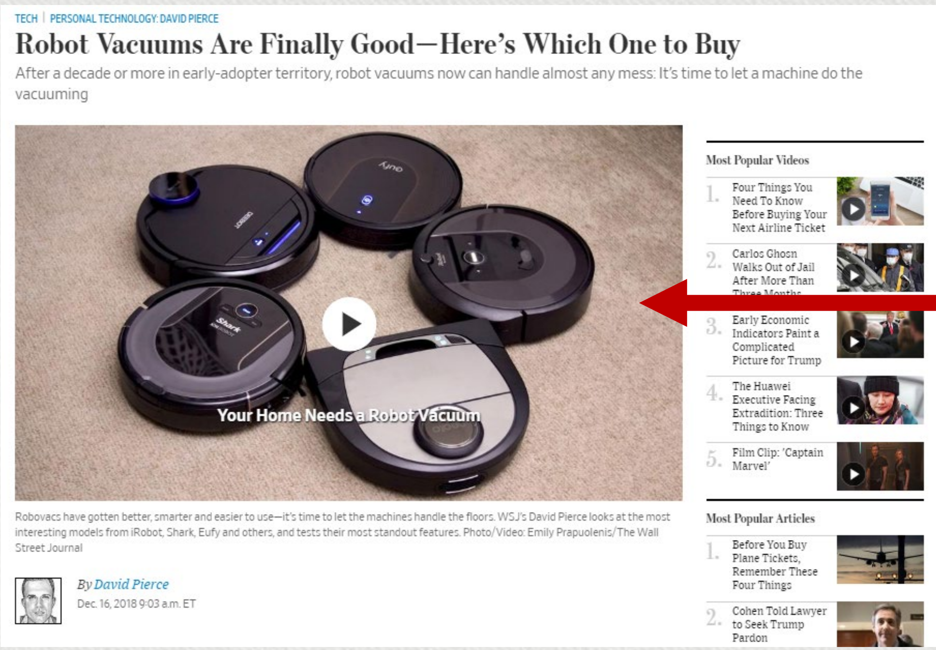
How easy will it be to grow into the high end of the Chinese market when Chinese brands are well-regarded and already entrenched among Chinese consumers?

Chinese brands have been growing into the high end of the U.S. by offering vacuums similar to high-end Roombas at 25-50% discounts. Will iRobot have to discount heavily to break into the Chinese market?

We expect that, over time, as consumers increasingly see non-Roomba robot vacuums as quality products with features similar to high-end Roombas, the global market share distribution will gradually grow to resemble the Chinese market.

Competitors Are Becoming More Mainstream Across All Tiers Of The Market

Whereas competitors were historically seen as "off-brand alternatives" to the recognizable Roomba brand, competing products have rapidly achieved mainstream acceptance. Notably, the *Wall Street Journal* reviewed iRobot, Shark, Neato, ECOVACS, and eufy in December, and found that alternative brands compared favorably to the Roomba. We believe that continued mainstream coverage of what were formerly considered "off-brands" will contribute to continued pricing pressure for Roomba – which is still priced at a material premium to even high-end peers – and will facilitate share gains among competitors.



TECH | PERSONAL TECHNOLOGY: DAVID PIERCE

Robot Vacuums Are Finally Good—Here's Which One to Buy

After a decade or more in early-adopter territory, robot vacuums now can handle almost any mess: It's time to let a machine do the vacuuming

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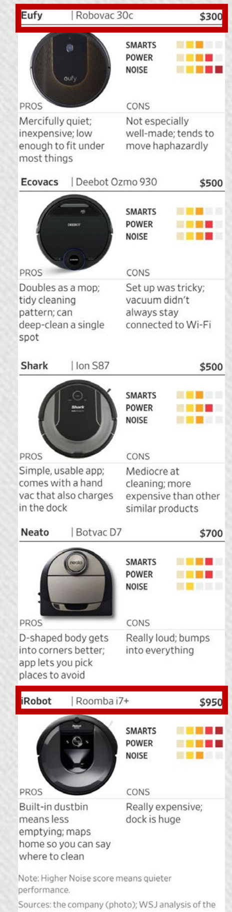
Robovacs have gotten better, smarter and easier to use—it's time to let the machines handle the floors. WSJ's David Pierce looks at the most interesting models from iRobot, Shark, Eufy and others, and tests their most standout features. Photo/Video: Emily Prapuolenis/The Wall Street Journal

