Volume 8, Issue 2
2Q 2019
Published Quarterly

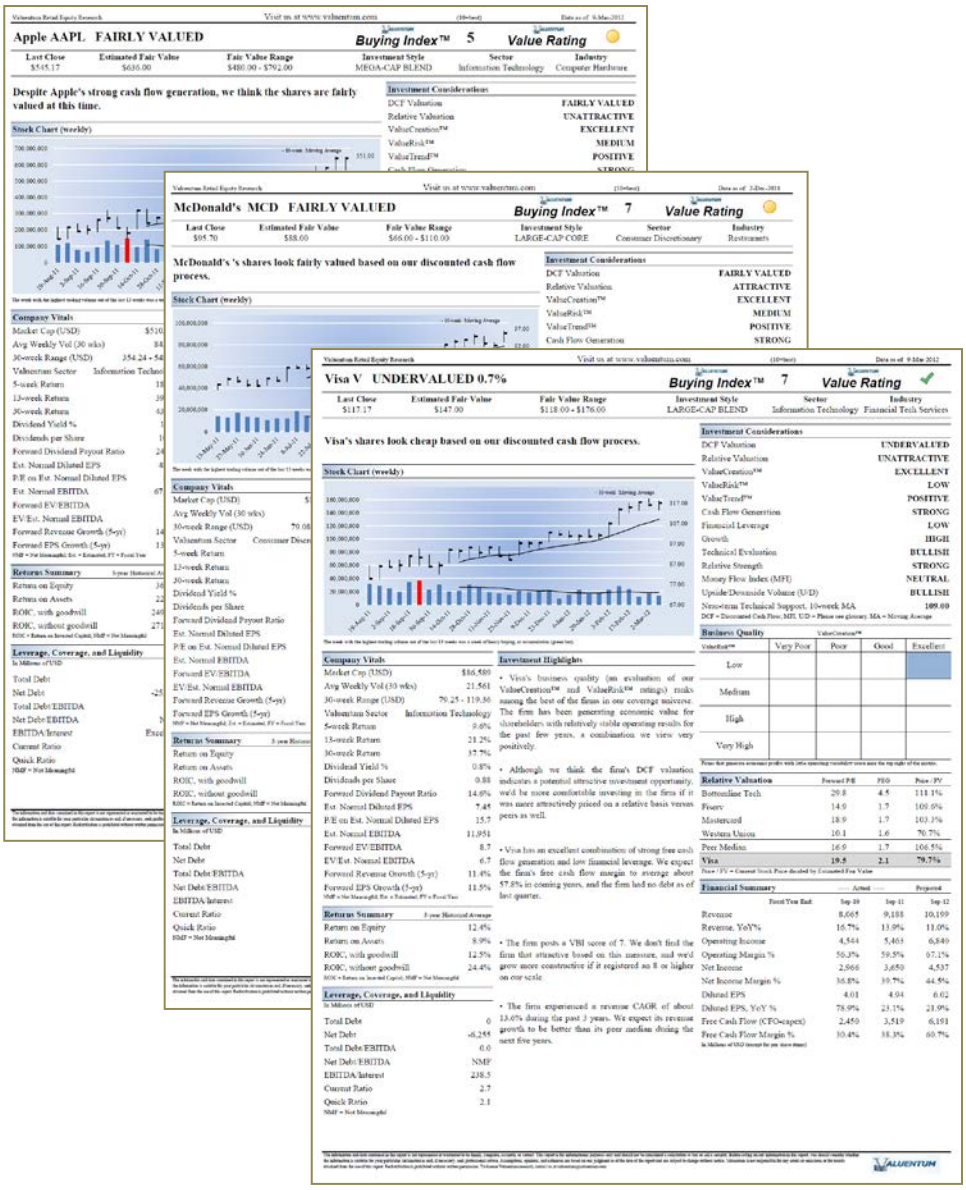
Valuentum *Ideas100*™

Announcing a New Tool for the Intelligent Investor!

- **An Invaluable Resource for Today's Financial Advisor and Portfolio Manager**
- **Forward-Looking, Easy-to-Compare Stock Reports on 100 of the Highest-Quality Firms**
- **Rankings Based on Competitive Advantages and Risk Profiles**
- **Valuentum Buying Index™ Ratings to Identify the Best Stocks To Consider Buying Now**
- **Independent Guidance from the Valuentum Analyst Team**
- **Updated Quarterly**

This publication can help you:

- **Build a new diversified portfolio of high-quality stocks from a variety of sectors**
- **Add solid companies to fortify your existing portfolio**
- **Identify investment gems**



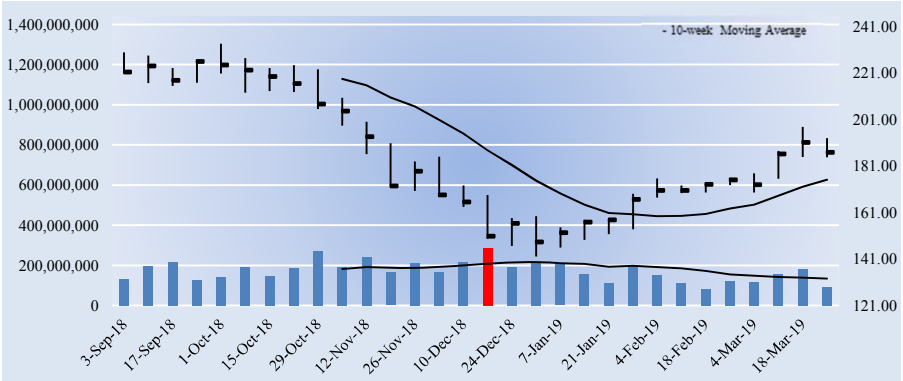
Apple AAPL FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$218.00	$174.00 - $262.00	MEGA-CAP VALUE	Information Technology	Computer Hardware

Apple's growing Services segment bodes well for its long-term gross margin performance, but concerns over iPhone sales trends have cropped up once again, particularly in China.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$933,970
Avg Weekly Vol (30 wks)	173,544
30-week Range (USD)	142 - 233.47
Valuentum Sector	Information Technology
5-week Return	7.3%
13-week Return	17.8%
30-week Return	-18.2%
Dividend Yield %	1.6%
Dividends per Share	2.92
Forward Dividend Payout Ratio	25.4%
Est. Normal Diluted EPS	13.61
P/E on Est. Normal Diluted EPS	13.7
Est. Normal EBITDA	85,354
Forward EV/EBITDA	10.7
EV/Est. Normal EBITDA	9.5
Forward Revenue Growth (5-yr)	2.0%
Forward EPS Growth (5-yr)	5.3%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	41.0%
Return on Assets	15.0%
ROIC, with goodwill	219.8%
ROIC, without goodwill	280.0%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	114,483
Net Debt	-122,617
Total Debt/EBITDA	1.4
Net Debt/EBITDA	NMF
EBITDA/Interest	25.2
Current Ratio	1.1
Quick Ratio	2.4

NMF = Not Meaningful

Investment Highlights

• Apple is as much a brand as it is one of the world's most innovative companies. The firm is no longer known for its iPods and personal computers, as the proliferation of the iPhone over the past decade has been a sight to behold. The company's execution remains top notch, and we expect it to continue to roll out innovative products in smartphones and wearable technology.

• Apple's rollout of future iterations of the iPhone should propel its fundamentals higher. Though we're not embedding another blockbuster hit in our model, we wouldn't be surprised if Apple delivers another one from its pipeline. It recently upped its Advanced Manufacturing Fund to $5 billion from $1 billion.

• Apple's growing Services segment bodes well for its long-term gross margin performance, and the segment is on track to hit its goal of doubling its revenue from 2016-2020. Apple Pay is now accepted by ~60% of US retailers, and paid subscriptions totaled 330 million at the end of fiscal 2018. Wearables has been an area of strength, and Apple holds ~45% of global smartwatch market share, according to estimates.

• Investors should pay close attention to the firm's gross margin, which fell to just over 38% in fiscal 2018 from 40% in fiscal 2015 and is expected to remain below 40% in the near term. Pricing and cost pressures may be unavoidable, and currency exchange rates should not be ignored as Apple generates more than 60% of its revenue outside the US.

• Apple's cash hoard is more than some of the market caps of the largest firms in the S&P 500. It retains tremendous flexibility, but it plans to take its balance sheet to cash-neutral over time. Its dividend growth potential may be unmatched for now, and buybacks have become a focal point in its cash-neutral strategy.

Investment Considerations

DCF Valuation	FAIRLY VALUED
Relative Valuation	UNATTRACTIVE
ValueCreation™	EXCELLENT
ValueRisk™	LOW
ValueTrend™	NEGATIVE
Cash Flow Generation	STRONG
Financial Leverage	MEDIUM
Growth	MODEST
Technical Evaluation	BULLISH
Relative Strength	STRONG
Money Flow Index (MFI)	NEUTRAL
Upside/Downside Volume (U/D)	BULLISH
Near-term Technical Support, 10-week MA	175.00

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
BlackBerry	NMF	NMF	83.1%
Cray	NMF	NMF	107.6%
Hewlett-Packard	10.4	NMF	79.6%
IBM	14.3	1.1	93.4%
Peer Median	12.3	1.1	88.2%
Apple	**16.2**	**2.1**	**85.7%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Sep-17	Sep-18	Sep-19
Revenue	229,234	265,595	255,237
Revenue, YoY%	6.3%	15.9%	-3.9%
Operating Income	61,344	70,898	65,123
Operating Margin %	26.8%	26.7%	25.5%
Net Income	48,351	59,531	56,420
Net Income Margin %	21.1%	22.4%	22.1%
Diluted EPS	9.21	11.91	11.51
Diluted EPS, YoY %	10.8%	29.3%	-3.3%
Free Cash Flow (CFO-capex)	51,430	64,121	59,086
Free Cash Flow Margin %	22.4%	24.1%	23.1%

In Millions of USD (except for per share items)

Structure of the Computer Hardware Industry — NEUTRAL

The computer hardware space, which spans the personal computer to the iPhone and iPad, is highly competitive. The industry is characterized by frequent product introductions and rapid technological advances that can cause dramatic market share shifts. Though some firms benefit from a strong brand, participants often price aggressively, pressuring margins. Firms are also subject to potential component shortages/disruptions, which can punish performance. Obsolescence may be an eventuality for some, and services revenue has become critical for others. We're neutral on the space.

