

Company Note	2
Investment Thesis	4
Company Overview	5
Financial Data	6
Financial Analysis	7
Ratings History	8
Tigress Research Methodology Overview	8
Glossary of Key Terms and Measures	8
Contacts	9
Analyst Certification	9
Research Disclosures	9
Tigress Research Investment Rating Meanings and Distribution	9
Specific Disclosures for the companies that are the subject of this Report	10
Research Report Disclaimer	11
About Tigress Financial Partners LLC	11

Research  
(646) 780-8880  
[research@tigressfp.com](mailto:research@tigressfp.com)

Trading  
(646) 780-8890  
[trading@tigressfp.com](mailto:trading@tigressfp.com)

**Tigress Financial Partners LLC**  
Member of FINRA / MSRB / SIPC  
40 Wall Street  
New York, NY 10005  
(212) 430-8700  
[www.tigressfinancialpartners.com](http://www.tigressfinancialpartners.com)

## **Garmin Ltd. (GRMN-US)**

### **Consumer Electronics**

- **We reiterate our Buy rating on GRMN as Business Performance continues to accelerate driven by the growth of aviation and advanced wearables offsetting declines in automotive personal navigation products.**
- **Business performance continues to accelerate driven by strong demand for aviation and outdoor products along with margin expansion.**
- **GRMN continues to drive growth through new product introductions and new business partnerships.**
- **GRMN continues to be a leading OEM and aftermarket supplier of avionics and flight deck solutions.**
- **GRMN's significant cash and cash flow enable it to fund new product development and strategic acquisitions along with the ongoing return of capital to shareholders enhancing shareholder value.**

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**Company Note**
**Garmin Ltd. (GRMN-US)**

Consumer Electronics

**Ivan Feinseth**  
 Director of Research  
 (646) 780-8901 Direct  
[ifeinseth@tigressfp.com](mailto:ifeinseth@tigressfp.com)

**Research Action:**

Reiterate rating

Rating: Buy

Prior Rating: Buy

Price 12/14/2017: \$59.46

52 Week High / \$63.15

Low: \$47.03

**Key Data: (TTM as of Sep-17)**

Excess Cash per Share: \$11.74

Annual Dividend: \$2.04

Dividend Yield: 3.43%

Avg. Volume (30 Day): 1.0M

Shares Outstanding: 187.5M

Float: 116.4M

Equity MV: \$11,148.8M

Sales TTM: \$3,059.3M

Beta: 1.01

EBITDAR: \$1,288.9M

NOPAT: \$696.1M

Total Invested Capital: \$3,490.2M

Return on Capital: 16.43%

Cost of Capital: 6.91%

Economic Profit: \$457.9M

Market Value Added: \$8,034.7M

Current Operations Value: \$10,070.9M

Future Growth Value: \$1,454.0M

- We reiterate our Buy rating on GRMN as Business Performance continues to accelerate driven by the growth of aviation and advanced wearables offsetting declines in automotive personal navigation products.** Strong demand for GRMN's flagship fēnix 5, and ADS-B transceivers along with new product introductions are driving revenue growth and margin expansion. GRMN continues to gain market share with its line of high-tech wearables incorporating new features including heart rate monitors and GPS capabilities. Increasing demand for GRMN's ADS-B transceiver and new flight deck product offerings are driving sales growth in its aviation division. GRMN is partnering with automakers to develop new in vehicle technology which is offsetting declining personal navigation device (PND) sales. GRMN continues to introduce new innovative products incorporating its GPS technology along with creating partnerships with leading companies such as MasterCard and Visa for device embedded payment technology and Amazon for Alexa based voice activation interfaces. GRMN's strong brand equity and incredibly innovative capabilities will drive increasing Return on Capital, growth in Economic Profit, and greater shareholder value creation. GRMN's strong balance sheet and cash flow will continue to fund its new product development, increase revenue and further allow it to create additional shareholder value through dividend increases and share repurchases. We believe significant upside in the shares exists from current levels.
- Business performance continues to accelerate driven by strong demand for aviation and outdoor products along with margin expansion.** Outdoor segment revenue increased 31% Y/Y driven by strong demand for its flagship fēnix 5 smart watch. For the 12 months ending September 2017, Net Sales Revenue increased 4% from \$2.94 billion to \$3.06 billion. We estimate a further increase of 2% to \$3.12 billion over the NTM. Economic Operating Cash Flow (EBITDAR) increased 12.5% Y/Y from \$1.16 billion to \$1.29 billion over the LTM driven by gross margin expansion. We forecast a further increase of 2.7% to \$1.32 billion over the NTM. Net Operating Profit After Tax (NOPAT) increased 14.4% Y/Y from \$495 million to \$566.3 million over the LTM. We forecast a further increase of 5.4% to \$596.9 million over the NTM. Return on Capital (ROC) increased from 14.97% to 16.43% over the LTM. We forecast a further increase to 16.9% over the NTM. Economic Profit increased 24.4% Y/Y from \$263.9 million to \$328.1 million over the LTM. We forecast a further increase of 3% to \$337.3 million over the LTM.

