



iRobot®

FIN 562 Valuation

Eugene Kow

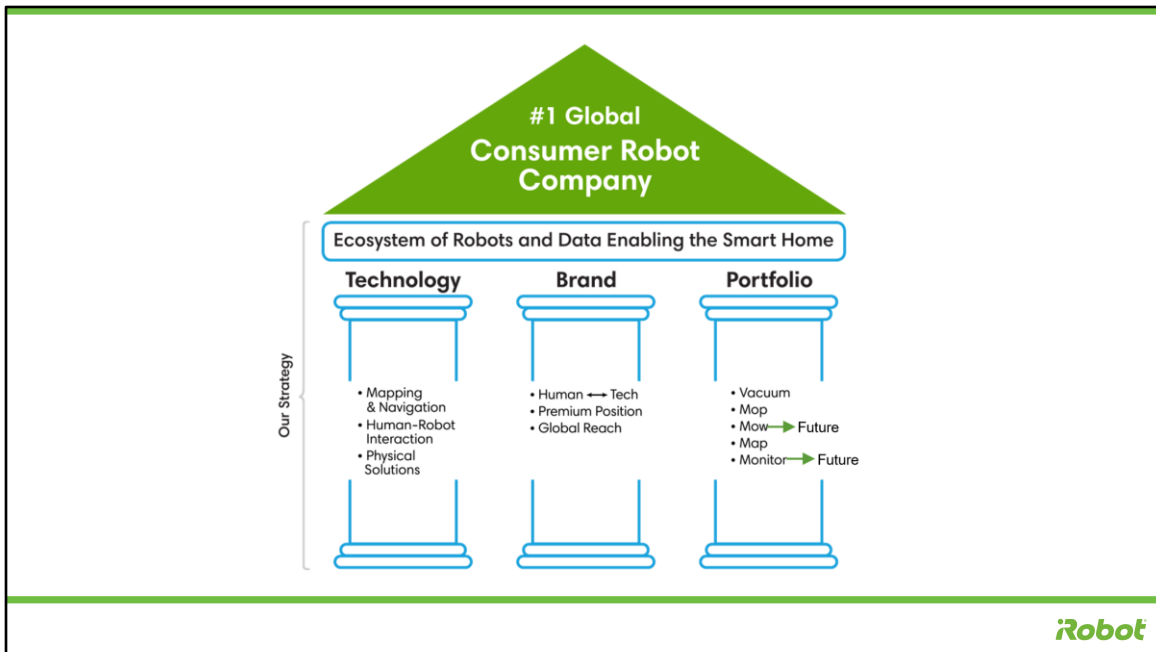
iRobot

History

- Founded in 1990 by three MIT graduates who designed robots for defense/space exploration, turned into a consumer company
- 1998 received DARPA grant which created PackBot
- 2002 released first Roomba
- 2005 IPOed on NASDAQ
- 2012 acquired maker of robotic floor moppers
- 2016 sold military robotics business



iRobot



iRobot's strategy to be the #1 consumer robot company across the globe. They see their initial ecosystem of robots expanding into providing mapping and sensor data to other parts of the smart home ecosystem, which in the long run could open access to an even larger market outside Robotic Vacuum Cleaners.

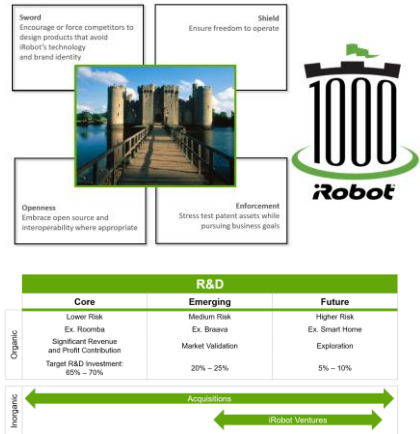
IP – A Key Differentiator

- Ranked #5 in 2016 in Top 20 patent powerhouses by IEEE
- Will vigorously defend its IP and continues to widen the competitive moat



iRobot Wipes the Floor With Another Competitor
Black & Decker just became the latest casualty of the Roomba maker's patent-enforcement efforts.

