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Snap-on Incorporated (SNA-US)
Machinery

- We reiterate our Buy rating on SNA and view the recent pullback as a buying opportunity as the company continues to benefit from gains in the repair market penetration and expansion into other industry verticals.
- SNA continues to drive growth through enhancing its franchise network, improving relationships with shop owners and repair facilities, ongoing expansion to critical industries, and increasing penetration in the emerging markets.
- SNA's innovative ability and broad product line remains its key strength driver of growth.
- SNA continues to increase shareholder return through ongoing dividend increases and share repurchases.
- SNA is on our Research Focus List and is in our Focused Opportunity Portfolio.

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

Trading (646) 780-8890 trading@tigressfp.com

Tigress Financial Partners LLC

Member of FINRA / MSRB / SIPC 410 Park Avenue New York, NY 10022 (212) 430-8700 www.tigressfinancialpartners.com

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Company Note

Snap-on Incorporated (SNA-US) Machinery

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

Research Action:

Reiterate rating

Rating: Buy **Prior Rating:** Buy Price 10/23/2018: 52 Week High / Low:

\$149.11 \$189.46 \$141.63 Key Data: (TTM as of Sep-18) **Excess Cash per Share:** -\$1.46 Annual Dividend: \$3.28 **Dividend Yield:** 2.20% Avg. Volume (30 Day): 0 8M **Shares Outstanding:** 56.2M Float: 55.5M Short Interest: 6.8M SI % / Float 12.22% **Equity MV:** \$8,376.3M Sales TTM: \$4,089.7M Beta: 0.94 **EBITDAR:** \$1,074.4M NOPAT: \$698.3M **Total Invested Capital:** \$4,810.3M Return on Capital: 15 17% **Cost of Capital:** 7.05% **Economic Profit:** \$373.8M Market Value Added: \$4,752.0M **Current Operations Value:** \$9,904.2M **Future Growth Value:** (\$342.0)m

- We reiterate our Buy rating on SNA and view the recent pullback as a buying opportunity as the company continues to benefit from gains in the repair market penetration and expansion into other industry verticals. SNA's ongoing value creation process continues to bring new products to market and drive its expansion into other industry verticals, as well as its global growth and penetration into emerging markets. SNA continues to grow in key Asia Pacific countries including India, Indonesia, and Japan. SNA continues to benefit from the ongoing complexity of new vehicles and its own ability to create more technologically-advanced diagnostic equipment to meet this growing and evolving demand. SNA continues to be the leading tool producer for the automotive industry and to expand into other verticals including aerospace, marine, and oil service. Expectations for SNA to continue to drive increases in Return on Capital and growing Economic Profit will continue to drive greater shareholder value creation. We believe SNA will overcome near-term business headwinds and view the recent pullback in the share price is a buying opportunity. We believe significant upside exists in the shares from current levels and continue to recommend purchase.
- SNA continues to drive growth through enhancing its franchise network, improving relationships with shop owners and repair facilities, ongoing expansion to critical industries, and increasing penetration in the emerging markets. SNA continues to create value through its rapid continuous improvement process (RCI). RCI continues to drive organizational efficiency and cost reduction helping SNA increase sales, expand margins, and improve operating efficiencies. RCI is the key driver of SNA's global manufacturing and supply chain management process, creating a market demand-driven sales base and a lower cost replenishment process. RCI continues to help SNA increase order fill rates and profitability and continues to drive gross margin improvements.



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Snap-on Incorporated (SNA-US)

Machinery

- SNA's innovative ability and broad product line remains its key strength driver of growth. SNA continues to invest in new product development and footprint expansion to go "beyond the garage" in to other critical industries including aerospace, oil service, and power generation. SNA manufactures the most innovative, highest quality tools, enabling greater safety and operational improvements. Recently SNA's Repair Systems & Information Group introduced a smart speed tire changer incorporating proprietary and patented technology to reduce the time needed to mount a tire. SNA's recent acquisition of Car-O-Liner together with its ownership of the Mitchell Manual continues to expand its penetration in the collision repair market.
- SNA continues to increase shareholder return through ongoing dividend increases and share repurchases. SNA recently increased its quarterly dividend 14.6% from \$0.82 per share to \$0.94 per share effective November 5th which follows a 15.5% increase in its quarterly dividend from \$0.71 per share to \$0.82 per share last year. In August 2017, SNA announced an open market purchase for \$500 million worth of stock. In 2017, SNA repurchased \$290.3 million worth of stock. Year-to-date 2018, SNA has repurchased \$85.8 million worth of stock.
- SNA is on our Research Focus List and is in our Focused Opportunity Portfolio. SNA's strong brand equity and market leading position best positions it to benefit from the increase in demand for vehicle services driven by further evolving vehicle complexity. SNA's innovative ability together with its increasing expansion into other industries, both in the U.S. and internationally, will continue to drive further growth.