By David Pierce
Dec. 16, 2018 9:03 a.m. ET

Roomba competitors no longer seen as cheap-o "off-brand" or "no-name" alternatives, but as legitimate products worthy of a review by the WSJ



Is the high-end Roomba really worth a >200% premium to another robot vacuum rated comparably by a trusted, mainstream media source?

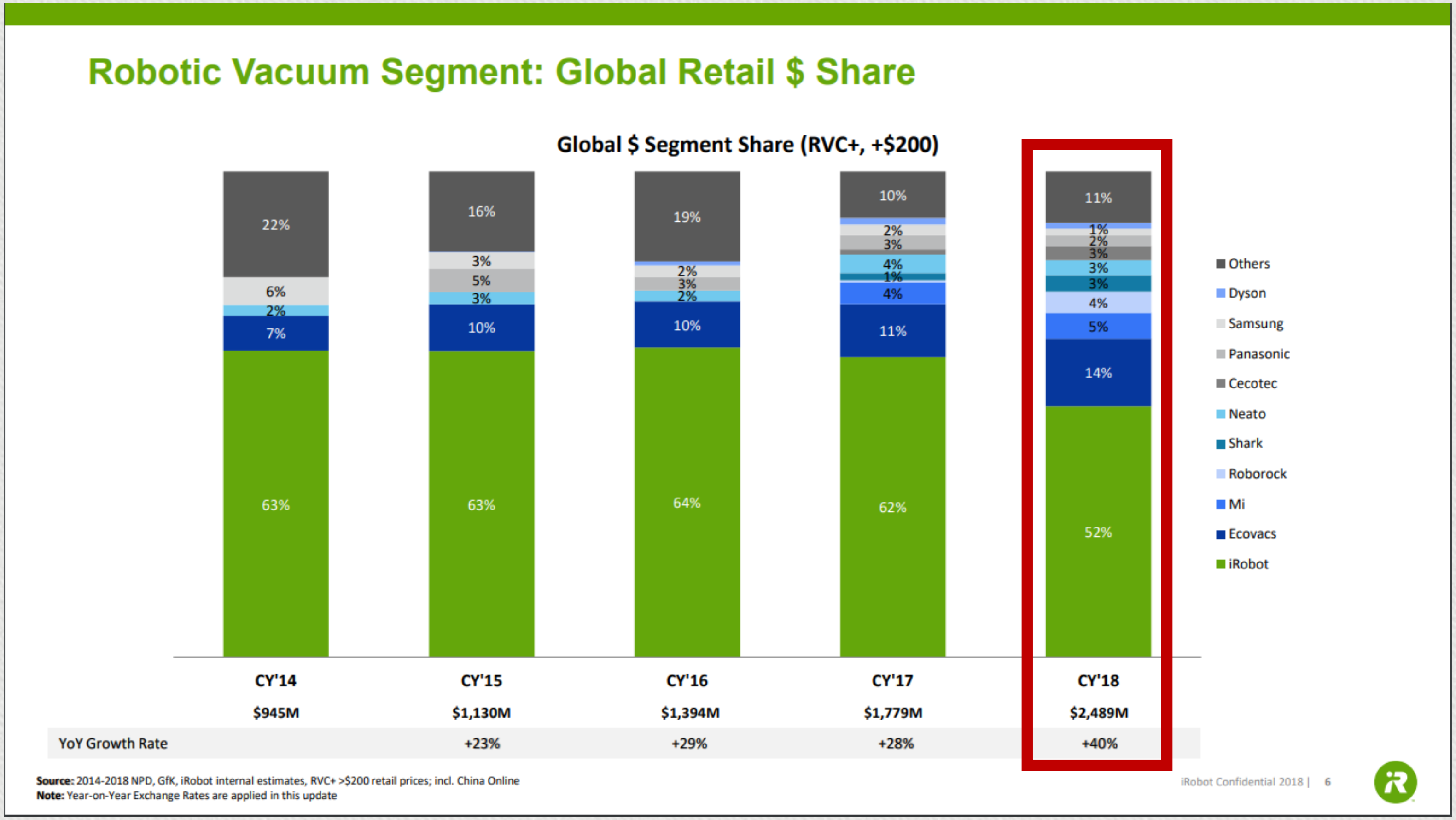
"Buying a robot vacuum is a bit like buying a car, in that there's no one choice that's right for everyone. If you're only worried about the basics, you don't need to spend much. *The Eufy Robovac 30c is a good vacuum that takes the job out of your hands. I didn't test its cheaper sibling, the $150 Robovac 11s, but the only difference between the two is the Wi-Fi connection, so if you don't care about the app, you can save even more money."*