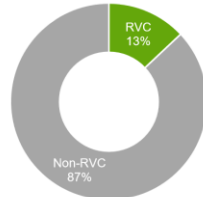
- Segments its R&D spend to keep generating IP in addition to planning acquisitions and running its own venture capital firm



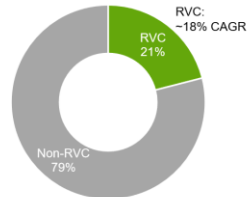
Robot Vacuum Cleaner (RVC) Market

Global Vacuum Cleaner Market >\$200 (USD, Retail)*

2012: ~\$5B Market



2016: ~\$7B Market
~5% CAGR



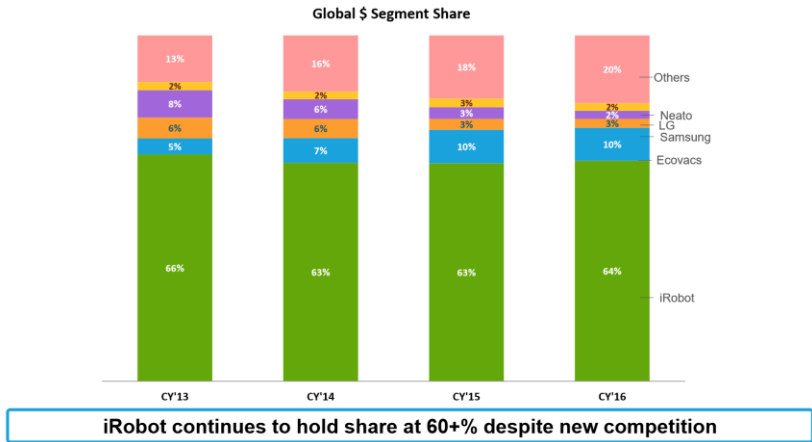
RVC segment (>\$200) growth expected to significantly outpace overall vacuum cleaner market growth (>\$200)

*Source: Global market size for vacuum cleaners >\$200 (NPD, GfK, and iRobot internal estimates)

December 5, 2017



iRobot Share of RVC Market (KPI)

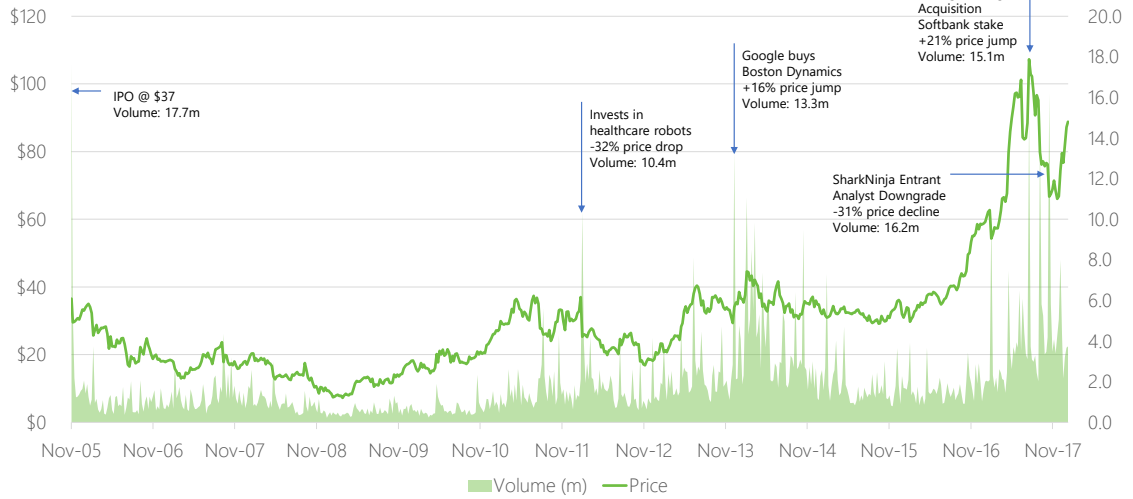


Source: NPD, GK, Euromonitor, iRobot internal data, Robotic Vacuum Cleaners +\$200 retail prices, incl. China Online
 Note: Year-on-Year Exchange Rates are applied in this update