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Snap-on Incorporated (SNA-US)

Machinery

Investment Thesis

SNA is best positioned to take advantage of both the aging vehicle market and the record production of new, technologically-advanced vehicles. SNA's growth will continue to be driven by its dominant position in the automotive repair market supported by the increase in automobile complexity, ongoing global expansion, and growth into additional vertical areas of service and repair including aerospace, HVAC, marine, military, oil service, and power generation. Additional catalysts for growth include expanding its franchise network, greater penetration in critical industries, and growing opportunities in emerging markets. SNA is the market leader, benefiting from its innovative ability to develop and sell the best tools and diagnostic equipment. SNA's strong brand equity and innovative ability will continue to drive an increasing Return on Capital, growing Economic Profit and greater shareholder value creation.

Company Overview

Snap-on Incorporated (SNA-US) manufacturers and sells the world's leading brand of professional tools, diagnostic equipment, and related solutions for technicians, vehicle service centers, original equipment manufacturers (OEMs) and other professional and industrial users. Its products include professional hand and power tools, vehicle diagnostic and service equipment, tool storage, hydraulic lifts, tire changers and balancers, diagnostic software and business management systems. Snap-on's brands include: Snap-on, BAHCO, Blackhawk, Blue-Point, Car-o-Liner, Challenger Lifts, Ecotechnics, Mitchell1, Norbar, ShopKey and Sun. SNA sells its products through multiple distribution channels including direct sale and franchise distributors in over 130 countries. Founded in 1920, Snap-on originated the mobile-van tool distribution channel for the automotive repair market. SNA's tools are backed by a lifetime warranty.

Snap-on operates under four business segments:

Snap-on Tools Group: (36% of revenue) Worldwide franchise mobile van channel selling to professional technicians and repair shops.

Repair Systems & Information Group: (30% of revenue) Sells diagnostic equipment, vehicle service information, business management systems, electronic parts catalogs, and other solutions for vehicle service to customers in the global vehicle service and repair market.



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Snap-on Incorporated (SNA-US)

Machinery

Commercial & Industrial Group: (28% of revenue) Sells tools and service equipment to a broad range of industrial and commercial users worldwide through direct, distributor and other non-franchise distribution channels in a broad range of industries.

Financial Services: (7% of revenue) Provides financing to customers for the purchase or lease of tools, equipment, and diagnostic products as well as business loans and vehicle leases to franchisees.

Snap-on reports revenue under three geographic regions: United States (68% of revenue); Europe (18% of revenue); and All Other (14% of revenue).



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Snap-on Incorporated (SNA-US)