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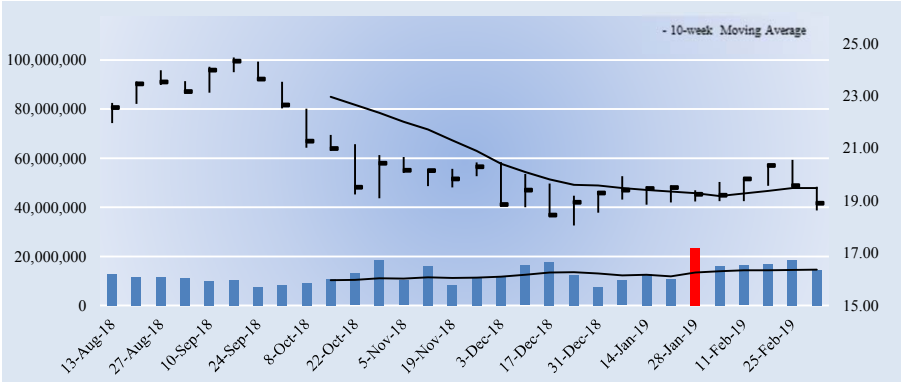
ABB ABB FAIRLY VALUED

Buying Index™ 4 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$23.00	$17.00 - $29.00	LARGE-CAP BLEND	Industrials	Electrical Equipment - industrial

ABB has agreed to sell an ~80% stake in its 'Power Grid' business to Hitachi, and it subsequently announced a cost-saving initiative aimed at simplifying its business model and structure.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**HIGH**
Technical Evaluation	**VERY BEARISH**
Relative Strength	**NEUTRAL**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Resistance, 10-wk MA	**19.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$40,427
Avg Weekly Vol (30 wks)	12,860
30-week Range (USD)	18.05 - 24.45
Valuentum Sector	Industrials
5-week Return	-1.3%
13-week Return	-0.5%
30-week Return	-16.4%
Dividend Yield %	4.4%
Dividends per Share	0.83
Forward Dividend Payout Ratio	61.3%
Est. Normal Diluted EPS	1.60
P/E on Est. Normal Diluted EPS	11.8
Est. Normal EBITDA	6,008
Forward EV/EBITDA	8.5
EV/Est. Normal EBITDA	7.5
Forward Revenue Growth (5-yr)	9.0%
Forward EPS Growth (5-yr)	13.8%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	14.0%
Return on Assets	4.8%
ROIC, with goodwill	11.4%
ROIC, without goodwill	23.4%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	8,618
Net Debt	4,461
Total Debt/EBITDA	2.9
Net Debt/EBITDA	1.5
EBITDA/Interest	11.5
Current Ratio	1.2
Quick Ratio	0.6

NMF = Not Meaningful

Investment Highlights

• ABB is a market leader across its power products and systems portfolio and is among the top 3 global providers in discrete automation, low voltage products, and process automation. The company has folded Baldor (electrical motors) and Thomas & Betts (low-voltage market) into operations. It was founded in 1883 and is headquartered in Switzerland.

• ABB's relationship with activist investor Cevian Capital may be worth watching. After defying pressure to spin off its 'Power Grids' division, ABB has since agreed to sell an 80% stake in the business to Hitachi. The deal will significantly impact revenue but should boost overall margin performance.

• Following its agreement with Hitachi, ABB announced a simplification program that is expected to result in $500 million in net cost savings through the medium-term. Other medium-term financial targets include 3%-6% comparable revenue growth per year, a 13%-16% operational EBITDA margin, basic earnings per share growth above revenue growth, and 100% conversion of net income to free cash flow.

• ABB is set to benefit from key growth areas, including power grid expansion, emerging market demand, energy efficiency initiatives, and automation business growth. It recently bought GE's Industrial Solutions business for $2.8 billion and expects annual cost benefits of $200 million from the deal, which will strengthen ABB's position in North America.

• Service momentum is a key building block for profitable growth at ABB, and service order growth has been solid in recent quarters (up 7% in 2018). We like this increasing recurring revenue stream. As of the end of 2018, its total backlog was $13.1 billion, a figure that now excludes its 'Power Grids' backlog.

Relative Valuation

	Forward P/E	PEG	Price / FV
Ametek	19.2	3.0	121.0%
AO Smith Corp	18.6	2.5	97.8%
Eaton	13.4	1.7	91.2%
Rockwell Automation	19.2	1.9	114.8%
Peer Median	18.9	2.2	106.3%
ABB	**14.0**	**1.3**	**82.2%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	34,312	27,662	36,763
Revenue, YoY%	1.4%	-19.4%	32.9%
Operating Income	3,294	2,102	4,197
Operating Margin %	9.6%	7.6%	11.4%
Net Income	2,219	1,450	2,880
Net Income Margin %	6.5%	5.2%	7.8%
Diluted EPS	1.03	1.02	1.35
Diluted EPS, YoY %	18.2%	-1.7%	33.2%
Free Cash Flow (CFO-capex)	2,850	2,152	1,983
Free Cash Flow Margin %	8.3%	7.8%	5.4%

In Millions of USD (except for per share items)

Structure of the Industrial Electrical Equipment Industry — NEUTRAL

Demand for products in the industrial electrical equipment space is highly cyclical, and industry constituents are exposed to volatile raw-material costs, which at times can be difficult to pass along to customers. Product development and quality initiatives are sources of competitive strengths, but rivals often compete aggressively on price to gain share. The industrial electrical equipment market should grow at a GDP-like pace in the developed world and a multiple of that trajectory in emerging markets. We're neutral on the space.

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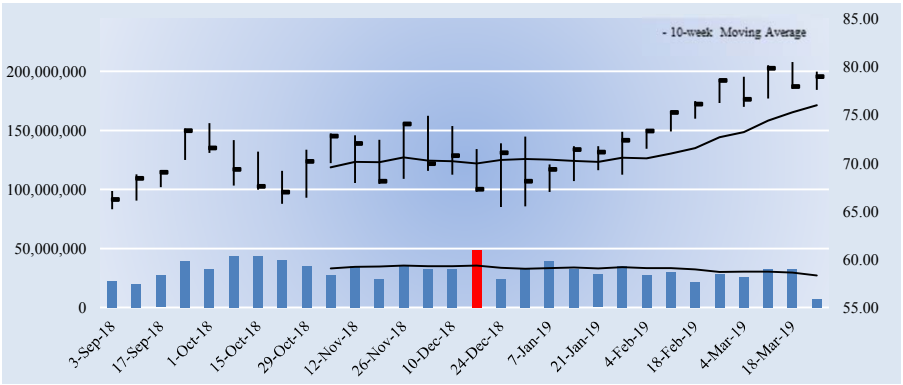
Abbott ABT FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$68.00	$54.00 - $82.00	LARGE-CAP CORE	Health Care	Pharmaceuticals - Big

Abbott continues to enhance its international presence, and recent acquisitions have improved its positioning in attractive growth markets.

Stock Chart (weekly)



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Company Vitals

Market Cap (USD)	$139,830
Avg Weekly Vol (30 wks)	31,324
30-week Range (USD)	65.22 - 80.49
Valuentum Sector	Health Care
5-week Return	3.4%
13-week Return	10.4%
30-week Return	18.4%
Dividend Yield %	1.6%
Dividends per Share	1.28
Forward Dividend Payout Ratio	39.5%
Est. Normal Diluted EPS	3.63
P/E on Est. Normal Diluted EPS	21.7
Est. Normal EBITDA	11,752
Forward EV/EBITDA	14.4
EV/Est. Normal EBITDA	13.2
Forward Revenue Growth (5-yr)	5.2%
Forward EPS Growth (5-yr)	23.7%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	4.7%
Return on Assets	2.0%
ROIC, with goodwill	14.4%
ROIC, without goodwill	23.3%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	19,566
Net Debt	15,480
Total Debt/EBITDA	2.8
Net Debt/EBITDA	2.2
EBITDA/Interest	8.4
Current Ratio	1.6
Quick Ratio	1.0

NMF = Not Meaningful

Investment Highlights

• The new Abbott isn't much different from the old Abbott (pre AbbVie spin-off), minus the blockbuster drug Humira and other members of its drug lineup. It remains aligned with favorable long-term healthcare trends in both developed and developing markets. The company is more than 125 years old. Roughly 65% of its sales are now generated outside the US.

• Abbott's diagnostics segment has some solid products in the pipeline that could kick-start growth, and it remains #1 in blood screening. More than 16% of the world's population will be 65 or older by 2050, offering meaningful opportunities across Abbott's portfolio.

• Abbott was busy on the M&A front in 2017 as it acquired point of care testing firm Alere for a total equity value of ~$5.3 billion and St. Jude Medical for $25 billion. The $5.5 billion point of care testing segment is one of the fastest growing segments in healthcare diagnostics, and the deal has made Abbott a leader in rapid testing. It expects $500 million in annual pre-tax synergies from the St. Jude deal.

• As the Dividend Aristocrat works to pay down debt from its recent acquisitions (net debt repayments were ~$8.5 billion in 2018), its dividend payout ratio is likely to remain near the lower end of its 40%-45% target. Organic sales growth is expected to be 6.5%-7.5% in 2019, and adjusted earnings per share guidance is a range of $3.15-$3.25 for the year.