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- **GRMN continues to drive growth through new product introductions and new business partnerships.** In addition to the successful launch of its fēnix 5 flagship smartwatch, GRMN introduced new watches and trackers in its vivo line. GRMN introduced the vivoFit Jr. 2 designed especially for kids in partnership with Disney (DIS-US, Buy-rated) incorporating Disney, Marvel and Star Wars graphics and themes. GRMN also introduced the vivoactive 3 and vivosport with GPS tracking and heart rate monitoring features. GRMN also introduced its first dive computer the Descent Mk-1 with surface-based GPS technology and multiple dive modes for monitoring logging diving information to sync with GRMN's Connect fitness app. GRMN has also introduced NFC (Near Field Connectivity) payment capabilities Garmin Pay™ in its vivo line in partnership with both MasterCard (MA-US, Buy-rated) and Visa (V-US, Non-rated). GRMN introduced Garmin Speak™ with Amazon (AMZN-US, Buy-rated) Alexa, an Alexa powered voice interface to control infotainment and navigation as well as incorporating all of Alexa's features including e-commerce and home control. GRMN also introduced its Impact bat sensor, its first product for the baseball market, that attaches to the base of a bat and helps improve a batter's swing.
- **GRMN continues to be a leading OEM and aftermarket supplier of avionics and flight deck solutions.** Aviation revenue increased 16% Y/Y, and gross margin on aviation product sales was 73%. GRMN continues to expand its aviation product line with the introduction of new products including the recently announced TXi series of touchscreen flight displays with engine monitoring solutions and the GFC 600 with advanced autopilot capabilities. GRMN also introduced the GTX 335 and 345 ADS-B transponders. ADS-B (Automatic dependent surveillance – broadcast) is a surveillance technology which determines an aircraft's position based on satellite navigation and broadcasts its location enabling the aircraft to be tracked by air traffic control ground stations. It can also be received by other aircraft to provide geospatial awareness for collision avoidance. It is transmitted automatically and requires no pilot or external input, and it is dependent on data from the aircraft's navigation system increasing the speed and accuracy of the transmission. We believe GRMN is best positioned to take advantage of the FAA-mandated transition to ADS-B which has to be completed by 2019.

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- **GRMN's significant cash and cash flow enable it to fund new product development and strategic acquisitions along with the ongoing return of capital to shareholders enhancing shareholder value.** GRMN's current annual dividend yield of 3.35% is significantly greater than the current 1.8% yield of the S&P 500. GRMN has over \$2.2 billion, \$11.74 a share, in excess cash and we expect Economic Operating Cash Flow (EBITDAR) of \$1.32 billion over the NTM. This allows GRMN to continue to invest in the growth of its business and increase dividends and stock buybacks over time. In 2013, GRMN announced an open market purchase of \$300 million worth of stock. In 2015, GRMN and announced an additional open market purchase of \$300 million worth of stock.

#### **Investment Thesis**

GRMN is the leader in navigation based products and applications. GRMN continues to introduce innovative new products that maximize the value of GPS information. The growth of its wearable / outdoor product business along with leadership positions in aviation and marine electronics will continue to grow through new product introductions, acquisitions, and OEM partnerships. GRMN's market-leading positions in aviation and electronics are now driving market leadership in wearables as well. GRMN's strong brand equity and incredibly innovative capabilities will drive increasing Return on Capital, growth in Economic Profit and greater shareholder value creation. GRMN's strong balance sheet and cash flow will continue to fund its new product development and growth and further allow it to create additional shareholder value through dividend increases and share repurchases.

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**Company Overview**

**Garmin Ltd. (GRMN-US)** is a leading manufacturer of navigation, communication and fitness equipment incorporating Global Positioning System (GPS) technology. Garmin designs and manufactures a diverse product line of fixed mount, and portable GPS enabled products and other communication, navigation and sensor-based information devices. Garmin sells its products globally through a network of independent dealers, distributors, and retail stores. Garmin products are manufactured in China, Taiwan, and the United States.

**Garmin's product line and operating segments include:**

**Aviation** – (15% of revenue ) includes GPS enabled navigation and communication electronic flight instrumentation systems, automatic flight control systems, traffic advisory systems, along with portable and wearable aviation navigation devices and mobile applications.

**Auto** – (29% of revenue) includes personal navigation devices (PNDs), OEM GPS navigation and infotainment solutions, and mobile applications.

**Fitness** – (27% of revenue) includes fitness, cycling, running and activity tracking devices and platforms for connecting and sharing data with other users.

**Marine** – (11% of revenue) includes products designed for commercial and recreational marine navigation and communications. Marine products include autopilot systems, chartplotters, fishfinders, marine instruments, radar, and sounders along with wrist worn devices sailing and entertainment products.