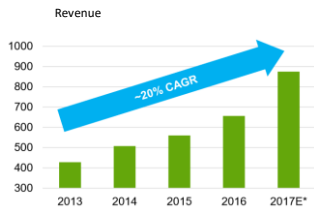


Market share is a key performance indicator for iRobot. The iRobot Roomba share in the robot segment remains constant despite the introduction of new players. This implies that their brand is strong

iRobot Stock Since Inception



Investor Day: Revenue, Margin, EPS



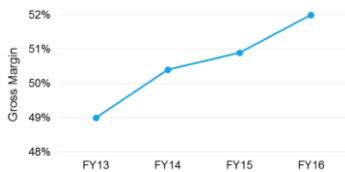
\$M except EPS

Total Revenue
YoY %

Operating Income
% of Revenue

EPS

	Previous Expectations	Current Expectations
Total Revenue	840 - 860	870 - 880
YoY %	27% - 30%	32% - 33%
Operating Income	50 - 60	55 - 65
% of Revenue	6% - 7%	6% - 7%
EPS	1.35 - 1.70	1.65 - 2.00



Stock Price: \$88.79
Shares Outstanding: 27.87m
Market Cap: \$2.47b

iRobot

iRobot in their latest investor day disclosed some key metrics that position it as a growth company rather than a value one:

1. Revenue is growing 20% CAGR vs. a 5% CAGR of the premium vacuum market
2. Gross margin continues to improve as it sells more premium products and improves on its manufacturing efficiency

It also revised its guidance for the 2017 year to nearly 33% YoY growth and a +17% improvement on its earnings per share driven by the improved revenue outlook.

Competitor Benchmark

Company	Forward P/E	Price/Sales (ttm)	Market Cap	Revenue (ttm)
iRobot	33.25 ★	3.22 ★	2.47b ↓	769.51m ↓
Philips	19.64	1.26	31.32b	24.88b
Whirlpool	10.83	0.57	12.04b	21.21b
Emerson Electric	21.83	3.06 ★	46.71b	15.26b
General Electric	16.10	1.16	141.01b	121.31b
Sony	17.26	0.85	63.41b	74.33b



iRobot is somewhat unique in its space being a public company with such a niche product. Most of its other competitors in consumer robotics or home cleaning appliances are large conglomerates. In fact, its largest competitor in the RVC category by percentage market share (10%) is Samsung, a chaebol from Korea and makes everything from semiconductor chips to cars.

Thus iRobot which has been positioning as a future growth company sees the highest Forward P/E and Price/Sales of its more established and diversified competitors despite having the smallest market cap and revenue by a factor of 10x.

<http://www.nasdaq.com/symbol/irbt/competitors>

Factors That Influence Share Price

Positive

- Revenue and earnings growth
- RVC market growth
- IP wins against competitors
- Launch of new products
- Potential acquisition target

Negative

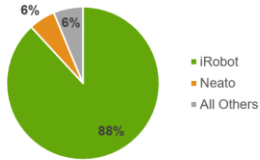
- Competitors especially at lower price points
- Weakening of IP laws
- Reliability issues with products, other brand damage

Thank You

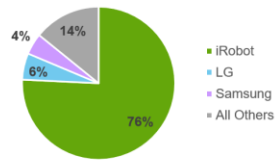
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2016 Robotic Vacuum Segment: Global Retail \$ Share

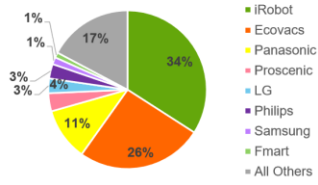
North America - \$441M



EMEA - \$415M



APAC - \$538M



iRobot is the largest player in each market

Source: 2016 NPD, GfK, and iRobot internal estimates; Robotic Vacuum Cleaners >\$200 retail prices; includes China On-line

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Global Brand Consistency

- China – Q3 2016 - Shanghai office opened and team set for better control of ecommerce marketing and distribution
- Japan – Q2 2017 - Forward integration of Japanese distributor
- EMEA – Q4 2017 – Forward integration of Robopolis, iRobot's largest European distributor



Taking more direct control of the brand in international markets

November 6, 2017

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Profitability Improvement Opportunities

Gross Margin Improvement

Operating Expense Leverage

Business Maturity

Example: Taking more direct control in China, Japan and EMEA

Scale

Examples: More than 2.5 million robots in 2016
Driving Wet Floor Care to scale

Efficiency

Examples: Automation in factories
Centralized repairs
Marketing Mix Analytics

Opportunities for both Gross Margin and Opex improvement



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