• Abbott continues to expand its global presence, particularly in Latin America and Russia, and its global infrastructure presence. The acquisition of St. Jude has made it the world leader in point-of-care diagnostic testing with focuses on cardio-metabolic, infectious disease, and toxicology.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**HIGH**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**NEUTRAL**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**76.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
AbbVie	9.3	1.3	90.7%
Eli Lilly	22.9	2.1	123.6%
Merck	20.3	2.5	113.6%
Pfizer	14.5	1.7	94.3%
Peer Median	17.4	1.9	103.9%
Abbott	**24.4**	**2.5**	**116.2%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	27,390	30,578	31,832
Revenue, YoY%	31.3%	11.6%	4.1%
Non-GAAP Operating Income	1,726	3,650	7,472
Non-GAAP EBIT %	6.3%	11.9%	23.5%
Non-GAAP Net Income	353	2,334	5,739
Non-GAAP NI Margin %	1.3%	7.6%	18.0%
Non-GAAP Diluted EPS	0.20	1.32	3.24
Non-GAAP Dil EPS, YoY %	NMF	NMF	NMF
Non-GAAP Free Cash Flow	4,435	4,906	7,645
Non-GAAP FCF Margin %	16.2%	16.0%	24.0%

In Millions of USD (except for per share items)

Structure of the Big Pharma Industry — GOOD

The big pharma industry is primarily composed of makers of branded drugs. Intellectual property protection is vital to the successful commercialization of medicines and offers makers of branded drugs a unique competitive advantage via patents, which can extend for decades. When branded drugs lose market exclusivity, however, makers of generic pharmaceuticals can generate intense price competition, causing drastic revenue losses on unprotected therapies. Long-term success for branded pharma companies depends on a strong and diverse drug pipeline, which can be augmented by M&A activity. We generally like the group and expect continued industry consolidation.

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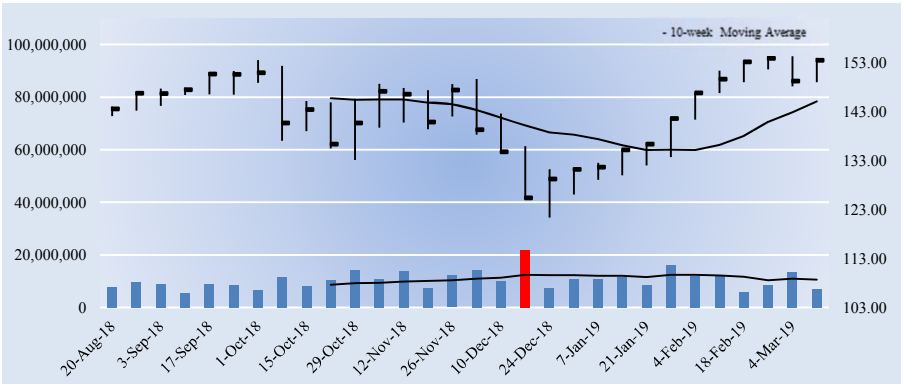
Automatic Data Processing ADP FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$149.00	$119.00 - $179.00	LARGE-CAP CORE	Information Technology	Staffing Services

Automatic Data Processing boasts a large, recurring revenue base resulting in strong, consistent cash flow generation.

Stock Chart (weekly)



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Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**145.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$68,051
Avg Weekly Vol (30 wks)	10,499
30-week Range (USD)	121.4 - 154.55
Valuentum Sector	Information Technology
5-week Return	4.3%
13-week Return	14.0%
30-week Return	7.5%
Dividend Yield %	2.1%
Dividends per Share	3.16
Forward Dividend Payout Ratio	58.2%
Est. Normal Diluted EPS	6.49
P/E on Est. Normal Diluted EPS	23.7
Est. Normal EBITDA	4,214
Forward EV/EBITDA	11.0
EV/Est. Normal EBITDA	9.7
Forward Revenue Growth (5-yr)	5.3%
Forward EPS Growth (5-yr)	15.0%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	38.9%
Return on Assets	4.2%
ROIC, with goodwill	54.2%
ROIC, without goodwill	109.8%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	2,002
Net Debt	-27,305
Total Debt/EBITDA	0.7
Net Debt/EBITDA	NMF
EBITDA/Interest	28.8
Current Ratio	1.1
Quick Ratio	1.0

NMF = Not Meaningful

Investment Highlights

• Automatic Data Processing (ADP) is one of the world's largest providers of business outsourcing solutions. It offers a wide range of easy-to-use human resource, payroll, tax and benefits administration solutions from a single source. It has ~700,000 clients in 110+ countries, and ~80% of the Fortune 100 use at least one ADP service. The company was founded in 1949 and is based in New Jersey.

• The US human cloud capital management (HCM) market was ~$65 billion in ADP's fiscal 2017 and is expected to grow to ~$79 million by fiscal 2020, while the multi-national and international HCM market is expected to grow to ~$45 billion in fiscal 2020 from ~$40 billion in fiscal 2017.

• ADP believes its runway for growth is a long one, though its operating environment is evolving. The increasing complexity of regulatory compliance, trends toward the use of big data, and the globalization of businesses and the additional complexities that come along with cross-border operations are all expected to help drive demand. Reported revenue is expected to grow 5%-7% in fiscal 2018.

• ADP expects revenue to grow at a 7%-9% CAGR from fiscal 2017 to fiscal 2020 thanks in part to its focus on large and growing markets where it has a competitive advantage and ~200 basis points of adjusted EBIT margin expansion thanks to operating leverage, platform migrations, and service alignment and productivity initiatives.

• ADP boasts a large, recurring revenue base resulting in strong, consistent cash flow generation. The firm's business model has low capital requirements. It has minimal long-term obligations and has been paying dividends continuously since 1974.

Relative Valuation

	Forward P/E	PEG	Price / FV
Insperity	26.9	2.2	113.2%
Korn/Ferry	13.8	2.6	97.3%
Manpower	10.7	2.4	90.3%
Paychex	27.4	2.8	111.3%
Peer Median	20.4	2.5	104.3%
Automatic Data Processing	**28.3**	**2.8**	**103.0%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Jun-17	Jun-18	Jun-19
Revenue	12,380	13,326	14,259
Revenue, YoY%	6.1%	7.6%	7.0%
Operating Income	2,327	2,512	3,229
Operating Margin %	18.8%	18.8%	22.6%
Net Income	1,733	1,621	2,361
Net Income Margin %	14.0%	12.2%	16.6%
Diluted EPS	3.85	3.66	5.43
Diluted EPS, YoY %	18.3%	-5.0%	48.6%
Free Cash Flow (CFO-capex)	1,656	2,044	2,480
Free Cash Flow Margin %	13.4%	15.3%	17.4%

In Millions of USD (except for per share items)

Structure of the Staffing Services Industry — NEUTRAL

The staffing services industry spans firms that provide business outsourcing services to those that offer talent management solutions. Providers of business outsourcing solutions compete with a variety of independent firms as well as captive in-house functions. Their businesses are characterized by long-term client relationships and recurring revenue. Talent management firms offer executive recruitment and consulting services and face emerging competition from professional networking website providers. Attracting consultants is particularly important for executive recruitment entities. We're neutral on the group.

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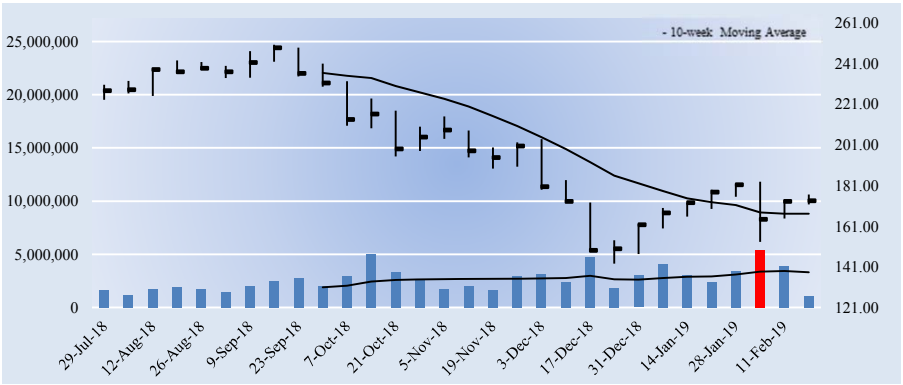
Alliance Data Systems ADS FAIRLY VALUED

Buying Index™ 7 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$229.00	$172.00 - $286.00	MID-CAP VALUE	Information Technology	Business Services

The shift to data-enabled, multi-channel digital marketing represents a huge and growing market for Alliance Data Systems.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$9,694
Avg Weekly Vol (30 wks)	2,664
30-week Range (USD)	142.58 - 250.27
Valuentum Sector	Information Technology
5-week Return	0.8%
13-week Return	-11.9%
30-week Return	-23.9%
Dividend Yield %	1.5%
Dividends per Share	2.52
Forward Dividend Payout Ratio	14.4%
Est. Normal Diluted EPS	25.41
P/E on Est. Normal Diluted EPS	6.8
Est. Normal EBITDA	2,678
Forward EV/EBITDA	9.3
EV/Est. Normal EBITDA	7.6
Forward Revenue Growth (5-yr)	4.2%
Forward EPS Growth (5-yr)	17.8%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	33.5%
Return on Assets	2.6%
ROIC, with goodwill	16.9%
ROIC, without goodwill	22.2%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	14,887
Net Debt	10,697
Total Debt/EBITDA	6.9
Net Debt/EBITDA	5.0
EBITDA/Interest	3.8
Current Ratio	2.4
Quick Ratio	2.2

NMF = Not Meaningful

Investment Highlights

• Alliance Data Systems is a leading provider of transaction-based, data-driven marketing and loyalty solutions (including database marketing services, marketing strategy consulting, analytics and creative services). Consumer marketing data is the core of its business and offerings. The company was founded in 1996 and is headquartered in Plano, Texas.

• As it pertains to the long-term outlook, Alliance Data has both cyclical and non-cyclical businesses. Two of its three businesses expect continued growth through any economic downturn, and the firm was able to sustain growth through the 2008-2009 recession.

• Alliance Data has three businesses. LoyaltyOne operates the AIR MILES Reward Program in Canada. Epsilon specializes in marketing services including data and analytics, and its 'Card Services' division focuses on receivables financing and processing services. The firm's private label credit cards are active in the wallets of 1 of 10 employed adults in the US.

• The shift to data-enabled, multi-channel digital marketing represents a huge and growing market for Alliance Data. The firm was able to grow through the Great Recession thanks to steady performance from its non-card businesses and lower loss rate in its cards business compared to bank cards.