**Outdoor** – (18% of revenue) includes action cameras, dog tracking/training devices, golfing devices, and other types of adventure handheld and wearable devices.

**Garmin also reports revenue by geographic segment:** The United States (50% of revenue), EMEA (37% of revenue) and APAC (13% of revenue).

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**Company Report – Research Update**
**Garmin Ltd. (GRMN-US)**
**Consumer Electronics**
**Financial Data**

Report Basis	LTM	LTM	LTM	LTM	LTM	LTM	NTM	5 Yr	3 Yr	Current
Reported Period Ending	09/29/2012	09/28/2013	09/27/2014	09/26/2015	09/24/2016	09/30/2017	09/30/2018	Average	Average	Trend
<b>Net Sales Revenue</b>	\$2,856.8	\$2,640.7	\$2,827.0	\$2,842.2	\$2,939.3	\$3,059.3	\$3,118.8	\$2,861.7	\$2,946.9	\$3,089.0
Sales Growth	6.33%	-7.56%	7.06%	0.54%	3.41%	4.08%	1.95%	1.51%	2.68%	3.01%
Sales Growth Trend	0.71%	-2.00%	1.21%	3.14%	2.26%	2.80%	3.82%	1.69%	3.07%	3.31%
<b>Operating Cash Flow (EBITDAR)</b>	\$1,089.1	\$1,063.6	\$1,192.9	\$1,132.9	\$1,145.3	\$1,288.9	\$1,323.3	\$1,164.7	\$1,189.0	\$1,306.1
EBITDAR Margin	38.12%	40.28%	42.20%	39.86%	38.97%	42.13%	42.43%	40.69%	40.32%	42.28%
EBITDAR Growth	17.88%	-2.35%	12.16%	-5.03%	1.09%	12.54%	2.67%	3.68%	2.87%	7.60%
<b>Net Operating Profit Before Tax (NOPBT)</b>	\$649.7	\$602.5	\$714.2	\$611.0	\$599.7	\$673.7	\$730.3	\$640.2	\$628.1	\$702.0
NOPBT Margin	22.74%	22.82%	25.26%	21.50%	20.40%	22.02%	23.42%	22.40%	21.31%	22.72%
NOPBT Growth	19.54%	-7.27%	18.54%	-14.45%	-1.85%	12.35%	8.40%	1.46%	-1.32%	10.38%
<b>Cash Operating Income Tax</b>	\$75.5	\$25.7	\$235.7	\$80.0	\$104.6	\$107.4	\$67.6	\$110.7	\$97.3	\$87.5
Economic Tax Effective Rate	11.62%	4.27%	33.00%	13.09%	17.45%	0.00%	9.26%	13.56%	10.18%	4.63%
<b>Net Operating Profit After Tax (NOPAT)</b>	\$574.2	\$576.7	\$478.5	\$531.0	\$495.0	\$566.3	\$596.9	\$529.5	\$530.8	\$581.6
NOPAT Margin	20.10%	21.84%	16.93%	18.68%	16.84%	22.75%	19.14%	19.41%	19.43%	20.95%
NOPAT Growth	20.19%	0.44%	-17.04%	10.97%	-6.77%	14.40%	5.39%	0.40%	6.20%	9.90%
<b>Cash &amp; Equivalents</b>	\$2,719.5	\$2,797.3	\$2,759.3	\$2,417.1	\$2,441.7	\$2,355.4	\$2,421.4	\$2,554.2	\$2,404.8	\$2,388.4
<b>Total Assets</b>	\$4,630.7	\$4,823.2	\$4,669.4	\$4,388.5	\$4,591.9	\$4,835.4	\$4,970.8	\$4,661.7	\$4,605.3	\$4,903.1
<b>Non - Interest Bearing Liabilities (NIBLs)</b>	\$1,011.1	\$939.0	\$1,088.1	\$791.2	\$855.0	\$915.3	\$941.0	\$917.7	\$853.9	\$928.2
<b>Net Assets</b>	\$3,619.6	\$3,884.3	\$3,581.3	\$3,597.3	\$3,736.9	\$3,920.0	\$4,029.8	\$3,744.0	\$3,751.4	\$3,974.9
Economic Asset Adjustments	(\$190.0)	(\$84.0)	(\$23.2)	\$8.1	\$7.1	(\$116.5)	(\$119.8)	(\$41.7)	(\$33.8)	(\$118.2)
<b>Net Operating Assets</b>	\$3,429.7	\$3,800.3	\$3,558.1	\$3,605.4	\$3,744.0	\$3,803.5	\$3,910.0	\$3,702.3	\$3,717.6	\$3,856.8
<b>Debt &amp; Debt Equivalents</b>	\$52.0	\$44.1	\$63.9	\$63.6	\$58.0	\$63.1	\$64.8	\$58.5	\$61.5	\$63.9
<b>Equity &amp; Equivalents</b>	\$3,387.7	\$3,557.5	\$3,236.4	\$3,234.7	\$3,362.2	\$3,639.7	\$3,741.6	\$3,406.1	\$3,412.2	\$3,690.6
<b>Total Capital - Financing Sources</b>	\$3,439.7	\$3,601.6	\$3,300.3	\$3,298.3	\$3,420.2	\$3,702.7	\$3,806.4	\$3,464.6	\$3,473.7	\$3,754.6
<b>Capital Adjustments</b>	(\$241.9)	(\$128.1)	(\$87.1)	(\$55.5)	(\$50.8)	(\$179.6)	(\$184.6)	(\$100.2)	(\$95.3)	(\$182.1)