- David Pierce – WSJ

Source

Global Market Share Falling Off A Cliff By Management's Own Admission

While iRobot continues to bank on expansion into the global robot vacuum TAM for top-line growth, competitors are taking significant share from Roomba. After hovering between 62-64% from CY14 through CY17, iRobot's share of the global retail robot vacuum market cratered to 52% in CY18. This highlights the competitive pressures which iRobot is facing and will continue to face as competitors which were once seen as cheap "off-market" products are increasingly seen as legitimate high-end alternatives.



Source: iRobot Investor Presentation, March 2019

Spruce Point Capital Management

Competitors Impeding On iRobot's Brick-And-Mortar Presence

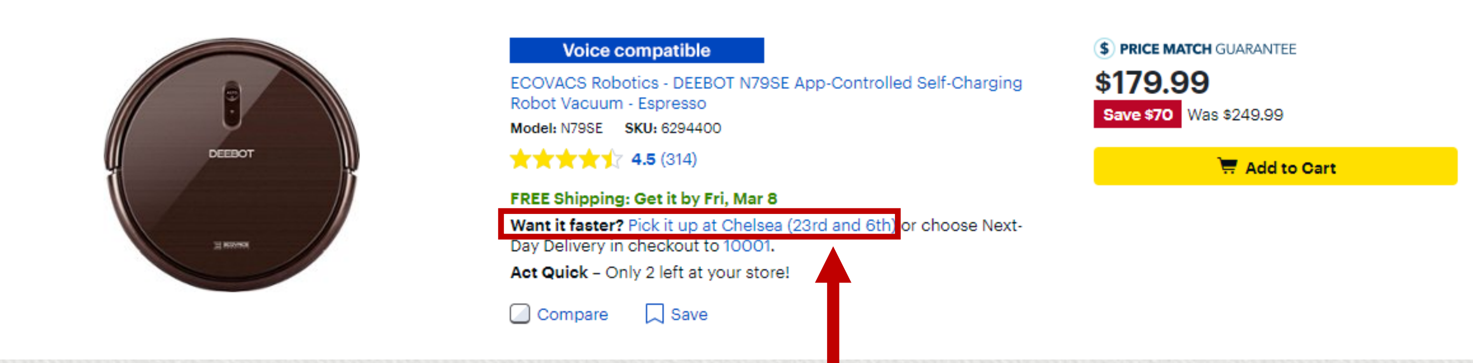
Could an increasing retail presence among competitors contribute to the forecasted drag on Roomba sales? Interestingly, management claimed that they saw no increase in competition at brick-and-mortar retailers in the U.S. through FY. However, we note that ECOVACS robot vacuums hit shelves for the first time in Q4 FY18. This would not only put pressure on retail sales for Roomba, but could help to improve the visibility and perception of competing brands which have until now been viewed as no-name, lower-tier brands.

IRBT Q4 FY18 Earnings Call

"In the U.S. we continue to see new competitive products selling through Amazon marketplace, but not on shelves of retailers where we still generate 60% of our domestic revenue."