• Alliance Data is expecting top-line growth to slow in the near term but recover as we move forward in 2019. Bankruptcies from certain customers will impact this growth rate, but active client receivables growth is expected to remain solid, which should provide resiliency.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**HIGH**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**WEAK**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**167.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				■
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Accenture	21.9	2.5	114.1%
Amdocs	13.3	1.4	80.4%
IHS Markit	20.6	1.9	108.2%
VMware	27.1	2.8	122.0%
Peer Median	21.2	2.2	111.2%
Alliance Data Systems	**9.9**	**0.7**	**75.7%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-16	Dec-17	Dec-18
Revenue	7,138	7,719	7,791
Revenue, YoY%	10.8%	8.1%	0.9%
Operating Income	1,266	1,646	1,777
Operating Margin %	17.7%	21.3%	22.8%
Net Income	516	789	958
Net Income Margin %	7.2%	10.2%	12.3%
Diluted EPS	8.76	14.11	17.49
Diluted EPS, YoY %	-8.5%	61.1%	24.0%
Free Cash Flow (CFO-capex)	1,907	2,385	2,555
Free Cash Flow Margin %	26.7%	30.9%	32.8%

In Millions of USD (except for per share items)

Structure of the Business Services Industry — NEUTRAL

Firms in the business services space primarily focus on management consulting, technology/data-integration services/software and outsourcing solutions. Participants generate high returns on invested capital, but the business services marketplace is very competitive, and firms can often face pressure from off-shore service providers in lower-cost locations (India, Philippines and China). Such competition may inhibit firms' ability to obtain sufficient pricing for services, and economic conditions may hinder the capability of clients to pay for such services. Still, we're generally neutral on the group.

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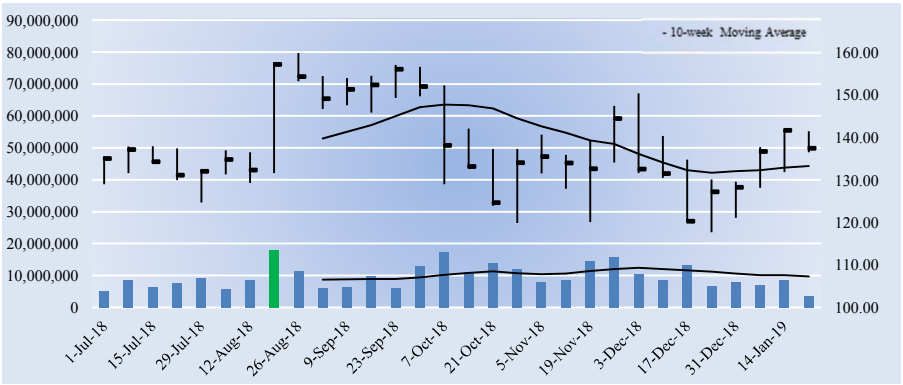
Autodesk ADSK FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Highest Rated	$109.00	$76.00 - $142.00	LARGE-CAP GROWTH	Information Technology	Software

Thanks in part to better-than-expected annualized recurring revenue growth, Autodesk is now projecting a non-GAAP operating margin in the 27%-30% range for fiscal 2020.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**AGGRESSIVE**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**IMPROVING**
Near-term Technical Support, 10-week MA	**133.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$30,179
Avg Weekly Vol (30 wks)	9,668
30-week Range (USD)	117.72 - 159.94
Valuentum Sector	Information Technology
5-week Return	15.8%
13-week Return	6.8%
30-week Return	5.7%
Dividend Yield %	0.0%
Dividends per Share	0.00
Forward Dividend Payout Ratio	0.0%
Est. Normal Diluted EPS	3.63
P/E on Est. Normal Diluted EPS	37.9
Est. Normal EBITDA	1,144
Forward EV/EBITDA	72.4
EV/Est. Normal EBITDA	26.6
Forward Revenue Growth (5-yr)	20.7%
Forward EPS Growth (5-yr)	-215.4%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	-101.4%
Return on Assets	-10.1%
ROIC, with goodwill	5.7%
ROIC, without goodwill	24.6%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	1,586
Net Debt	263
Total Debt/EBITDA	NMF
Net Debt/EBITDA	-0.9
EBITDA/Interest	-6.4
Current Ratio	0.9
Quick Ratio	0.8

NMF = Not Meaningful

Investment Highlights

• Autodesk is a leading design software and services firm. Its flagship products include AutoCAD, AutoCAD LT, AutoCAD Mechanical, Maya, 3ds Max, and Industry Collections. It serves customers in the architecture, engineering and construction, manufacturing, and digital media, consumer and entertainment industries. The company was founded in 1982 and is headquartered in California.

• Autodesk recently announced a restructuring plan designed to prioritize its transition to a subscription-based business model. Management is quick to point out that this is not a cost reducing plan, and it is focused on re-balancing its investments as it enters the growth phase of its transformation.

• Increased recurring revenue is one of the most attractive portions of Autodesk's transformation. Annualized recurring revenue is expected to grow at a 24% CAGR from fiscal 2016 to fiscal 2020 as annualized revenue per subscription is expected to grow at a 3% CAGR and subscriptions grow at a 20% CAGR over the same time period. Free cash flow is expected to hit $1.4 billion in fiscal 2020.

• Thanks in part to better-than-expected annualized recurring revenue growth, Autodesk is now projecting a non-GAAP operating margin in the 27%-30% range for fiscal 2020. Divested non-core assets have helped reduce non-recurring revenue by ~$200 million, and management reinvested the proceeds into core strategic positions.

• The markets for Autodesk's products are highly competitive and subject to rapid change. Its primary global competitors are Adobe Systems, ANSYS, AVEVA, Bentley, and Dassault, and obsolescence risk is all too real.

Relative Valuation

	Forward P/E	PEG	Price / FV
F5 Networks	14.9	1.7	92.3%
Microsoft	23.8	1.9	93.6%
Oracle	14.3	1.5	83.5%
Salesforce.com	57.5	9.4	124.8%
Peer Median	19.4	1.8	92.9%
Autodesk	**NMF**	**NMF**	**126.1%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Jan-17	Jan-18	Jan-19
Revenue	2,031	2,057	2,560
Revenue, YoY%	-18.9%	1.3%	24.5%
Non-GAAP Operating Income	-419	-415	310
Non-GAAP EBIT %	-20.6%	-20.2%	12.1%
Non-GAAP Net Income	-582	-567	215
Non-GAAP NI Margin %	-28.7%	-27.6%	8.4%
Non-GAAP Diluted EPS	-2.61	-2.58	0.98
Non-GAAP Dil EPS, YoY %	NMF	NMF	NMF
Non-GAAP FCF (CFO-capex)	94	-50	368
Non-GAAP FCF Margin %	4.6%	-2.4%	14.4%

In Millions of USD (except for per share items)

Structure of the Software Industry — VERY GOOD

Firms that serve the mature software markets—or those consisting of basic business applications—have powerful distribution channels, large installed bases, and fortress balance sheets. These entrenched competitors benefit from significant customer switching costs, which make it nearly impossible for new entrants to gain a foothold. Participants generally benefit from high-margin license revenue and generate significant returns on investment. Still, the shift to cloud computing has created both opportunities and challenges, and the enterprise software landscape continues to evolve. We like the group.

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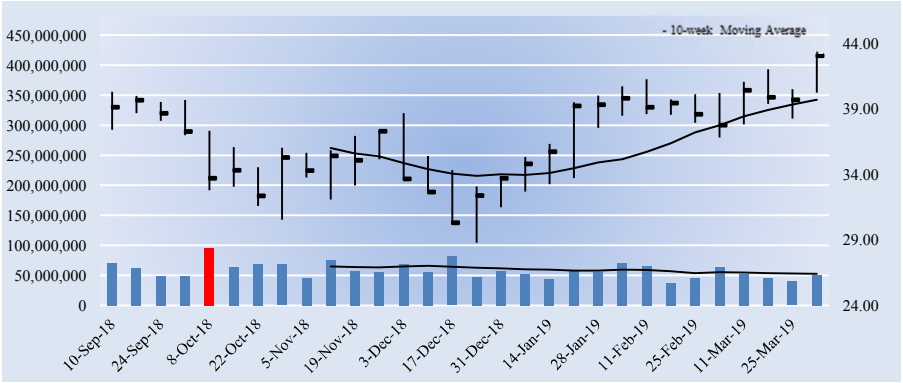
Applied Materials AMAT FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$48.00	$36.00 - $60.00	LARGE-CAP VALUE	Information Technology	Semi Equipment

Applied Materials expects wafer fab equipment spending to decline at a mid- to high-teens rate in 2019 over 2018 levels.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$44,159
Avg Weekly Vol (30 wks)	58,674
30-week Range (USD)	28.79 - 43.39
Valuentum Sector	Information Technology
5-week Return	10.4%
13-week Return	27.3%
30-week Return	7.3%
Dividend Yield %	2.0%
Dividends per Share	0.84
Forward Dividend Payout Ratio	27.8%
Est. Normal Diluted EPS	3.81
P/E on Est. Normal Diluted EPS	11.3
Est. Normal EBITDA	4,824
Forward EV/EBITDA	11.2
EV/Est. Normal EBITDA	9.4
Forward Revenue Growth (5-yr)	1.2%
Forward EPS Growth (5-yr)	5.1%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	35.2%
Return on Assets	16.5%
ROIC, with goodwill	50.1%
ROIC, without goodwill	96.3%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	5,309
Net Debt	1,279
Total Debt/EBITDA	1.0
Net Debt/EBITDA	0.2
EBITDA/Interest	22.4
Current Ratio	2.6
Quick Ratio	1.6

NMF = Not Meaningful

Investment Highlights

• Applied may be the largest supplier of semi equipment, LCD fabrication equipment to the flat panel display industry and photovoltaic manufacturing systems to the solar industry, but substantial competition exists in all areas of its business. The firm was founded in 1967 and is headquartered in Santa Clara, California.

• In both semiconductor and display, major changes in device technology provide a catalyst for the firm's growth. With the coming of artificial intelligence, an explosion of data generation from machines is expected to drive demand for data storage and compute models and architectures.