<b>Net Capital Financing Sources</b>	\$3,197.8	\$3,473.5	\$3,213.2	\$3,242.8	\$3,369.4	\$3,523.1	\$3,621.8	\$3,364.4	\$3,378.4	\$3,572.5
<b>Net Working Capital</b>	\$574.9	\$700.3	\$446.6	\$686.1	\$702.2	\$742.0	\$762.7	\$655.4	\$710.1	\$752.4
Cost of Net Working Capital	\$39.3	\$49.7	\$39.9	\$39.3	\$48.5	\$49.9	\$51.3	\$45.5	\$45.9	\$50.6
% of Revenue	1.38%	1.88%	1.41%	1.38%	1.65%	1.63%	1.63%	1.59%	1.56%	1.64%
<b>Operational Capital</b>	\$1,034.7	\$1,158.0	\$942.2	\$1,188.8	\$1,214.4	\$1,359.5	\$1,397.5	\$1,172.6	\$1,254.2	\$1,378.5
Cost of Operational Capital	\$70.4	\$85.5	\$73.0	\$73.9	\$84.0	\$89.0	\$91.4	\$81.1	\$82.3	\$90.2
% of Revenue	2.46%	3.24%	2.58%	2.60%	2.86%	2.91%	2.93%	2.84%	2.79%	2.92%
<b>Productive Capital</b>	\$1,034.7	\$1,158.0	\$942.2	\$1,188.8	\$1,214.4	\$1,359.5	\$1,397.5	\$1,172.6	\$1,254.2	\$1,378.5
Cost of Productive Capital	\$70.4	\$85.5	\$73.0	\$73.9	\$84.0	\$89.0	\$91.4	\$81.1	\$82.3	\$90.2
% of Revenue	2.46%	3.24%	2.58%	2.60%	2.86%	2.91%	2.93%	2.84%	2.79%	2.92%
<b>Total Operating Capital</b>	\$600.1	\$913.0	\$718.6	\$1,109.5	\$1,147.3	\$1,287.8	\$1,323.9	\$1,035.2	\$1,181.5	\$1,305.8
Cost of Total Operating Capital	\$43.2	\$59.0	\$56.7	\$63.4	\$78.9	\$84.2	\$86.5	\$68.4	\$75.5	\$85.3
% of Revenue	1.51%	2.23%	2.01%	2.23%	2.68%	2.75%	2.77%	2.38%	2.56%	2.76%
<b>Non - Operating Capital</b>	\$2,576.7	\$2,665.3	\$2,617.9	\$2,275.0	\$2,294.8	\$2,202.5	\$2,264.1	\$2,411.1	\$2,257.4	\$2,233.3
Cost of Non - Operating Capital	\$164.7	\$204.3	\$183.6	\$169.7	\$159.8	\$155.4	\$159.8	\$174.6	\$161.6	\$157.6
% of Revenue	5.77%	7.74%	6.49%	5.97%	5.44%	5.08%	5.12%	6.14%	5.50%	5.10%
<b>Total Capital</b>	\$3,176.8	\$3,578.3	\$3,336.6	\$3,384.6	\$3,442.0	\$3,490.2	\$3,588.0	\$3,446.3	\$3,438.9	\$3,539.1
Cost of Total Capital	\$207.9	\$263.3	\$240.3	\$233.1	\$238.7	\$239.6	\$246.3	\$243.0	\$237.1	\$242.9
% of Revenue	7.28%	9.97%	8.50%	8.20%	8.12%	7.83%	7.90%	8.52%	8.05%	7.86%
<b>Cost of Capital (WACC)</b>	6.74%	7.80%	6.95%	6.94%	6.99%	6.91%	6.91%	7.12%	6.95%	6.91%
<b>Capital Structure</b>										
<b>Debt &amp; Debt Equivalents</b>	\$52.0	\$44.1	\$63.9	\$63.6	\$58.0	\$63.1	\$64.8	\$58.5	\$61.5	\$63.9
Debt & Debt Equivalents % of Market Value	0.63%	0.50%	0.64%	0.93%	0.63%	0.62%	0.62%	0.65%	0.70%	0.62%
<b>Preferred Equity</b>	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Preferred Equity % of Market Value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Market Value of Common Equity</b>	\$8,134.1	\$8,826.4	\$9,989.1	\$6,768.7	\$9,160.5	\$10,130.3	\$10,414.0	\$8,975.0	\$8,686.5	\$10,272.2
Common Equity % of Market Value	99.37%	99.50%	99.36%	99.07%	99.37%	99.38%	99.38%	99.35%	99.30%	99.38%
<b>Total Economic Market Value (MV)</b>	\$8,186.0	\$8,870.4	\$10,053.0	\$6,832.3	\$9,218.5	\$10,193.4	\$10,478.9	\$9,033.5	\$8,748.1	\$10,336.1
Total %	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
<b>Excess Cash</b>	\$2,576.7	\$2,665.3	\$2,617.9	\$2,275.0	\$2,294.8	\$2,202.5	\$2,264.1	\$2,411.1	\$2,257.4	\$2,233.3
<b>Economic Enterprise Value</b>	\$5,609.4	\$6,205.1	\$7,435.1	\$4,557.3	\$6,923.7	\$7,990.9	\$8,214.7	\$6,622.4	\$6,490.6	\$8,102.8
<b>Average Capital</b>	\$3,088.0	\$3,335.6	\$3,343.4	\$3,228.0	\$3,306.1	\$3,446.3	\$3,572.5	\$3,331.9	\$3,326.8	\$3,509.4
Capital Δ	\$219.7	\$275.7	(\$260.3)	\$29.6	\$126.5	\$153.8	\$98.7	\$65.1	\$103.3	\$126.2