Machinery

Financial Data

Report Basis Reported Period Ending	LTM 09/28/2013	LTM 09/27/2014	LTM 10/03/2015	LTM 10/01/2016	LTM 09/30/2017	LTM 09/29/2018	NTM 09/30/2019	5 Yr Average	3 Yr Average	Curren Trenc
Reported Period Ending	09/20/2013	09/2//2014	10/03/2015	10/01/2016	09/30/2017	03/23/2018	03/30/2019	Average	Average	Trend
Net Sales Revenue	\$3,188.7	\$3,420.7	\$3,595.1	\$3,662.6	\$3,925.0	\$4,089.7	\$3,846.3	\$3,738.6	\$3,892.4	\$3,968.0
Sales Growth	4.30%	7.28%	5.10%	1.88%	7.16%	4.20%	-5.95%	5.12%	4.41%	-0.88%
Sales Growth Trend	4.39%	6.09%	5.97%	3.17%	5.05%	5.38%	-1.89%	5.13%	4.53%	1.75%
Operating Cash Flow (EBITDAR)	\$706.4	\$778.4	\$892.9	\$955.6	\$1,017.1	\$1,074.4	\$1,003.6	\$943.7	\$1,015.7	\$1,039.0
EBITDAR Margin	22.15%	22.76%	24.84%	26.09%	25.91%	26.27%	26.09%	25.17%	26.09%	26.18%
EBITDAR Growth	11.61%	10.19%	14.71%	7.02%	6.43%	5.64%	-6.59%	8.80%	6.37%	-0.48%
Net Operating Profit Before Tax (NOPBT)	\$599.5	\$669.2	\$780.7	\$840.9	\$894.8	\$944.2	\$882.7	\$826.0	\$893.3	\$913.4
NOPBT Margin	18.80%	19.56%	21.72%	22.96%	22.80%	23.09%	22.95%	22.02%	22.95%	23.02%
NOPBT Growth	14.23%	11.62%	16.66%	7.71%	6.41%	5.53%	-6.52%	9.59%	6.55%	-0.50%
Cash Operating Income Tax	\$189.9	\$211.4	\$245.3	\$257.0	\$268.7	\$245.9	\$207.4	\$245.7	\$257.2	\$226.7
Economic Tax Effective Rate	31.68%	31.59%	31.42%	30.57%	30.03%	26.04%	23.50%	29.93%	28.88%	24.77%
Net Operating Profit After Tax (NOPAT)	\$409.6	\$457.8	\$535.4	\$583.9	\$626.1	\$698.3	\$675.2	\$580.3	\$636.1	\$686.8
NOPAT Margin	12.85%	13.38%	14.89%	15.94%	15.95%	17.07%	17.56%	15.45%	16.32%	17.32%
NOPAT Growth	15.59%	11.77%	16.95%	9.05%	7.23%	11.53%	-3.30%	11.31%	9.27%	4.11%
Cash & Equivalents	\$182.5	\$124.7	\$119.2	\$117.5	\$94.1	\$122.2	\$119.9	\$115.5	\$111.3	\$121.0
Total Assets	\$4,101.0	\$4,268.5	\$4,491.4	\$4,600.1	\$5,256.2	\$5,354.8	\$5,253.5	\$4,794.2	\$5,070.4	\$5,304.1
Non - Interest Bearing Liabilities (NIBLs)	\$984.0	\$912.0	\$1,039.0	\$880.7	\$985.2	\$938.9	\$921.1	\$951.2	\$934.9	\$930.0
Net Assets	\$3,100.1	\$3,339.0	\$3,434.6	\$3,701.4	\$4,252.8	\$4,396.2	\$4,313.0	\$3,824.8	\$4,116.8	\$4,354.6
Economic Asset Adjustments	\$353.6	\$314.4	\$364.8	\$353.3	\$388.2	\$414.1	\$406.2	\$367.0	\$385.2	\$410.1
Net Operating Assets	\$3,453.7	\$3,653.4	\$3,799.4	\$4,054.7	\$4,641.0	\$4,810.3	\$4,719.2	\$4,191.8	\$4,502.0	\$4,764.8
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Debt & Debt Equivalents	\$1,054.6	\$990.7	\$1,008.3	\$969.4	\$1,283.2	\$1,186.0	\$1,163.5	\$1,087.5	\$1,146.2	\$1,174.7
Equity & Equivalents	\$1,989.2	\$2,277.0	\$2,361.0	\$2,670.6	\$2,921.8	\$3,164.4	\$3,104.5	\$2,679.0	\$2,918.9	\$3,134.5
Total Capital - Financing Sources	\$3,043.8	\$3,267.7	\$3,369.3	\$3,640.0	\$4,205.0	\$4,350.4	\$4,268.0	\$3,766.5	\$4,065.1	\$4,309.2
Capital Adjustments	\$277.8	\$242.9	\$294.2	\$279.9	\$313.4	\$337.4	\$331.0	\$293.6	\$310.2	\$334.2
Net Capital Financing Sources	\$3,321.6	\$3,510.6	\$3,663.5	\$3,919.9	\$4,518.4	\$4,687.8	\$4,599.1	\$4,060.0	\$4,375.4	\$4,643.4