• Applied Materials expects short term headwinds such as macroeconomic risks, global trade tensions, and a pullback in memory investments to eventually give way to demand and pricing stabilization in the back half of 2019. The company expects wafer fab equipment spending to decline at a mid- to high-teens rate in 2019 over 2018 levels. Weakness in emerging markets is impacting its display business.

• As with its peers, Applied Materials' growth will largely be driven by strength in mobile devices and the proliferation of connected devices in the 'Internet of Things.' It is optimistic about the long-term opportunity of the display market as the industry moves through technology transitions, but the businesses' top line will face pressure in the near term.

• The semiconductor industry has been increasingly driven by consumer demand for lower-cost electronic products with increased capability. The rapid pace of technological change can quickly diminish the value of Applied Materials' current technologies.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**40.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Cree	NMF	NMF	149.4%
KLA-Tencor	14.7	1.3	100.3%
Lam Research	13.9	NMF	118.3%
United Micro	NMF	1.7	62.3%
Peer Median	14.3	1.5	109.3%
Applied Materials	**14.3**	**1.6**	**89.7%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Oct-17	Oct-18	Oct-19
Revenue	14,537	17,253	14,510
Revenue, YoY%	34.3%	18.7%	-15.9%
Non-GAAP Operating Income	3,868	4,796	3,633
Non-GAAP EBIT %	26.6%	27.8%	25.0%
Non-GAAP Net Income	3,434	3,313	3,036
Non-GAAP NI Margin %	23.6%	19.2%	20.9%
Non-GAAP Diluted EPS	3.17	3.23	3.02
Non-GAAP Dil EPS, YoY %	105.4%	1.9%	-6.5%
Non-GAAP FCF (CFO-capex)	3,264	3,165	3,584
Non-GAAP FCF Margin %	22.5%	18.3%	24.7%

In Millions of USD (except for per share items)

Structure of the Semiconductor Equipment Industry — VERY POOR

The semiconductor equipment industry is highly competitive and characterized by rapid technological change. Success hinges on the ability to commercialize new technology in a timely manner, continuously enhance products to improve efficiency of customer fab operations, and manage costs and inventory effectively. Performance of constituents is heavily influenced by manufacturing capacity and fab utilization rates, which together create volatile demand cycles. The potential for unexpected shifts in demand for the group's products leaves us unexcited about the industry's structural characteristics.

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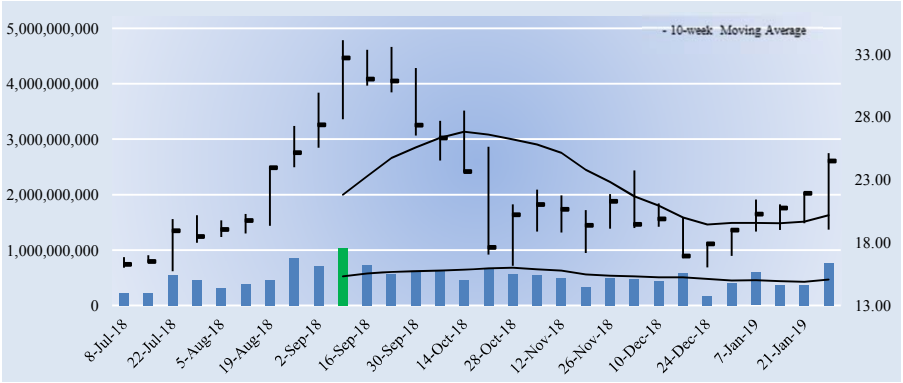
Advanced Micro Devices AMD FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$19.00	$10.00 - $29.00	LARGE-CAP GROWTH	Information Technology	Broad Line Semiconductors

Advanced Micro Devices has opportunity to take market share in the near term, but its free cash flow generation has left quite a bit to be desire of late.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$25,466
Avg Weekly Vol (30 wks)	517,078
30-week Range (USD)	15.72 - 34.14
Valuentum Sector	Information Technology
5-week Return	35.0%
13-week Return	21.8%
30-week Return	46.5%
Dividend Yield %	0.0%
Dividends per Share	0.00
Forward Dividend Payout Ratio	0.0%
Est. Normal Diluted EPS	0.69
P/E on Est. Normal Diluted EPS	35.3
Est. Normal EBITDA	1,165
Forward EV/EBITDA	38.0
EV/Est. Normal EBITDA	22.0
Forward Revenue Growth (5-yr)	9.8%
Forward EPS Growth (5-yr)	87.5%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	-8084.5%
Return on Assets	-11.1%
ROIC, with goodwill	8.5%
ROIC, without goodwill	15.3%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	1,395
Net Debt	210
Total Debt/EBITDA	4.7
Net Debt/EBITDA	0.7
EBITDA/Interest	2.3
Current Ratio	1.8
Quick Ratio	1.1

NMF = Not Meaningful

Investment Highlights

• AMD is a global semiconductor company. The firm makes x86 microprocessors as well as graphics, video, and multimedia products for desktop and mobile devices. Its solutions, for example, power the newest gaming and entertainment consoles from Microsoft and Sony. The company was founded in 1969 and is headquartered in Sunnyvale, California.

• Secular trends support AMD's growing total addressable market, which is expected to hit ~$64 billion in 2020, and material growth opportunities exist in datacenter and cloud-based end markets in addition to rapidly expanding technology in gaming and immersive platforms.

• Intel has dominated the microprocessor market for years, and its market share, and significant financial resources will continue to pressure pricing and profits at AMD. However, AMD has made some share gains against Intel in PCs and CPUs of late, and it has an opportunity to take additional share with its planned 2019 launch of its 7-nanometer chips, which will beat Intel's competing chip to market.

• Though we have concerns with AMD's financial leverage, the firm does not have any debt maturities until 2019 and no maturities over $170 million until 2022. Total debt was ~$1.25 billion at the end of 2018, down from more than $2.2 billion at the end of 2015, but free cash flow generation has left a bit to be desired of late. Its credit rating is in junk territory.

• AMD's long-term financial model consists of the following targets: double-digit revenue growth (new product momentum), gross margin of 40%-44% (higher ASP and richer mix), operating expenses as a percentage of revenue of 26%-30% (opex leverage), and EPS of $0.75+.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**VERY HIGH**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**WEAK**
Financial Leverage	**HIGH**
Growth	**HIGH**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**20.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Broadcom	11.6	NMF	102.6%
Intel	10.7	2.4	87.0%
STMicroelectronics	11.3	1.9	93.7%
Texas Instruments	18.3	2.6	117.2%
Peer Median	11.5	2.4	98.2%
Advanced Micro Devices	**75.8**	**6.8**	**129.0%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-16	Dec-17	Dec-18
Revenue	4,272	5,329	6,475
Revenue, YoY%	7.0%	24.7%	21.5%
Non-GAAP Operating Income	-470	152	514
Non-GAAP EBIT %	-11.0%	2.9%	7.9%
Non-GAAP Net Income	-497	43	343
Non-GAAP NI Margin %	-11.6%	0.8%	5.3%
Non-GAAP Diluted EPS	-0.60	0.04	0.32
Non-GAAP Dil EPS, YoY %	-29.4%	-107.0%	NMF
Non-GAAP FCF (CFO-capex)	13	-45	-129
Non-GAAP FCF Margin %	0.3%	-0.8%	-2.0%

In Millions of USD (except for per share items)

Structure of the Broad Line Semiconductor Industry — POOR

The broad line semiconductor industry is characterized by intense competition, rapid technological change, and frequent product introductions. The number and variety of computing devices have expanded rapidly, creating a connected landscape between suppliers and competitors. New market segments have emerged rapidly (smartphones, tablets), and constituents must continuously innovate to maintain share as traditional PC demand faces pressure. Though some firms may gain advantages via the combination of their manufacturing/test facilities with their design teams, we think the structure of the group is poor.

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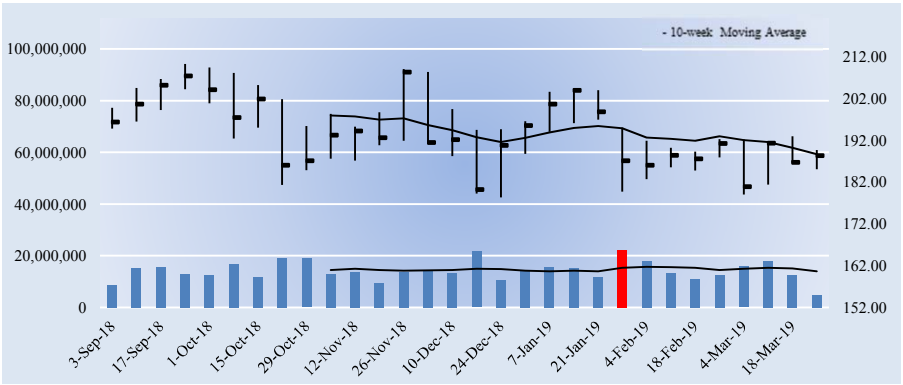
Amgen AMGN FAIRLY VALUED

Buying Index™ 3 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$202.00	$162.00 - $242.00	LARGE-CAP VALUE	Health Care	Pharmaceuticals - Big

Amgen is excited about its potential in the areas of atherosclerosis and heart failure, and we like its approach to innovative research.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**BEARISH**
Relative Strength	**WEAK**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BEARISH**
Near-term Technical Resistance, 10-wk MA	**189.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$125,200
Avg Weekly Vol (30 wks)	14,245
30-week Range (USD)	178.29 - 210.19
Valuentum Sector	Health Care
5-week Return	-0.2%
13-week Return	-1.9%
30-week Return	-5.5%
Dividend Yield %	3.1%
Dividends per Share	5.80
Forward Dividend Payout Ratio	41.0%
Est. Normal Diluted EPS	15.39
P/E on Est. Normal Diluted EPS	12.2
Est. Normal EBITDA	13,111
Forward EV/EBITDA	9.8
EV/Est. Normal EBITDA	9.9
Forward Revenue Growth (5-yr)	0.1%
Forward EPS Growth (5-yr)	5.6%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Amgen is one of the world's largest biotechnology medicines firms. The company's pipeline continues to advance, and commercial execution of its portfolio remains strong. We expect it to continue to successfully execute on new product launches as well. The firm has been a pioneer since 1980 and is headquartered in Thousand Oaks, California.