Source: Company Data, Financial statements and Tigress Research

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## Company Report – Research Update

### Garmin Ltd. (GRMN-US)

### Consumer Electronics

#### Financial Analysis

Report Basis	LTM	LTM	LTM	LTM	LTM	LTM	LTM	NTM	5 Yr	3 Yr	Current
Reported Period Ending	09/29/2012	09/28/2013	09/27/2014	09/26/2015	09/24/2016	09/30/2017	09/30/2018	Average	Average	Average	Trend
Return on Market Value (NOPAT / MV)	7.01%	6.50%	4.76%	7.77%	5.37%	5.56%	5.71%	5.99%	6.23%	5.63%	
Return on Enterprise Value (NOPAT / EV)	10.24%	9.29%	6.44%	11.65%	7.15%	7.09%	7.29%	8.32%	8.63%	7.19%	
Return on Capital (NOPAT / Average Capital)	18.60%	17.29%	14.31%	16.45%	14.97%	16.43%	16.89%	15.89%	15.95%	16.66%	
Cost of Capital (WACC)	6.74%	7.80%	6.95%	6.94%	6.99%	6.91%	6.91%	7.12%	6.95%	6.91%	
Economic Return Spread	11.86%	9.49%	7.36%	9.51%	7.98%	9.52%	9.79%	8.77%	9.00%	9.65%	
Capital Charge	\$208.0	\$260.0	\$232.4	\$223.9	\$231.2	\$238.2	\$244.9	\$237.1	\$231.1	\$241.6	
Economic Profit (EP)	\$366.2	\$316.7	\$246.1	\$307.0	\$263.9	\$328.1	\$337.3	\$292.4	\$299.7	\$332.7	
Economic Profit Improvement (EPI)	\$93.2	(\$49.5)	(\$70.6)	\$60.9	(\$43.2)	\$64.2	\$9.2	(\$7.6)	\$27.3	\$36.7	
EP Growth	34.14%	-13.51%	-22.29%	24.75%	-14.06%	24.35%	2.80%	-0.15%	11.68%	13.57%	
Economic Profit Margin on Sales	12.82%	11.99%	8.71%	10.80%	8.98%	10.72%	10.81%	10.24%	10.17%	10.77%	
Economic Profit Per Share	\$1.89	\$1.62	\$1.26	\$1.59	\$1.38	\$1.74	\$1.79	\$1.52	\$1.57	\$1.76	
GAAP Earnings Per Share	\$2.97	\$2.95	\$1.63	\$2.80	\$2.67	\$3.69	\$2.94	\$2.75	\$3.05	\$3.31	
Excess Cash Per Share	\$13.22	\$13.65	\$13.62	\$11.95	\$12.16	\$11.74	\$12.07	\$12.62	\$11.95	\$11.90	
<b>Performance Drivers</b>											
Sales Growth	6.33%	-7.56%	7.06%	0.54%	3.41%	4.08%	1.95%	1.51%	2.68%	3.01%	
Sales Growth Trend (ROC Sales Growth)	0.71%	-2.00%	1.21%	3.14%	2.26%	3.82%	2.80%	1.69%	3.07%	3.31%	
EBITDAR Margin	38.12%	40.28%	42.20%	39.86%	38.97%	42.13%	42.43%	40.69%	40.32%	42.28%	
EBITDAR Growth	17.88%	-2.35%	12.16%	-5.03%	1.09%	12.54%	2.67%	3.68%	2.87%	7.60%	
NOPBT Margin	22.74%	22.82%	25.26%	21.50%	20.40%	22.02%	23.42%	22.40%	21.31%	22.72%	
NOPBT Growth	19.54%	-7.27%	18.54%	-14.45%	-1.85%	12.35%	8.40%	1.46%	-1.32%	10.38%	
NOPAT Margin	20.10%	21.84%	16.93%	18.68%	16.84%	22.75%	19.14%	19.41%	19.43%	20.95%	
NOPAT Growth	20.19%	0.44%	-17.04%	10.97%	-6.77%	14.40%	5.39%	0.40%	6.20%	9.90%	