- Colin Angle – CEO, iRobot

Best Buy Website: Proof Of New Retail Competition

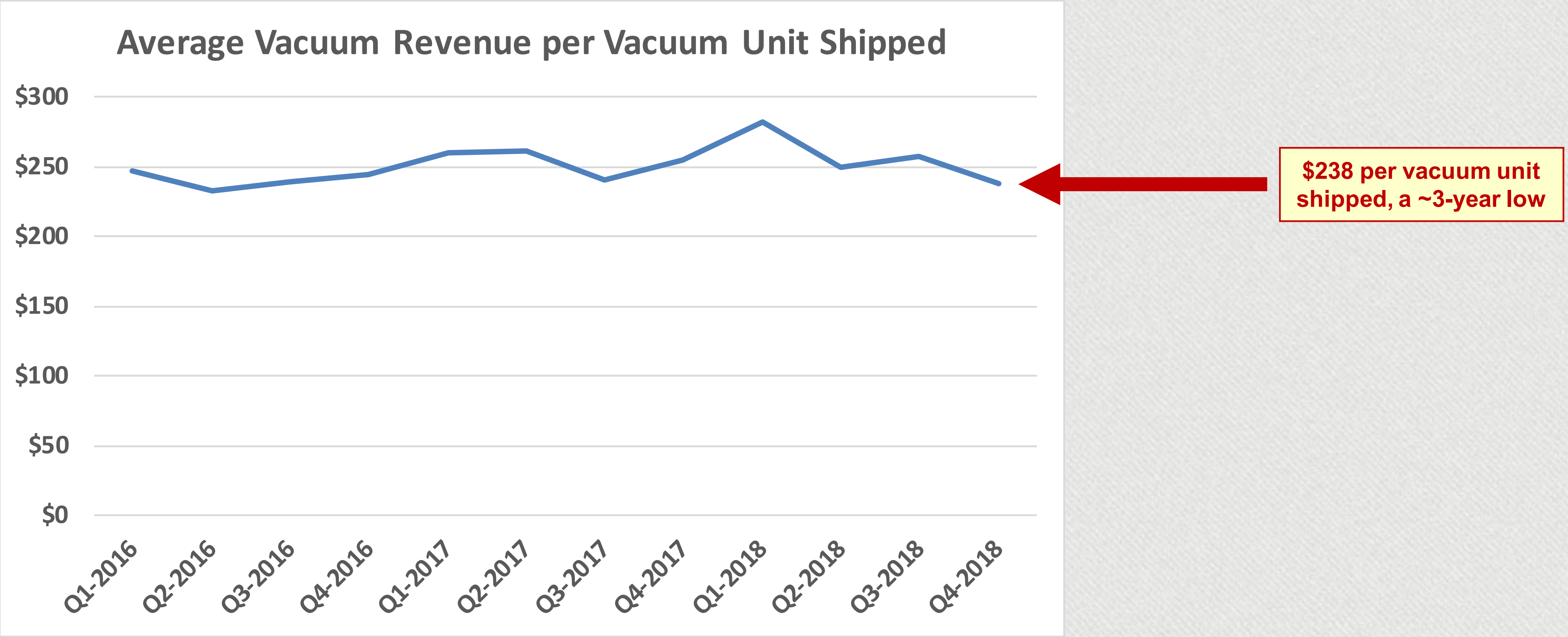


Source
Archived Source (as of March 6, 2019)

ECOVACS available in-store without a preorder

Competition Putting Visible Pressure On Sales

Despite the release of new, higher-end vacuums, average vacuum revenue per vacuum unit shipped continues to trend lower. In Q4 FY18 – the first full period of availability for the i7 and i7+ – this metric fell to $238, its lowest point since Q2 2016. We see this as clear evidence that both the proliferation of new competitors and the rising quality of competing products is putting significant downward pricing pressure on the Roomba.



Source: iRobot SEC Filings

Management Overoptimistic On Non-Vacuum Products – And Pessimistic On Vacuums?