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Net Working Capital	\$1,370.5	\$1,457.3	\$1,538.9	\$1,514.0	\$1,704.4	\$1,758.5	\$1,725.2	\$1,594.6	\$1,659.0	\$1,741.8
Cost of Net Working Capital	\$77.1	\$82.8	\$86.3	\$83.5	\$98.9	\$122.1	\$119.8	\$94.7	\$101.5	\$120.9
% of Revenue	2.42%	2.42%	2.40%	2.28%	2.52%	2.98%	3.11%	2.52%	2.59%	3.05%
Operational Capital	\$1,830.8	\$1,932.9	\$2,022.7	\$2,006.6	\$2,253.4	\$2,326.1	\$2,282.1	\$2,108.3	\$2,195.4	\$2,304.1
Cost of Operational Capital	\$104.5	\$110.2	\$114.0	\$110.2	\$130.9	\$161.4	\$158.4	\$125.3	\$134.2	\$159.9
% of Revenue	3.28%	3.22%	3.17%	3.01%	3.34%	3.95%	4.12%	3.34%	3.43%	4.03%
Productive Capital	\$2,860.7	\$2,968.5	\$3,016.8	\$2,980.4	\$3,435.7	\$3,477.8	\$3,412.0	\$3,175.8	\$3,298.0	\$3,444.9
Cost of Productive Capital	\$164.6	\$170.7	\$172.4	\$164.0	\$197.2	\$243.7	\$239.1	\$189.6	\$201.6	\$241.4
% of Revenue	5.16%	4.99%	4.80%	4.48%	5.02%	5.96%	6.22%	5.05%	5.15%	6.09%
Total Operating Capital	\$3,430.7	\$3,699.7	\$3,860.0	\$4,120.3	\$4,743.2	\$4,892.5	\$4,800.0	\$4,263.1	\$4,585.3	\$4,846.3
Cost of Total Operating Capital	\$193.1	\$208.8	\$217.8	\$218.3	\$272.4	\$339.7	\$333.3	\$251.4	\$276.8	\$336.5
% of Revenue	6.06%	6.10%	6.06%	5.96%	6.94%	8.31%	8.66%	6.67%	7.07%	8.49%
Non - Operating Capital	\$23.1	(\$46.3)	(\$60.6)	(\$65.6)	(\$102.2)	(\$82.3)	(\$80.7)	(\$71.4)	(\$83.4)	(\$81.5)
Cost of Non - Operating Capital	\$1.4	(\$0.7)	(\$3.1)	(\$3.5)	(\$5.2)	(\$6.5)	(\$6.4)	(\$3.8)	(\$5.0)	(\$6.4)
% of Revenue	0.04%	-0.02%	-0.09%	-0.09%	-0.13%	-0.16%	-0.17%	-0.10%	-0.13%	-0.16%
Total Capital	\$3,453.7	\$3,653.4	\$3,799.4	\$4,054.7	\$4,641.0	\$4,810.3	\$4,719.2	\$4,191.8	\$4,502.0	\$4,764.8
Cost of Total Capital % of Revenue	\$194.5 6.10%	\$208.2 6.09%	\$214.7 5.97%	\$214.8 5.86%	\$267.2 6.81%	\$333.2 8.15%	\$326.9 8.50%	\$247.6 6.58%	\$271.7 6.94%	\$330.0 8.32%
Cost of Capital (WACC)	5.96%	5.86%	5.76%	5.47%	6.15%	7.05%	7.05%	6.06%	6.22%	7.05%
Capital Structure										
Debt & Debt Equivalents	\$1,054.6	\$990.7	\$1,008.3	\$969.4	\$1,283.2	\$1,186.0	\$1,163.5	\$1,087.5	\$1,146.2	\$1,174.7
Debt & Debt Equivalents % of Market Value	15.38%	12.28%	10.28%	9.90%	13.01%	10.28%	10.28%	11.08%	11.02%	10.28%
Preferred Equity	\$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%
Market Value of Common Equity	\$5,800.6	\$7,075.5	\$8,802.0	\$8,826.9	\$8,580.6	\$10,355.4	\$10,159.5	\$8,728.1	\$9,254.3	\$10,257.4
Common Equity % of Market Value	84.62%	87.72%	89.72%	90.10%	86.99%	89.72%	89.72%	88.92%	88.98%	89.72%
Total Economic Market Value (MV)	\$6,855.2	\$8,066.2	\$9,810.3	\$9,796.3	\$9,863.8	\$11,541.4	\$11,323.0	\$9,815.6	\$10,400.5	\$11,432.2
Total %	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Excess Cash	\$23.1	(\$46.3)	(\$60.6)	(\$65.6)	(\$102.2)	(\$82.3)	(\$80.7)	(\$71.4)	(\$83.4)	(\$81.5
Economic Enterprise Value	\$6,832.2	\$8,112.5	\$9,870.9	\$9,861.9	\$9,966.0	\$11,623.6	\$11,403.7	\$9,887.0	\$10,483.8	\$11,513.7
Average Capital	\$3,130.9	\$3,416.1	\$3,587.0	\$3,791.7	\$4,219.2	\$4,603.1	\$4,643.4	\$3,923.4	\$4,204.7	\$4,623.3
Capital Δ	\$381.4	\$188.9	\$153.0	\$256.4	\$598.5	\$169.3	(\$88.7)	\$273.2	\$341.4	\$40.3