Economic Profit Margin on Sales (EP / Sales)	12.82%	11.99%	8.71%	10.80%	8.98%	10.72%	10.81%	10.24%	10.17%	10.77%	
Economic Profit Growth	34.14%	-13.51%	-22.29%	24.75%	-14.06%	24.35%	2.80%	-0.15%	11.68%	13.57%	
Economic Return Spread (ROC-WACC)	11.86%	9.49%	7.36%	9.51%	7.98%	9.52%	9.98%	8.77%	9.00%	9.75%	
Economic Return Ratio (ROC / WACC)	276.03%	221.81%	205.92%	237.10%	214.14%	237.73%	244.39%	223.34%	229.66%	241.06%	
Economic Profit Momentum (ΔEP/Capital)	2.91%	-1.42%	-2.20%	1.88%	-1.28%	1.82%	0.25%	-0.24%	0.81%	1.04%	
Economic Profit Momentum Margin (ΔEP/Sales)	3.26%	-1.87%	-2.50%	2.14%	-1.47%	2.10%	0.29%	-0.32%	0.92%	1.20%	
Capital Growth	7.38%	8.62%	-7.49%	0.92%	3.90%	4.56%	2.80%	2.10%	3.13%	3.68%	
Capital Turns	0.89X	0.76X	0.88X	0.88X	0.87X	0.87X	0.86X	0.85X	0.87X	0.86X	
EVC Acceleration Margin	3.47%	-1.73%	-2.67%	2.15%	-1.52%	2.19%	0.30%	-0.24%	0.95%	1.25%	
EVC Acceleration Spread	3.21%	-1.60%	-2.12%	1.82%	-1.34%	1.94%	0.27%	-0.21%	0.82%	1.10%	
<b>Risk Factors</b>											
Free Cash Flow (NOPAT - Δ Capital)	\$354.6	\$301.0	\$738.8	\$501.4	\$368.5	\$412.5	\$498.2	\$464.4	\$427.5	\$455.4	
Free Cash Flow Rate (FCF / Capital)	11.09%	8.67%	22.99%	15.46%	10.94%	11.71%	13.76%	13.95%	12.70%	12.73%	
Free Cash Flow Yield (FCF / MV)	4.33%	3.39%	7.35%	7.34%	4.00%	4.05%	4.75%	5.22%	5.13%	4.40%	
Total Debt / Total Capital	1.62%	1.27%	1.99%	1.96%	1.72%	1.79%	1.79%	1.75%	1.82%	1.79%	
Total Debt / EBITDAR	4.77%	4.14%	5.36%	5.62%	5.06%	4.89%	4.90%	5.01%	5.19%	4.90%	
Excess Cash	\$2,576.7	\$2,665.3	\$2,617.9	\$2,275.0	\$2,294.8	\$2,202.5	\$0.0	\$2,411.1	\$2,257.4	\$1,101.2	
Financial Leverage ((Total Debt - Excess Cash) / Pension Leverage (Net Pension Liability / MV)	-30.84%	-29.55%	-25.41%	-32.37%	-24.26%	-20.99%	0.62%	-26.52%	-25.87%	-10.18%	
Equity Risk Index (S&P 500 = 1.00)	1.12	1.09	1.08	1.08	1.01	1.01	1.01	1.05	1.03	1.01	
Stock Price Volatility	3.17	3.44	3.48	3.41	4.00	3.51	3.51	3.57	3.64	3.51	
Sales Index (NL Sales)	7.96	7.88	7.95	7.95	7.99	8.03	8.05	7.96	7.99	8.04	
Market Value Index (NL Market Value)	9.01	9.09	9.22	8.83	9.13	9.23	9.26	9.10	9.06	9.24	
Size Index (NL Sales: MV)	8.48	8.48	8.58	8.39	8.56	8.63	8.65	8.53	8.53	8.64	
Beta	1.18	1.14	1.13	1.11	1.01	1.01	1.01	1.08	1.04	1.01	
TFP Adjusted Beta	1.12	1.09	1.08	1.08	1.01	1.01	1.01	1.05	1.03	1.01	
Stock Price Volatility	3.17	3.44	3.48	3.41	4.00	3.51	3.51	3.57	3.64	3.51	
<b>Valuation Measures</b>											
Total Economic Market Value (MV)	\$8,186.0	\$8,870.4	\$10,053.0	\$6,832.3	\$9,218.5	\$10,193.4	\$10,478.9	\$9,033.5	\$8,748.1	\$10,336.1	