• Amgen is anticipating data generated in 2019 to provide key insights to the future of its oncology pipeline, and it has a notable presence in cardiovascular disease. Repatha is the market leading PCSK9 inhibitory with more than 60% share of prescriptions in the US.

• Amgen is excited about its potential in the areas of atherosclerosis and heart failure, and it expects its efforts in biosimilars to come to fruition as commercialization began in 2018. We're not fans of the lower-margin nature of biosimilars, however, and this may not be as attractive of a growth market as management believes, though the push for lower cost treatment in the US may help its efforts.

• We like Amgen's approach to innovative research. The firm pursues a 'biology first' process allowing its scientists to first explore the complex molecular pathways of disease before determining what type of medicine is most likely to deliver optimal efficacy. Its near-term pipeline leaves a bit to be desired at the moment, however.

• Global expansion is key to future growth at Amgen. The firm continues to form partnerships and acquire rights to expand its presence in Japan, China, and key emerging markets. Sales of key product Enbrel are worth watching as it faces pressure in the increasingly crowded inflammatory disease space.

Relative Valuation

	Forward P/E	PEG	Price / FV
Abbott	24.4	2.5	116.2%
Eli Lilly	22.9	2.1	123.6%
Merck	20.3	2.5	113.6%
Pfizer	14.5	1.7	94.3%
Peer Median	21.6	2.3	114.9%
Amgen	**13.3**	**2.7**	**93.2%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	26.1%
Return on Assets	8.1%
ROIC, with goodwill	36.4%
ROIC, without goodwill	73.5%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	33,929
Net Debt	4,625
Total Debt/EBITDA	2.7
Net Debt/EBITDA	0.4
EBITDA/Interest	9.0
Current Ratio	2.8
Quick Ratio	2.4

NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	22,849	23,747	22,821
Revenue, YoY%	-0.6%	3.9%	-3.9%
Non-GAAP Operating Income	10,348	10,577	11,279
Non-GAAP EBIT %	45.3%	44.5%	49.4%
Non-GAAP Net Income	1,979	8,394	8,977
Non-GAAP NI Margin %	8.7%	35.3%	39.3%
Non-GAAP Diluted EPS	2.69	12.62	14.14
Non-GAAP Dil EPS, YoY %	-73.7%	368.8%	12.0%
Non-GAAP Free Cash Flow	10,513	10,558	9,966
Non-GAAP FCF Margin %	46.0%	44.5%	43.7%

In Millions of USD (except for per share items)

Structure of the Big Pharma Industry — GOOD

The big pharma industry is primarily composed of makers of branded drugs. Intellectual property protection is vital to the successful commercialization of medicines and offers makers of branded drugs a unique competitive advantage via patents, which can extend for decades. When branded drugs lose market exclusivity, however, makers of generic pharmaceuticals can generate intense price competition, causing drastic revenue losses on unprotected therapies. Long-term success for branded pharma companies depends on a strong and diverse drug pipeline, which can be augmented by M&A activity. We generally like the group and expect continued industry consolidation.

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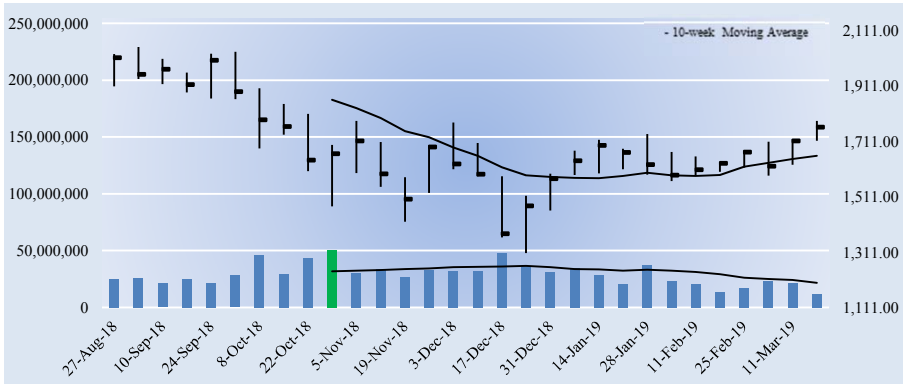
Amazon.com AMZN FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$2049.00	$1537.00 - $2561.00	MEGA-CAP BLEND	Consumer Discretionary	Internet & Catalog Retail

We're big fans of the high-margin, cash-rich nature of Amazon Web Services, and Amazon continues to focus on taking market share in its retail operations.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$880,925
Avg Weekly Vol (30 wks)	29,105
30-week Range (USD)	1307 - 2050.5
Valuentum Sector	Consumer Discretionary
5-week Return	10.0%
13-week Return	30.9%
30-week Return	-8.0%
Dividend Yield %	0.0%
Dividends per Share	0.00
Forward Dividend Payout Ratio	0.0%
Est. Normal Diluted EPS	55.63
P/E on Est. Normal Diluted EPS	31.7
Est. Normal EBITDA	61,296
Forward EV/EBITDA	24.6
EV/Est. Normal EBITDA	14.3
Forward Revenue Growth (5-yr)	18.0%
Forward EPS Growth (5-yr)	34.2%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	18.6%
Return on Assets	4.3%
ROIC, with goodwill	19.8%
ROIC, without goodwill	23.7%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	39,787
Net Debt	-1,463
Total Debt/EBITDA	1.4
Net Debt/EBITDA	NMF
EBITDA/Interest	19.8
Current Ratio	1.1
Quick Ratio	0.8

NMF = Not Meaningful

Investment Highlights

• Amazon seeks to be the center for four primary customer sets: consumers, sellers, enterprises, and content creators. The company also provides advertising services and co-branded credit card agreements in addition to its Amazon Web Services, a suite of on demand cloud-based services. It stands as the best example as to why the dot-com boom of the late 1990s wasn't a complete bust.

• Amazon Web Services is becoming an increasingly important part of Amazon's business. Revenue growth in the segment is outpacing overall company growth, and AWS accounted for ~59% of operating income in 2018 despite generating roughly 11% of revenue.

• In the past, Amazon has notoriously been less concerned with maximizing profits, but free cash flow has now become a welcome abundance. However, an investment in the stock remains risky due to a lack of clarity into long-term operating margins, to which our fair value estimate is very sensitive. A 1% change in our mid-cycle operating margin assumption results in a ~$178 change in Amazon's fair value estimate.

• The online retailer continues to focus on taking market share and damaging its brick-and-mortar competitors. Its $13.7 billion purchase of Whole Foods speaks directly to this as the firm continues to compete aggressively for market share. The company continues to work to disrupt a number of other verticals, including pharmacy and shipping.

• Amazon is truly a special entity. From millions of new Prime members, to creating its own content, to delivering packages via drones, to its rapidly expanding AWS business and beyond, Amazon is a wonder of an enterprise. The Internet giant is working to enter the digital ad market in a big way.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**AGGRESSIVE**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**1659.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Alibaba	32.8	1.8	87.8%
Booking Holdings	17.4	1.6	82.1%
eBay	13.6	2.0	98.1%
Expedia Group	17.6	1.5	81.6%
Peer Median	17.5	1.7	85.0%
Amazon.com	**NMF**	**2.6**	**86.0%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	177,866	232,887	279,697
Revenue, YoY%	30.8%	30.9%	20.1%
Operating Income	4,320	12,717	17,330
Operating Margin %	2.4%	5.5%	6.2%
Net Income	3,033	10,073	13,909
Net Income Margin %	1.7%	4.3%	5.0%
Diluted EPS	6.15	20.15	27.54
Diluted EPS, YoY %	NMF	NMF	36.7%
Free Cash Flow (CFO-capex)	6,479	17,296	18,276
Free Cash Flow Margin %	3.6%	7.4%	6.5%

In Millions of USD (except for per share items)

Structure of the Internet & Catalog Retail Industry — GOOD

The Internet and catalog retail industry benefits as a whole from the secular trend toward consumer digital (online) consumption. The industry consists of a number of exclusive online retailers led by Amazon, which continues to disrupt the broader retail space, and businesses that offer Internet travel services such as Booking Holdings, while online auctions are dominated by eBay. The industry generates high returns on investment due to minimal capital costs, but the landscape will be vastly different in the decades ahead. Still, we like the group.

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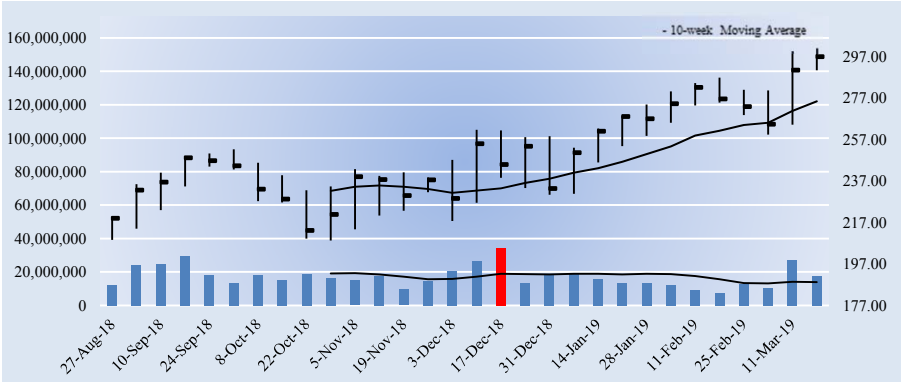
Broadcom AVGO FAIRLY VALUED

Buying Index™ 7 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$266.00	$213.00 - $319.00	LARGE-CAP CORE	Information Technology	Broad Line Semiconductors

Broadcom acquired CA Technologies for ~$18.9 billion in cash. CA brings a strong degree of recurring revenue and adds to its semiconductor and infrastructure software solutions portfolio.