Tigress Financial Partners LLC - Member of FINRA / MSRB / SIPC
Research: (646) 780-8880 research@tigressfp.com
410 Park Avenue New York NY, 10022 (212) 430-8700 www.tigressfinancialpartners.com

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Snap-on Incorporated (SNA-US)

Machinery

Financial Analysis

Report Basis Reported Period Ending	LTM 09/28/2013	LTM 09/27/2014	LTM 10/03/2015	LTM 10/01/2016	LTM 09/30/2017	LTM 09/29/2018	NTM 09/30/2019	5 Yr Average	3 Yr Average	Current Trend
Return on Market Value (NOPAT / MV)	5.98%	5.68%	5.46%	5.96%	6.35%	6.05%	5.94%	5.90%	6.12%	5.99%
Return on Enterprise Value (NOPAT / EV)	6.00%	5.64%	5.42%	5.92%	6.28%	6.01%	5.89%	5.86%	6.07%	5.95%
Return on Capital (NOPAT / Average Capital)	13.08%	13.40%	14.93%	15.40%	14.84%	15.17%	14.88%	14.75%	15.14%	15.03%
Cost of Capital (WACC)	5.96%	5.86%	5.76%	5.47%	6.15%	7.05%	7.05%	6.06%	6.22%	7.05%
Economic Return Spread	7.12%	7.54%	9.16%	9.93%	8.69%	8.12%	7.97%	8.69%	8.91%	8.04%
Capital Charge	\$186.6	\$200.1	\$206.7	\$207.4	\$259.3	\$324.5	\$318.4	\$239.6	\$263.7	\$321.5
Economic Profit (EP)	\$223.0	\$257.7	\$328.7	\$376.5	\$366.8	\$373.8	\$366.7	\$340.7	\$372.3	\$370.2
Economic Profit Improvment (EPI)	\$12.2	\$34.7	\$71.0	\$47.7	(\$9.7)	\$7.0	(\$7.1)	\$30.2	\$15.0	(\$0.1)
EP Growth	5.79%	15.57%	27.56%	14.52%	-2.57%	1.90%	-1.89%	11.39%	4.62%	0.00%
Economic Profit Margin on Sales	6.99%	7.53% \$4.43	9.14% \$5.66	10.28% \$6.48	9.35% \$6.31	9.14% \$6.51	9.53% \$6.39	9.09% \$5.88	9.59% \$6.43	9.34% \$6.45
Economic Profit Per Share GAAP Earnings Per Share	\$3.83 \$5.84	\$6.89	\$7.98	\$9.15	\$9.95	\$11.23	\$12.30	\$9.04	\$10.11	\$11.76
Excess Cash Per Share	\$0.40	(\$0.80)	(\$1.04)	(\$1.13)	(\$1.79)	(\$1.46)	(\$1.43)	(\$1.24)	(\$1.46)	(\$1.45)
Performance Drivers										
Sales Growth	4.30%	7.28%	5.10%	1.88%	7.16%	4.20%	-5.95%	5.12%	4.41%	-0.88%
Sales Growth Trend (ROC Sales Growth)	4.39%	6.09%	5.97% 24.84%	3.17%	5.05% 25.91%	5.38%	-1.89%	5.13% 25.17%	4.53%	1.75%
EBITDAR Margin EBITDAR Growth	22.15% 11.61%	22.76% 10.19%	24.84% 14.71%	26.09% 7.02%	6.43%	26.27% 5.64%	26.09% -6.59%	8.80%	26.09% 6.37%	26.18% -0.48%
NOPBT Margin	18.80%	19.56%	21.72%	22.96%	22.80%	23.09%	22.95%	22.02%	22.95%	23.02%
NOPBT Growth	14.23%	11.62%	16.66%	7.71%	6.41%	5.53%	-6.52%	9.59%	6.55%	-0.50%
NOPAT Margin	12.85%	13.38%	14.89%	15.94%	15.95%	17.07%	17.56%	15.45%	16.32%	17.32%
NOPAT Growth	15.59%	11.77%	16.95%	9.05%	7.23%	11.53%	-3.30%	11.31%	9.27%	4.11%
Economic Profit Margin on Sales (EP / Sales)	6.99%	7.53%	9.14%	10.28%	9.35%	9.14%	9.53%	9.09%	9.59%	9.34%
Economic Profit Growth	5.79%	15.57%	27.56%	14.52%	-2.57%	1.90%	-1.89%	11.39%	4.62%	0.00%
Economic Return Spread (ROC-WACC)	7.12%	7.54%	9.16%	9.93%	8.69%	8.12%	7.83%	8.69%	8.91%	7.98%
Economic Return Ratio (ROC / WACC)	219.49%	228.80%	259.06%	281.52%	241.45%	215.16%	211.09%	245.20%	246.05%	213.13%
Economic Profit Momentum (∆EP/Capital)	0.37%	0.99%	1.94%	1.22%	-0.21%	0.15%	-0.15%	0.82%	0.38%	0.00%