Economic Enterprise Value	\$5,609.4	\$6,205.1	\$7,435.1	\$4,567.3	\$6,923.7	\$7,990.9	\$8,214.7	\$6,622.4	\$6,490.6	\$8,102.8	
Equity Market Value	\$8,134.1	\$8,826.4	\$9,989.1	\$6,768.7	\$9,160.5	\$10,130.3	\$10,414.0	\$8,975.0	\$8,686.5	\$10,272.2	
Total Capital	\$3,176.8	\$3,578.3	\$3,336.6	\$3,384.6	\$3,442.0	\$3,490.2	\$3,588.0	\$3,446.3	\$3,438.9	\$3,539.1	
Market Value Created MVC (MV - Capital)	\$5,009.3	\$5,292.1	\$6,716.4	\$3,447.7	\$5,776.5	\$6,703.2	\$6,890.9	\$5,587.2	\$5,309.1	\$6,797.0	
MVC Margin (MVC / Sales)	175.35%	200.41%	237.58%	121.30%	196.53%	219.11%	220.95%	195.24%	180.16%	220.04%	
MVC Spread (MVC / Capital)	157.69%	147.90%	201.30%	101.87%	167.82%	192.05%	192.05%	162.12%	154.38%	192.05%	
Current EVC Value (EP / WACC)	\$5,435.7	\$4,063.0	\$3,541.2	\$4,425.7	\$3,773.5	\$4,746.5	\$4,879.5	\$4,107.7	\$4,313.3	\$4,813.0	
Current Operations Value COV	\$8,523.6	\$7,398.7	\$6,884.6	\$7,653.7	\$7,079.6	\$8,192.8	\$8,451.9	\$7,439.6	\$7,640.1	\$8,322.4	
Current Operations Value Per Share	\$43.91	\$37.96	\$35.23	\$39.63	\$37.14	\$43.39	\$43.89	\$38.63	\$40.03	\$43.64	
Future Growth Value (MVC - EVA Value)	(\$337.6)	\$1,471.7	\$3,168.4	(\$821.4)	\$2,138.9	\$2,000.6	\$2,026.9	\$1,594.0	\$1,108.0	\$2,013.8	
Future Growth Value Reliance (FGV / MV)	-4.12%	16.59%	31.52%	-12.02%	23.20%	19.63%	19.34%	17.64%	12.67%	19.48%	
Share Price	\$38.29	\$36.17	\$60.59	\$45.57	\$40.77	\$53.97	\$53.97	\$47.41	\$46.77	\$53.97	
Dividend Yield	4.44%	4.98%	3.07%	4.34%	5.00%	3.78%					
Total Shareholder Return (TTM)	18.91%	-0.56%	70.58%	-20.44%	-5.53%	36.16%	0.00%	-12.15%	-1.36%	15.39%	
MV to IC Ratio	2.58X	2.48X	3.01X	2.02X	2.68X	2.92X	2.92X	2.62X	2.54X	2.92X	
EV / EBITDAR Multiple	5.15X	5.83X	6.23X	4.02X	6.05X	6.20X	6.21X	5.69X	5.46X	6.20X	
EV / NOPBIT Multiple	8.63X	10.30X	10.41X	7.46X	11.55X	11.86X	11.25X	10.34X	10.33X	11.54X	
EV / NOPAT Multiple	9.77X	10.76X	15.54X	8.58X	13.99X	14.11X	13.76X	12.51X	12.23X	13.93X	
EV / EP Multiple	15.32X	19.59X	30.21X	14.84X	26.24X	24.36X	24.36X	22.65X	21.66X	24.36X	
Future Growth Value (% of MV)	-4.12%	16.59%	31.52%	-12.02%	23.20%	19.63%	19.34%	17.64%	12.67%	19.48%	
Current Operations Value (% of MV)	104.12%	83.41%	68.48%	112.02%	76.80%	80.37%	80.37%	82.36%	87.33%	80.52%	
Market Value (COV + FGV %)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
Basic Shares Outstanding	194.1	194.9	195.4	193.1	190.6	188.8	192.6	192.6	190.9	190.7	