Stock Chart (weekly)



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Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**HIGH**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**275.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$127,921
Avg Weekly Vol (30 wks)	17,298
30-week Range (USD)	208.23 - 300.98
Valuentum Sector	Information Technology
5-week Return	5.6%
13-week Return	22.6%
30-week Return	41.2%
Dividend Yield %	3.6%
Dividends per Share	10.60
Forward Dividend Payout Ratio	46.0%
Est. Normal Diluted EPS	27.03
P/E on Est. Normal Diluted EPS	11.0
Est. Normal EBITDA	13,862
Forward EV/EBITDA	12.9
EV/Est. Normal EBITDA	11.6
Forward Revenue Growth (5-yr)	6.4%
Forward EPS Growth (5-yr)	0.9%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Broadcom is a leading diversified communications semiconductor company with a broad portfolio of category-leading franchises. It serves markets in China, the US, Singapore, among others across the globe. The company is headquartered in Singapore and has a long history, with some of its divisions tracing their roots to the 1960s.

• As of fiscal 2018, 42% of Broadcom's revenue was generated in its 'Wired Infrastructure' segment. Key drivers for the segment include increasing use of cloud, social media, and video streaming, big data and corresponding analytics, and the adoption of connected home technology.

• Broadcom recently acquired Brocade in an all cash deal worth ~$5.5 billion. Brocade's fiber channel switches are expected to be used in gaining share in the data center products market as they speed up data transfer between servers and storage devices. Broadcom has withdrawn its hostile takeover bid for Qualcomm but continued its acquisitive streak with the purchase of CA Tech for ~$18.9 billion in cash.

• The CA Tech deal continues a focus on established mission critical businesses and expands its addressable market into the growing and fragmented infrastructure software market. The firm expects its non-GAAP operating margin to move towards 55% in 2020. Investors should note our financial leverage assumptions are based on pre-closing guidance.

• Broadcom's capital allocation plan includes the distribution of 50% of prior fiscal year's free cash flow as dividends, the flexibility to use the balance of free cash flow to fund a combination of share repurchases and future acquisitions, and the maintenance of an investment grade credit rating.

Relative Valuation

	Forward P/E	PEG	Price / FV
Advanced Micro Devices	75.8	6.8	129.0%
Intel	10.7	2.4	87.0%
STMicroelectronics	11.3	1.9	93.7%
Texas Instruments	18.3	2.6	117.2%
Peer Median	14.8	2.5	105.5%
Broadcom	**12.9**	**1.6**	**111.6%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	16.0%
Return on Assets	7.3%
ROIC, with goodwill	19.8%
ROIC, without goodwill	47.5%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Oct-17	Oct-18	Oct-19
Revenue	17,636	20,848	24,621
Revenue, YoY%	33.2%	18.2%	18.1%
Non-GAAP Operating Income	2,666	5,368	11,837
Non-GAAP EBIT %	15.1%	25.7%	48.1%
Non-GAAP Net Income	1,698	12,278	9,727
Non-GAAP NI Margin %	9.6%	58.9%	39.5%
Non-GAAP Diluted EPS	4.03	28.49	23.03
Non-GAAP Dil EPS, YoY %	NMF	NMF	NMF
Non-GAAP FCF (CFO-capex)	5,482	8,245	9,640
Non-GAAP FCF Margin %	31.1%	39.5%	39.2%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	37,641
Net Debt	32,548
Total Debt/EBITDA	4.0
Net Debt/EBITDA	3.4
EBITDA/Interest	15.0
Current Ratio	3.9
Quick Ratio	3.3

NMF = Not Meaningful

Structure of the Broad Line Semiconductor Industry — POOR

The broad line semiconductor industry is characterized by intense competition, rapid technological change, and frequent product introductions. The number and variety of computing devices have expanded rapidly, creating a connected landscape between suppliers and competitors. New market segments have emerged rapidly (smartphones, tablets), and constituents must continuously innovate to maintain share as traditional PC demand faces pressure. Though some firms may gain advantages via the combination of their manufacturing/test facilities with their design teams, we think the structure of the group is poor.

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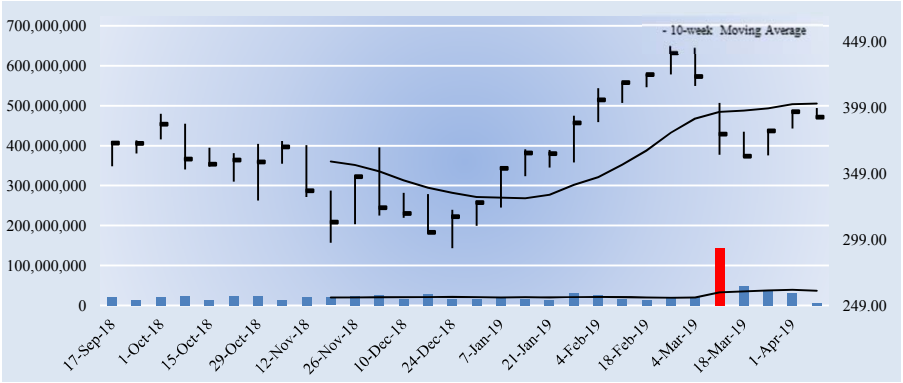
Boeing BA FAIRLY VALUED

Buying Index™ 3 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$330.00	$256.00 - $404.00	MEGA-CAP CORE	Industrials	A&D Prime

Boeing's backlog gives it excellent visibility and a growth trajectory better than most firms of similar size, but concerns related to two recent 737 MAX crashes has dampened sentiment and its near-term outlook.

Stock Chart (weekly)



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Company Vitals

Market Cap (USD)	$229,749
Avg Weekly Vol (30 wks)	25,819
30-week Range (USD)	292.47 - 446.01
Valuentum Sector	Industrials
5-week Return	5.6%
13-week Return	12.6%
30-week Return	9.1%
Dividend Yield %	2.1%
Dividends per Share	8.22
Forward Dividend Payout Ratio	40.5%
Est. Normal Diluted EPS	25.46
P/E on Est. Normal Diluted EPS	15.4
Est. Normal EBITDA	19,603
Forward EV/EBITDA	14.2
EV/Est. Normal EBITDA	12.0
Forward Revenue Growth (5-yr)	6.6%
Forward EPS Growth (5-yr)	10.6%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	1516.7%
Return on Assets	8.1%
ROIC, with goodwill	36.0%
ROIC, without goodwill	48.3%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	13,847
Net Debt	5,283
Total Debt/EBITDA	1.0
Net Debt/EBITDA	0.4
EBITDA/Interest	29.5
Current Ratio	1.1
Quick Ratio	0.3

NMF = Not Meaningful

Investment Highlights

• Boeing is the largest manufacturer of commercial jetliners and military aircraft combined. Boeing also makes rotorcraft, electronic and defense systems, missiles, satellites, launch vehicles and advanced information and communication systems. The firm is a major service provider to NASA. It was founded in 1916 and is now based in Chicago, Illinois.

• The aerospace giant is benefiting from a benign operating environment. Global economic growth continues (albeit modestly), air passenger traffic is healthy, defense markets are firming with renewed threats, and commercial aviation remains a long-term growth market.

• Boeing's commercial aerospace backlog of unfulfilled deliveries ($490 billion total backlog as of the end of 2018) gives it excellent visibility and a growth trajectory better than most firms of similar size. 19% of its backlog is expected to be converted to revenue in 2019 (65% through 2022). It is working to build a $50 billion services division over the next decade, which should enhance its purchasing power.

• The company has found itself garnering materially negative headlines after two fatal 737 MAX crashes. It could face notable one-time costs in legal liabilities, and the aircraft has been grounded in most countries around the world. Monthly production rates have been cut, but Boeing's backlog supports its long-term growth trajectory.

• We think Boeing has learned from the recent global financial crisis, but cyclical end markets will always be a risk. The firm is also exposed to risks related to geopolitical trade policy uncertainty. However, it earns an 'A' rating from the credit agencies, and the firm's balance sheet remains relatively healthy.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**MODEST**
Technical Evaluation	**BEARISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BEARISH**
Near-term Technical Resistance, 10-wk MA	**402.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
General Dynamics	13.8	1.2	84.3%
Lockheed Martin	14.8	1.3	95.5%
Northrop Grumman	12.4	1.1	91.1%
Raytheon	15.2	1.3	92.5%
Peer Median	14.3	1.3	91.8%
Boeing	**19.3**	**2.1**	**118.8%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	93,392	101,127	111,139
Revenue, YoY%	-1.2%	8.3%	9.9%
Operating Income	10,257	11,912	14,182
Operating Margin %	11.0%	11.8%	12.8%
Net Income	8,197	10,460	11,651
Net Income Margin %	8.8%	10.3%	10.5%
Diluted EPS	13.42	17.84	20.28
Diluted EPS, YoY %	76.3%	32.9%	13.7%
Free Cash Flow (CFO-capex)	11,605	13,600	11,578
Free Cash Flow Margin %	12.4%	13.4%	10.4%

In Millions of USD (except for per share items)

Structure of the Aerospace and Defense Industry — GOOD

The global commercial aerospace duopoly is being challenged by encroaching international competitors who are intent on increasing market share, but Boeing and Airbus continue to dominate the large commercial aircraft segment. Long-term demand for commercial aircraft is cyclical and depends on the health of the credit markets, airline customers, and lessors, but massive backlogs and a strong multi-decade demand outlook are reasons for confidence. The defense industry has strong competition in all market segments and remains dependent on government funding decisions and competing budget priorities.