Economic Profit Momentum Margin (∆EP/Sales)	0.38%	1.02%	1.98%	1.30%	-0.25%	0.17%	-0.18%	0.84%	0.41%	-0.01%
Capital Growth	12.97%	5.69%	4.36%	7.00%	15.27%	3.75%	-1.89%	7.21%	8.67%	0.93%
Capital Turns	0.96X	0.97X	0.98X	0.93X	0.87X	0.87X	0.84X	0.93X	0.89X	0.85X
EVC Acceleration Margin EVC Acceleration Spread	0.40% 0.43%	1.09% 1.11%	2.08% 2.08%	1.33% 1.33%	-0. 26% -0. 26%	0.18% 0.17%	-0.17% -0.15%	0.78% 0.65%	0.40% 0.38%	0.00% 0.00%
Risk Factors										
O Fl (NODAT A O:t-I)	#00.0	#00B B	#200 A	#207 F	607.6	# 500.0	#700 O	6007.4	CO04.7	#C4C F
Free Cash Flow (NOPAT - \(\Delta \) Capital)	\$28.3 0.85%	\$268.9 7.66%	\$382.4 10.44%	\$327.5	\$27.6 0.61%	\$529.0 11.28%	\$763.9 16.61%	\$307.1 7.67%	\$294.7	\$646.5 13.95%
Free Cash Flow Rate (FCF / Capital) Free Cash Flow Yield (FCF / MV)	0.41%	3.33%	3.90%	8.36% 3.34%	0.28%	4.58%	6.75%	3.09%	6.75% 2.74%	5.67%
Total Debt / Total Capital	31.75%	28.22%	27.52%	24.73%	28.40%	25.30%	25.30%	26.83%	26.14%	25.30%
Total Debt / EBITDAR	149.29%	127.27%	112.93%	101.44%	126.17%	110.38%	115.94%	115.64%	112.66%	113.16%
Excess Cash	\$23.1	(\$46.3)	(\$60.6)	(\$65.6)	(\$102.2)	(\$82.3)	\$0.0	(\$71.4)	(\$83.4)	(\$41.1)
Financial Leverage ((Total Debt - Excess Cash) /	15.05%	12.86%	10.90%	10.57%	14.05%	10.99%	10.28%	11.87%	11.87%	10.63%
Pension Leverage (Net Pension Liability / MV)	-3.73%	-2.07%	-2.46%	-2.52%	-2.94%	-2.26%	0.00%	-2.45%	-2.57%	-1.13%
Equity Risk Index (S&P 500 = 1.00)	0.88	0.88	0.89	0.90	0.94	0.94	0.94	0.91	0.93	0.94
Stock Price Volatility	2.94	2.34	2.42	2.75	2.97	3.01	3.01	2.70	2.91	3.01
Sales Index (NL Sales)	8.07	8.14	8.19	8.21	8.28	8.32	8.25	8.22	8.27	8.29
Market Value Index (NL Market Value)	8.83	9.00	9.19	9.19	9.20	9.35	9.33	9.19	9.25	9.34
Size Index (NL Sales: MV)	8.45	8.57	8.69	8.70	8.74	8.83	8.79	8.70	8.76	8.81
Beta	0.83	0.83	0.84	0.85	0.91	0.92	0.92	0.87	0.89	0.92
TFP Adjusted Beta	0.88	0.88	0.89	0.90	0.94	0.94	0.94	0.91	0.93	0.94
Stock Price Volatility	2.94	2.34	2.42	2.75	2.97	3.01	3.01	2.70	2.91	3.01
Valuation Measures	40.5	40.5	40 6 :	40.777	40.5	044.5	011.5	do a :	440 (044 (
Total Economic Market Value (MV)	\$6,855.2	\$8,066.2	\$9,810.3	\$9,796.3	\$9,863.8	\$11,541.4	\$11,323.0	\$9,815.6	\$10,400.5	\$11,432.2
Economic Enterprise Value	\$6,832.2	\$8,112.5	\$9,870.9	\$9,861.9	\$9,966.0	\$11,623.6	\$11,403.7	\$9,887.0	\$10,483.8	\$11,513.7
Equity Market Value	\$5,800.6	\$7,075.5	\$8,802.0	\$8,826.9	\$8,580.6	\$10,355.4	\$10,159.5	\$8,728.1	\$9,254.3	\$10,257.4
Total Capital	\$3,453.7	\$3,653.4	\$3,799.4	\$4,054.7	\$4,641.0	\$4,810.3	\$4,719.2	\$4,191.8	\$4,502.0	\$4,764.8
Market Value Created MVC (MV - Capital)	\$3,401.5	\$4,412.8	\$6,010.9	\$5,741.6 156.76%	\$5,222.8	\$6,731.1	\$6,603.8	\$5,623.8 150.43%	\$5,898.5	\$6,667.4
MVC Margin (MVC / Sales)	106.67%	129.00%	167.20% 158.21%	156.76%	133.06% 112.54%	164.59% 139.93%	171.69%	150.43% 134.16%	151.54% 131.02%	168.03% 139.93%