Spruce Point Capital Management

Competitive Landscape Becoming More Crowded At All Price Points

Management is aiming to grow Braava (mopping) revenue to 10% of total sales in FY19. We can use this not only to derive management's implied Braava sales growth guidance for the coming year, but, using this implied growth, we can also back out implied Roomba (vacuum) growth guidance for FY19. Management's total sales growth guidance of 17-20%, together with its Braava growth target, implies that it expects Roomba sales to grow by just ~17% through the year – a meaningful step down from 25% in FY18 and 37% in FY17.

Recent statements by management suggest that it plans to grow Braava sales largely through price increases, but we believe that price hikes would seriously hinder unit growth – particularly as the space becomes increasingly crowded, and as competitors begin to roll out more advanced dual robot vacuum-mops (something iRobot does not yet offer). Investors should not expect iRobot to be able to grow sales through price hikes just as pricing is coming under extreme pressure.

	Actual	Management Guidance	
($, Millions)	FY18	FY19E – Low	FY19E – High
Total Sales Growth	23.6%	17.0%	20.0%
(Implied) Total Sales	$1,092.6	$1,278.3	$1,310.6
Braava as a % of Sales	7.8%	10.0%	10.0%
Braava Sales	$85.0	$127.8	$131.1
(Implied) Braava Sales Growth	9.0%	**50.4%**	**54.2%**
Other Revenue	($0.4)	-	-
(Implied) Roomba Sales	$1,008.0	$1,150.5	$1,179.4
(Implied) Roomba Sales Growth	**24.9%**	**14.1%**	**17.0%**

Management implicitly guiding to unrealistic Braava sales growth at unproven increased price point

Management implicitly guiding to a meaningful deceleration in Roomba sales growth *even before* Shark launches the RV950

Do we really believe that Braava sales can grow by >50% in FY19 after growing just 22% in FY17 and 9% in FY18? Braava's "robust" Q4 in Japan was good for 25% YoY segment growth – could the U.S. really double that over the course of a year?

Is management telegraphing muted sales growth expectations for Roomba in FY19?

SPRUCE POINT CAPITAL MANAGEMENT

More Realistic Braava Sales Growth Could Result In A Meaningful Revenue Miss

If we assume more measured Braava revenue growth in line with historical levels (around 9% YoY), iRobot revenue could miss the guidance midpoint by ~4%.

With Braava's "robust" Q4 in Japan producing 25% sales growth YoY for the mopping segment, we do not believe that total Braava sales growth will exceed 20-25% even in a bull-case scenario. Management's target of >50% sales growth for the segment seems grossly unrealistic.

	Actual	Management Guidance	
($, Millions)	FY18	FY19E – Low	FY19E – High
Braava Sales Growth Estimate	9.0%	9.0%	20.0%
Braava Sales	$85.0	$92.6	$102.0
Roomba Sales – Implied Guidance	$1,008.0	$1,150.5	$1,179.4
(Implied) Roomba Sales Growth	24.9%	14.1%	17.0%
Other Revenue	($0.4)	-	-
Total Sales	$1,092.6	$1,243.2	$1,281.4
Total Sales Growth	23.6%	13.8%	17.3%
Total Sales vs. Guidance Midpoint	-	($51.3)	($13.1)

More realistic segment growth range between historical levels at the low end and recent Japanese performance at the high end.

More measured Braava sales growth could alone result in a revenue miss of ~4% versus the midpoint of guidance.

Robot Lawnmower Set To Become Another Failed Outdoor Product For iRobot

After years of development, management finally announced its much-anticipated robot lawnmower (Terra) on its Q4 FY18 conference call. This isn't iRobot's first attempt at selling outdoor robots, of course. The Company sold a gutter-cleaning robot (Looj) starting in 2008, but the product met with poor reviews and was discontinued in 2017 after contributing minimal sales. iRobot still sells a swimming pool cleaner (Mirra), but it is currently responsible for less than 1% of revenue after five full years on the market. We also note that, per management, the current iteration of the Terra is not iRobot's first attempt at a robot lawnmower, having scrapped earlier versions.

iRobot has had almost no success branching outside of its core Roomba product, and has struggled even more to produce robots for outdoor use. We are highly skeptical that management has gotten it right with the Terra.