Source: Company Data, Financial statements and Tigress Research

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Research: (646) 780-8880 research@tigressfp.com

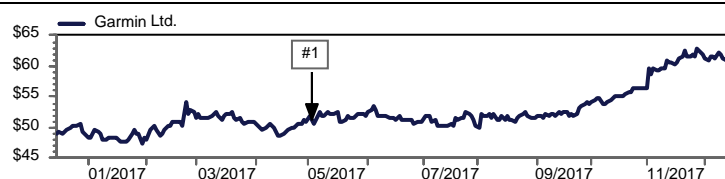
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**Garmin Ltd. (GRMN-US)**
**Consumer Electronics**
**Ratings History**

Garmin Ltd. (GRMN-US)				
Item #	Date	Research Action	Rating	Price
#1	05/02/2017	Initiation of Coverage	Buy	\$51.24


**Tigress Research Methodology Overview**

We employ proprietary quantitative valuation models combined with dynamic fundamental analysis based on the principles of Economic Profit to formulate timely and insightful investment ratings, analysis, strategies, and recommendations.

We make key adjustments to reported financial data eliminating GAAP-based accounting distortions and measuring all companies on a cash operating basis.

Our proprietary research framework is a multi-factor model that scores and ranks companies based on their risk-adjusted ability to create Economic Profit relative to their current market value focusing on three key components:

**Business Performance:** Measuring economic profitability, growth and operating efficiency.

**Risk:** Measuring business sustainability, volatility, strength, and consistency.

**Valuation:** Linking business performance to market value. Measuring value created relative to capital employed and enterprise multiples of economic profit and cash flow.

We score and rank 24 key measurements of performance, risk, and value into relative market and industry investment recommendations.

For more information on our research methodology, please review the *Tigress Investment Research Guide to Company Valuation and Analysis*.

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<b>Excess Cash per Share:</b>	Excess Cash per Share is the amount of excess cash divided by basic shares outstanding. Excess Cash consists of all cash and short-term securities less operating cash needed to run the business. Operating Cash is 5% of TTM net sales revenue.
<b>EBITDAR:</b>	Earnings Before Interest, Taxes, Depreciation, Amortization, and Restructuring and Rent Costs. This is especially important when comparing companies that use a significant amount of leased assets like restaurants and retailers.
<b>NOPAT:</b>	Net Operating Profit after Tax represents a company's after-tax cash operating profit excluding financing costs.
<b>Total Invested Capital:</b>	Total Invested Capital the total cash investment that shareholders and debt holders have made during the life of the company.
<b>Return on Capital:</b>	Return on Capital equals NOPAT divided by Total Invested Capital. It is a key measure of operating efficiency. ROC quantifies how well a company generates cash flow relative to the capital invested in its business.
<b>Cost of Capital:</b>	Is the proportionately weighted cost of each category of capital – common equity, preferred equity and debt.
<b>Economic Profit:</b>	Economic Profit is the net operating income after tax less the opportunity cost of the total capital invested. It is the most important driver of shareholder value.
<b>Current Operations Value:</b>	Current Operations Value is the portion of market value based on the discounted present value of the current earnings stream assuming it remains constant forever.
<b>Future Growth Value:</b>	Future Growth Value is the portion of market value based on un-earned Economic Profit

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Research: (646) 780-8880 [research@tigressfp.com](mailto:research@tigressfp.com)

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**Contacts**

**Ivan Feinseth**  
 Director of Research  
 (646) 780-8901 Direct  
[ifeinseth@tigressfp.com](mailto:ifeinseth@tigressfp.com)

**Michael Naidrich**  
 Capital Markets / Sales & Trading  
 (646) 780-8902 Direct  
[mnaidrich@tigressfp.com](mailto:mnaidrich@tigressfp.com)

**Peter Bergen**  
 Institutional Sales and Trading  
 (646) 780-8915 Direct  
[pbergen@tigressfp.com](mailto:pbergen@tigressfp.com)

**Mario LoGrande**  
 Institutional Sales & Trading  
 (646) 780-8905 Direct  
[mlogrande@tigressfp.com](mailto:mlogrande@tigressfp.com)

**Joseph Pisano**  
 Institutional Sales & Trading  
 (646) 780-8893 Direct  
[jpisano@tigressfp.com](mailto:jpisano@tigressfp.com)

**David Schiffman**  
 Capital Markets / Sales & Trading  
 (646) 780-8914 Direct  
[dschiffman@tigressfp.com](mailto:dschiffman@tigressfp.com)

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Rating:	Meaning:	Rating Distribution (12/14/2017)			
		Companies Under Coverage		Relationship Companies Under Coverage*	
		#	%	#	%
<b>Strong Buy:</b>	Expect significant price gains in the price of the stock relative to its industry peer group and general market over the next 12 months.	16	14%	1	15%
<b>Buy:</b>	Expect out-performance for the price of the stock relative to its industry peer group and general market over the next 12 months.	52	44%	5	70%
<b>Neutral:</b>	Expect little or no outperformance opportunity over the next 12 months.	44	38%	1	115%
<b>Underperform:</b>	Expect underperformance for the price of the stock relative to its industry peer group and general market over the next 12 months.	5	4%	0	0%
<b>Sell:</b>	Expect price decline or significant relative market and industry underperformance over the next 12 months.	0	0%	0	0%
<b>Not Rated</b>	No Current Research Rating	NA	NA	65	NA

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Garmin Ltd. (GRMN-US)	14
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**Tigress Financial Partners LLC - Member of FINRA / MSRB / SIPC****Research: (646) 780-8880 [research@tigressfp.com](mailto:research@tigressfp.com)****40 Wall Street New York NY, 10005 (212) 430-8700 [www.tigressfinancialpartners.com](http://www.tigressfinancialpartners.com)**

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