MVC Spread (MVC / Capital) Current EVC Value (EP / WACC)	98.49% \$3,741.3	120.79% \$4,399.8	\$5,705.4	141.60% \$6,882.7	\$5,968.2	\$5,301.1	139.93% \$5,200.8	\$5,624.7	\$5,984.2	\$5,250.9
Current EVC Value (EP / WACC) Current Operations Value COV	\$6,872.2	\$4,399.8 \$7,815.9	\$9,292.5	\$10,674.5	\$10,187.3	\$9,904.2	\$9,844.2	\$9,548.1	\$10,188.8	\$9,874.2
Current Operations Value COV	\$118.08	\$134.29	\$159.94	\$183.73	\$175.34	\$172.55	\$169.79	\$164.68	\$176.07	\$171.16
Future Growth Value (MVC - EVA Value)	(\$17.0)	\$250.2	\$517.9	(\$878.2)	(\$323.5)	\$1,637.2	\$1,478.8	\$267.5	\$211.6	\$1,558.0
Future Growth Value Reliance (FGV / MV)	-0.25%	3.10%	5.28%	-8.96%	-3.28%	14.19%	13.06%	2.72%	2.03%	13.63%
Share Price	\$89.38	\$118.65	\$151.31	\$151.96	\$149.01	\$160.72	\$160.72	\$146.33	\$153.90	\$160.72
Dividend Yield	1.70%	1.48%	1.40%	1.61%	1.91%	2.04%	ψ.00Z	ψ	Ψ.00.00	Ψ.00.72
		34.23%	28.93%	2.04%	-0.04%	9.90%	0.00%	-8.95%	5.17%	4.43%
Total Shareholder Return (Trivi)	45.28%				2.13X	2.40X	2.40X	2.34X	2.31X	2.40X
Total Shareholder Return (TTM) MV to IC Ratio	45.28% 1.98X	2.21X	2.58X	2.42X						
MV to IC Ratio EV / EBITDAR Multiple			2.58X 11.06X	10.32X	9.80X	10.82X	11.36X	10.48X	10.32X	11.08X
MV to IC Ratio EV / EBITDAR Multiple EV / NOPBIT Multiple	1.98X	2.21X					11.36X 12.92X	10.48X 11.97X		11.08X 12.60X
MV to IC Ratio EV / EBITDAR Multiple	1.98X 9.67X	2.21X 10.42X	11.06X	10.32X	9.80X	10.82X			10.32X	
MV to IC Ratio EV / EBITDAR Multiple EV / NOPBIT Multiple EV / NOPAT Multiple EV / EP Multiple	1.98X 9.67X 11.40X	2.21X 10.42X 12.12X	11.06X 12.64X	10.32X 11.73X	9.80X 11.14X	10.82X 12.31X	12.92X	11.97X	10.32X 11.74X	12.60X
MV to IC Ratio EV / EBITDAR Multiple EV / NOPBIT Multiple EV / NOPAT Multiple EV / EP Multiple Future Growth Value (% of MV)	1.98X 9.67X 11.40X 16.68X 30.64X -0.25%	2.21X 10.42X 12.12X 17.72X	11.06X 12.64X 18.44X	10.32X 11.73X 16.89X	9.80X 11.14X 15.92X	10.82X 12.31X 16.65X	12.92X 16.89X	11.97X 17.04X	10.32X 11.74X 16.48X	12.60X 16.76X
MV to IC Ratio EV / EBITDAR Multiple EV / NOPBIT Multiple EV / NOPAT Multiple EV / EP Multiple Future Growth Value (% of MV) Current Operations Value (% of MV)	1.98X 9.67X 11.40X 16.68X 30.64X -0.25% 100.25%	2.21X 10.42X 12.12X 17.72X 31.48X 3.10% 96.90%	11.06X 12.64X 18.44X 30.03X 5.28% 94.72%	10.32X 11.73X 16.89X 26.20X -8.96% 108.96%	9.80X 11.14X 15.92X 27.17X -3.28% 103.28%	10.82X 12.31X 16.65X 31.10X 14.19% 85.81%	12.92X 16.89X 31.10X 13.06% 86.94%	11.97X 17.04X 29.02X 2.72% 97.28%	10.32X 11.74X 16.48X 28.16X 2.03% 97.97%	12.60X 16.76X 31.10X 13.63% 86.37%
MV to IC Ratio EV / EBITDAR Multiple EV / NOPBIT Multiple EV / NOPAT Multiple EV / EP Multiple Future Growth Value (% of MV)	1.98X 9.67X 11.40X 16.68X 30.64X -0.25%	2.21X 10.42X 12.12X 17.72X 31.48X 3.10%	11.06X 12.64X 18.44X 30.03X 5.28%	10.32X 11.73X 16.89X 26.20X -8.96%	9.80X 11.14X 15.92X 27.17X -3.28%	10.82X 12.31X 16.65X 31.10X 14.19%	12.92X 16.89X 31.10X 13.06%	11.97X 17.04X 29.02X 2.72%	10.32X 11.74X 16.48X 28.16X 2.03%	12.60X 16.76X 31.10X 13.63%