Business Segment / Product	History	Status
Defense and Security Business	Launched in 1998. Provided battlefield robots to Department of Defense.	• Sold to Arlington Capital Partners in 2016. Now does business as "Endeavor Robotics".
Looj (Gutter-Cleaning Robot)	Launched in 2008	• Generally met with mixed to poor reviews (example) • Discontinued in 2017
Mirra (Swimming Pool Cleaner)	Launched in 2013 as replacement for Verro pool cleaner product line	• Currently responsible for less than 1% of iRobot revenue.
TelePresence	Released Ava 500 video collaboration robot in 2013 after years of planning and R&D	• Currently responsible for less than 1% of iRobot revenue despite heavy promotion by management as a future source of growth (see our original report on iRobot)
Scooba (Floor-Scrubbing Robot)	Launched in 2006	• Discontinued in 2016 in favor of Braava robotic mop
Braava (Robotic Mop)	Developed by Evolution Robotics (acquired by iRobot in 2012 for $74M)	• Responsible for less than 10% of iRobot revenue as of FY 2017
Terra (Robotic Lawnmower)	In development since early/mid-2010s. Applied for "Terra" trademark in 2014 (source). Received FCC clearance to sell lawnmowing robot against National Radio Astronomy Observatory challenge in 2015 (source).	• Finally announced in Q4 FY18. FY19 rollout is only a beta launch. • ***What kind of results can we really expect given iRobot's failures in outdoor robotics?***

Robot Lawnmower Not Fit For U.S. Market – And iRobot Is Late To The Game In Europe

iRobot plans to launch the Terra in Germany before doing a full U.S. rollout, likely because Europe already has an established market for robot lawnmowers. However, whereas iRobot found its initial success as a first-mover in the robot vacuum space, it will have to fight an uphill battle for market share in Europe against Husqvarna (45-60% share), Bosch (10-15%), and Honda (10-15%) – all well-regarded brands commanding a premium price, yet with sufficient scale to weather a price war. Growing lawnmower sales in Europe will not be as easy as was growing vacuum sales in the entirely untapped U.S. robot vacuum market of the early-to-mid 2000s.

Robot vacuum market when Roomba first launched: Zero competition

Robot lawnmower market when Terra first launches: Competition from respected brands

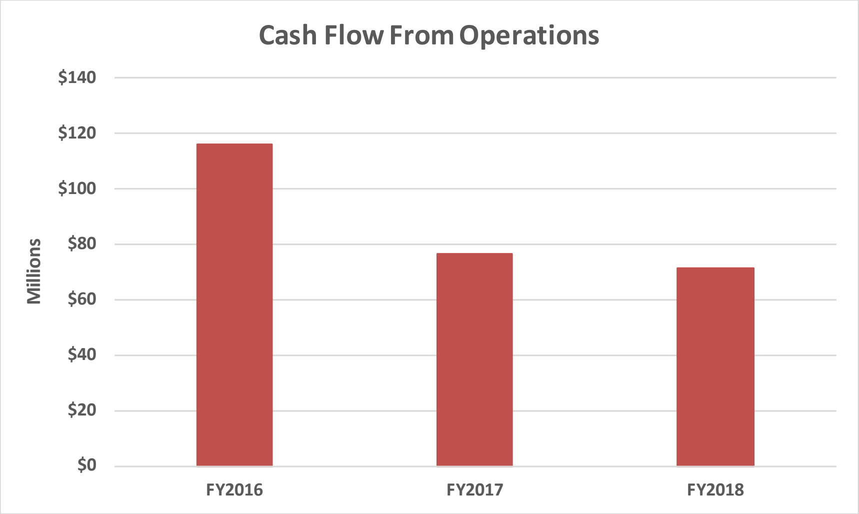
Spruce Point notes that, while robotic lawnmowers have gained some traction in Germany and Scandinavia, lawns in these countries tend to be small, square, and flat, and therefore easily navigated by a small roving robot. U.S. lawns, on the other hand, tend to be much larger and irregularly-shaped, complicating the process of setting boundaries for the user (buried guide wires, as are used in Europe, might not be feasible for many U.S. homes). Steep slopes and divots could also entrap a robot lawnmower, particularly in inclement weather. Importantly, unskilled labor costs are much lower in the U.S. than in Europe, where users might opt for a robot vacuum as a cost-saving option.