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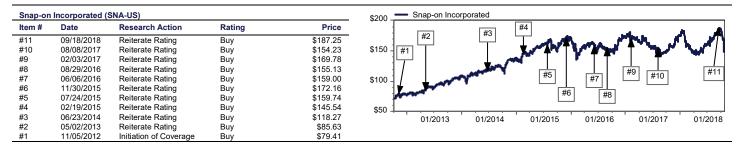


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Snap-on Incorporated (SNA-US)

Machinery

Ratings History



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.

Glossary of Key Terms and Measures

Excess Cash per Share: 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.

EBITDAR: 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.

NOPAT: Net Operating Profit after Tax represents a company's after-tax cash operating profit excluding financing costs.

Total Invested Capital: Total Invested Capital the total cash investment that shareholders and debt holders have made during the life of the

company.

Return on Capital: 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.

Cost of Capital: Is the proportionately weighted cost of each category of capital – common equity, preferred equity and debt.

Economic Profit: 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.

Current Operations Value: 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.

Future Growth Value: Future Growth Value is the portion of market value based on un-earned Economic Profit

For more information on the key terms and measures, please review the Tigress Investment Research Guide to Company Valuation and Analysis.

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Contacts

Ivan Feinseth
Director of Research
(646) 780-8901 Direct
ifeinseth@tigressfp.com

Barney Greengrass
Capital Markets / Sales & Trading
(646) 780-8914 Direct
bgreengrass@tigressfp.com

Aaron Ju Research Associate (646) 780-8887 Direct aaronju@tigressfp.com

Ernest Williams
Institutional Sales & Trading
(646) 780-8886 Direct
ewilliams@tigressfp.com

Steven Pikowski
Operations / Sales & Trading
(646) 780-8894 Direct
spikowski@tigressfp.com

Lily Li Global Wealth Management (646) 780-8903 Direct <u>lilyeli@tigressfp.com</u>

Rating Distribution (10/23/2018)

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rigidad recognist employe a tivo act rating dyctom for evaluating and invocation apportantly and				rtating biotilbation (10/20/2010)					
universe. The pote	sociated with owning the common equity of rated firms within our research ntial return is measured on a relative basis to the general market which is S&P 500 and to the subject company's industry peer group as indicated.	_	Companies Under Coverage		Relationship Companies Under Coverage*				
Rating:	Meaning:		#	%	#	%			
Strong Buy:	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%			
Buy:	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%			
Neutral:	Expect little or no outperformance opportunity over the next 12 months.		45	38%	1	15%			
Underperform:	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%			
Sell:	Expect price decline or significant relative market and industry underperformance over the next 12 months.		0	0%	0	0%			
Not Rated	No Current Research Rating		NA	NA	65	NA			
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Company:	Disclosure:	
Snap-on Incorporated (SNA-US)	14	
Key Disclosure:		

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