Deteriorating Financials And Valuation Insanity

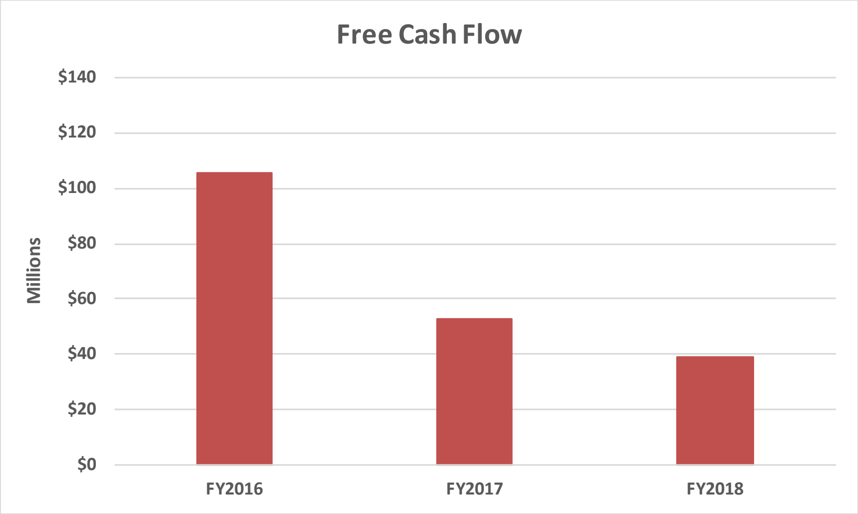
Spruce Point Capital Management

iRobot's Free Cash Flow Will Continue To Decline In The Future

Both iRobot's cash flow from operations and free cash flow have been in decline since FY16. This has been driven in part by growth in accounts receivable and inventory, which, as discussed in our previous two reports, appears suspicious to us given its recent acquisitions of European and Japanese distributors. With pricing pressure set to intensify with increasing competition, we anticipate continued operating cash flow compression going forward. At the same time, capital expenditures are forecast to rise to $40m in 2019 (from $32m in 2018) resulting in lower free cash flow.



OCF: -22% CAGR since FY16



FCF: -39% CAGR since FY16

Source: iRobot SEC Filings

Expanding The Credit Facility

iRobot doubled its credit facility in Q2 FY18, from $75M to $150M. We find this interesting given that, at the time, the Company had $89M of cash on its balance sheet and no debt, yet had no stated plans to engage in M&A. Why else would management expand its revolver so dramatically? We fear that management has cash flow concerns going forward, and that OCF and FCF will continue to be pressured through the coming quarters. Again, in line with our discussions in our last two reports, continued sales growth matched by heavy spending on working capital would concern us following on its recent acquisition of international distributors.

IRBT FY18 10-K

Working Capital Facility

Credit Facility

In June 2018, we entered into a new agreement with Bank of America, N.A., increasing the amount of our unsecured revolving line of credit from $75.0 million to $150.0 million. As of December 29, 2018, the full amount was available for borrowing. The new revolving line of credit is available to fund working capital and other corporate purposes. The new agreement extends the term of the credit facilities to June 2023. The interest on loans under the credit facility accrues, at our election, at either (1) LIBOR plus a margin, currently equal to 1.0%, based on our ratio of indebtedness to Adjusted EBITDA (the "Eurodollar Rate"), or (2) the lender's base rate. The lender's base rate is equal to the highest of (1) the federal funds rate plus 0.5%, (2) the lender's prime rate or (3) the Eurodollar Rate plus 1.0%.

Source

Why "Buy" Or "Hold" A Stock With 13% Implied Downside?

Sell-side analysts remain bullish on IRBT, but the recent run-up in the stock has surpassed even the Street's lofty price targets – prompting two recent downgrades from Sidoti and Canaccord. Although every analyst recommends IRBT as a "Buy" or "Hold," the stock is currently priced at a premium to every price target currently issued by the Street – and at this point, no analyst has factored in Shark's pending entry into the high end of the market with the new RV950 model. The average analyst price target is 13% below current levels and could fall further upon re-evaluating iRobot's long term competitive positioning in the RVC market.

We believe that the stock has run up both with the broader market upswing and on sporadic news regarding the possibility of a trade deal with China. However, while we note that the impending tariff hike remains an outstanding risk, we believe that the stock is clearly overextended even if the tariff hike is cancelled.

	Post Q3 FY18 Earnings			Post Q4 FY18 Earnings		
Research Firm	Recommendation	Price Target	Implied Upside	Recommendation	Price Target	Implied Upside
Sidoti & Company	Buy	$118.00	28%	Neutral	$118.00	-5%
Canaccord Genuity	Buy	115.00	25%	Hold	114.00	-8%
Northland Securities	Outperform	115.00	25%	Outperform	119.00	-4%
Needham & Co	Buy	95.00	3%	Buy	112.00	-10%
Piper Jaffray	Neutral	82.00	-11%	Neutral	96.00	-23%
J.P. Morgan	Neutral	77.00	-16%	Neutral	88.00	-29%
Dougherty & Company	Neutral	-	-	Neutral	-	-
Raymond James	Market Perform	-	-	Market Perform	-	-
AVERAGE	**-**	**$100.33**	**+9%**	**-**	**$107.83**	**-13%**

Source: Bloomberg

Spruce Point Capital Management

Depending On Trade Negotiation Outcomes, Spruce Point Sees 60%-80% Downside Risk In IRBT

The sell-side community appears content to build a 10% tariff into its models and take the resulting earnings as a safe projection. We remind investors that, while the 25% tariff on Chinese products has been delayed, no agreement has been reached as of yet, and sentiment regarding the prospects of a deal seem to vary wildly by the day. Even if we take all other consensus estimates as given, a more sane multiple combined with a 25% tariff starting in Q2 (and hitting the income statement in the middle of the quarter) would yield 60%-70% downside risk. We also note that management is committing more capex to the business, and will invest $40M in expanding and diversifying its supply chain in FY19. These projects will weigh on cash flow and introduce material execution risk to the business.

Using our own estimates, we see 60%-80% downside risk in the stock, depending on the outcome of upcoming trade talks.

Valuation Using Consensus Estimates

$M unless noted	Consensus FY19 10% Tariff	Adj. Consensus FY19 25% Tariff As Of Q2
Sales	$1,293	$1,293
Growth	18%	18%
Adj. EBITDA	175	144
Margin	14%	11%
EBIT	114	82
Margin	9%	6%
Net Income	$88	$64
Diluted Shares	29	29
GAAP EPS	$3.07	$2.23
Multiple[1]	17x – 22x	17x – 22x
Share Price	**$52.19 – $67.54**	**$37.91 – $49.06**
Downside	**-45% – -58%**	**-60% – -69%**

Valuation Using Our Estimates

$M unless noted	Our FY FY19 10% Tariff	Our FY19, Adj. 25% Tariff As Of Q2
Sales	$1,207	$1,207
Growth	10%	10%
Adj. EBITDA	147	117
Margin	12%	10%
EBIT	85	55
Margin	7%	5%
Net Income	$65	$42
Diluted Shares	29	29
GAAP EPS	$2.29	$1.48
Multiple[1]	17x – 22x	17x – 22x
Share Price	**$38.93 – $50.38**	**$25.16 – $32.56**
Downside	**-60% – -69%**	**-74% – -80%**

1. Multiple range based on slight premium to current peers on the low end, and IRBT's historical average forward multiple of approximately 22x on the high end.