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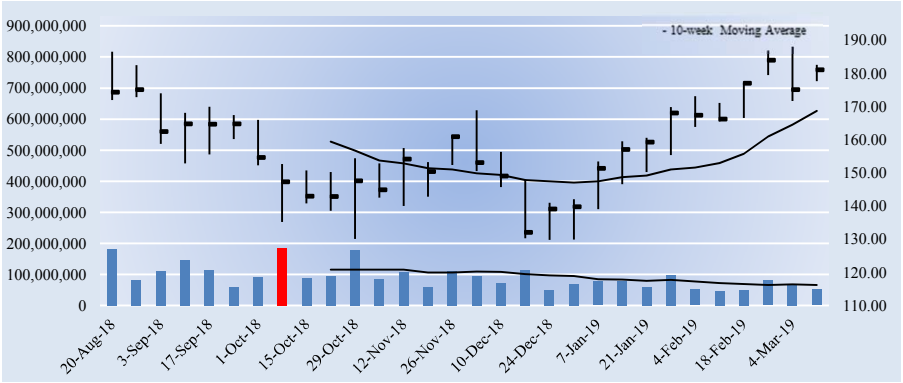
Alibaba BABA FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$206.00	$155.00 - $258.00	MEGA-CAP BLEND	Consumer Discretionary	Internet & Catalog Retail

Alibaba is widely known as being synonymous with e-commerce in China, and it is targeting $1 trillion in gross merchandising volume in fiscal 2020.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**AGGRESSIVE**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**1659.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$472,332
Avg Weekly Vol (30 wks)	92,039
30-week Range (USD)	129.77 - 188.08
Valuentum Sector	Consumer Discretionary
5-week Return	7.2%
13-week Return	23.5%
30-week Return	3.3%
Dividend Yield %	0.0%
Dividends per Share (in CNY)	0.00
Forward Dividend Payout Ratio	0.0%
Est. Normal Diluted EPS (in CNY	59.47
P/E on Est. Normal Diluted EPS	20.3
Est. Normal EBITDA (in CNY)	242,664
Forward EV/EBITDA	20.5
EV/Est. Normal EBITDA	12.6
Forward Revenue Growth (5-yr)	28.4%
Forward EPS Growth (5-yr)	27.5%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Alibaba has been generating significant economic value (ROIC-less-WACC) during the past few years. The company benefits greatly from a network effect and will continue to benefit from favorable demographic trends in China. Altaba (formerly Yahoo!) and Softbank own a nice slice of the firm. The firm also explores next-generation technology applications in its 'Innovation Initiatives' segment.

• Alibaba is widely known as being synonymous with e-commerce in China. The firm owns Taobao.com, the country's largest online shopping destination, Tmall, China's largest third-party plaform for brands and retailers, and Juhuasuan, China's most popular group buying marketplace.

• One upside catalyst to Alibaba's shares rests on its monetization rate. Though the firm manages its business for growth in GMV and active buyers, the Street is laser-focused on this metric. Segments outside its core commerce business such as 'Cloud Computing' and 'Digital Media and Entertainment' could be sources of upside as well, though sustained profitability in those areas may still be a ways off.

• Alibaba has a robust marketplaces operation and is a mobile commerce leader. Total gross merchandising volume (GMV) on its China retail marketplaces is staggeringly large. The company is targeting GMV to reach $1 trillion in fiscal 2020 from $768 billion in fiscal 2018, but the potential for slowing economic growth in China could impact this goal.

• We think Alibaba's shares are worth roughly $206 each. Risks are abundant with operators in China (regulatory/legal/corporate governance), and the company's standing within the political structure of the country could be worth watching. It would take a massive event to truly derail the firm at this point.

Relative Valuation

	Forward P/E	PEG	Price / FV
Amazon.com	NMF	2.6	86.0%
Booking Holdings	17.4	1.6	82.1%
eBay	13.6	2.0	98.1%
Expedia Group	17.6	1.5	81.6%
Peer Median	17.4	1.8	84.1%
Alibaba	**32.8**	**1.8**	**87.8%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	23.0%
Return on Assets	14.1%
ROIC, with goodwill	27.7%
ROIC, without goodwill	33.3%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Mar-17	Mar-18	Mar-19
Revenue (CNY)	158,273	250,266	388,163
Revenue, YoY%	56.5%	58.1%	55.1%
Non-GAAP Operating Income	48,055	69,808	124,708
Non-GAAP EBIT Margin %	30.4%	27.9%	32.1%
Non-GAAP Net Income	43,675	64,093	96,130
Non-GAAP NI Margin %	27.6%	25.6%	24.8%
Non-GAAP Diluted EPS (CNY)	16.97	24.52	36.83
Non-GAAP Dil EPS, YoY %	-39.1%	44.4%	50.2%
Non-GAAP Free Cash Flow	62,780	95,335	83,302
Non-GAAP FCF Margin %	39.7%	38.1%	21.5%

In Millions of CNY (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of CNY

Total Debt	125,553
Net Debt	-88,074
Total Debt/EBITDA	1.5
Net Debt/EBITDA	NMF
EBITDA/Interest	24.0
Current Ratio	1.9
Quick Ratio	1.6

NMF = Not Meaningful

Structure of the Internet & Catalog Retail Industry — GOOD

The Internet and catalog retail industry benefits as a whole from the secular trend toward consumer digital (online) consumption. The industry consists of a number of exclusive online retailers led by Amazon, which continues to disrupt the broader retail space, and businesses that offer Internet travel services such as Booking Holdings, while online auctions are dominated by eBay. The industry generates high returns on investment due to minimal capital costs, but the landscape will be vastly different in the decades ahead. Still, we like the group.

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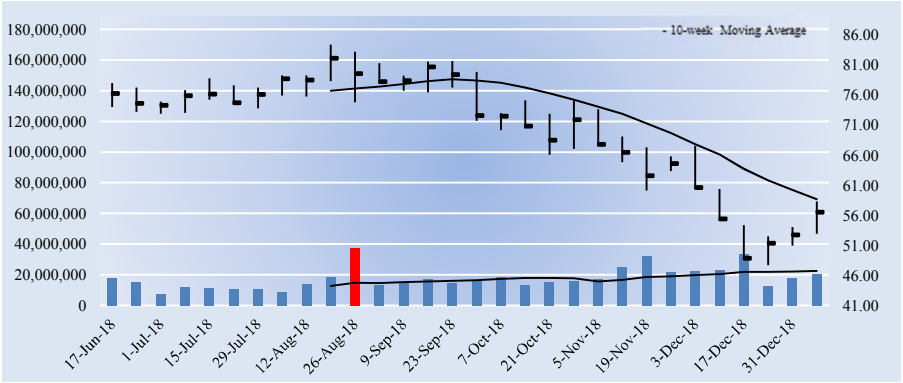
Best Buy BBY FAIRLY VALUED

Buying Index™ 4 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$67.00	$50.00 - $84.00	LARGE-CAP VALUE	Consumer Discretionary	Specialty Retailers

Best Buy is focused on delivering cost reductions in the near term, and the company recently spent nearly $800 million in cash on the acquisition of GreatCall.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**MEDIUM**
Financial Leverage	**LOW**
Growth	**MODEST**
Technical Evaluation	**BEARISH**
Relative Strength	**WEAK**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BEARISH**
Near-term Technical Resistance, 10-wk MA	**59.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$17,354
Avg Weekly Vol (30 wks)	17,684
30-week Range (USD)	47.72 - 84.37
Valuentum Sector	Consumer Discretionary
5-week Return	-6.4%
13-week Return	-22.3%
30-week Return	-23.7%
Dividend Yield %	3.2%
Dividends per Share	1.80
Forward Dividend Payout Ratio	34.4%
Est. Normal Diluted EPS	5.40
P/E on Est. Normal Diluted EPS	10.5
Est. Normal EBITDA	2,871
Forward EV/EBITDA	5.4
EV/Est. Normal EBITDA	5.4
Forward Revenue Growth (5-yr)	1.5%
Forward EPS Growth (5-yr)	10.3%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Best Buy is the global leader in consumer electronics as far as big box retailers go. The company must continue to reinvent itself to mitigate competitive pressures from the likes of online powerhouse Amazon. Best Buy has notable market share in areas such as home theater, notebooks and desktops. It was founded in 1966 and is headquartered in Minnesota.

• Best Buy's Best Buy 2020 strategy includes a target of $600 million in annualized cost reductions by the end of fiscal 2021. As of the third quarter of fiscal 2019, the company had achieved $465 million towards that target as it continues to work to offset investments in and pressures on its business.

• Best Buy is facing a promotional environment like no other in its history. Competition is unforgiving, but the firm has been able to gain share in the majority of its categories in the US. Bottom-line performance of late has benefited from a disciplined promotional strategy, optimization of merchandise margins, and expense management. As long as the economy remains strong, positive comps are a real possibility.

• Best Buy recently acquired GreatCall, a leading provider of connected health and personal emergency response services for the aging population, for ~$800 million in cash. Management points to the need for tech-based solutions for everyday-life for a growing population of aging Americans as deal rationale, but its balance sheet health has taken a hit.

• Best Buy holds a net cash position on the balance sheet and generates strong levels of free cash flow. Its strong Dividend Cushion ratio is hard to ignore, as was the recent hike in the payout. Still, it's hard for us to get excited about any big box retailer, and management is not shy about buybacks.

Relative Valuation

	Forward P/E	PEG	Price / FV
Bed Bath & Beyond	7.6	NMF	69.2%
Home Depot	18.1	1.8	111.4%
Lowe's	18.8	1.8	117.2%
Office Depot	8.6	1.2	73.5%
Peer Median	13.3	1.8	92.5%
Best Buy	**10.8**	**1.7**	**84.3%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	22.8%
Return on Assets	7.3%
ROIC, with goodwill	60.4%
ROIC, without goodwill	72.8%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Jan-17	Jan-18	Jan-19
Revenue	39,403	42,151	42,783
Revenue, YoY%	-0.3%	7.0%	1.5%
Operating Income	1,893	1,853	2,174
Operating Margin %	4.8%	4.4%	5.1%
Net Income	1,207	999	1,575
Net Income Margin %	3.1%	2.4%	3.7%
Diluted EPS	3.74	3.25	5.23
Diluted EPS, YoY %	62.6%	-13.1%	60.8%
Free Cash Flow (CFO-capex)	1,975	1,453	1,206
Free Cash Flow Margin %	5.0%	3.4%	2.8%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	1,355
Net Debt	-1,778
Total Debt/EBITDA	0.5
Net Debt/EBITDA	NMF
EBITDA/Interest	33.8
Current Ratio	1.3
Quick Ratio	0.5

NMF = Not Meaningful

Structure of the Specialty Retailers Industry — NEUTRAL

The specialty retail segment is fragmented, highly competitive, and economically-sensitive. The group covers a broad array of businesses and is dominated by retailers with large brick-and-mortar store footprints. Though some constituents may be insulated from e-commerce competition, others risk obsolescence as product distribution moves to digital means, and online retailers offer lower prices for identical goods and services. We're fairly neutral on the structure of the industry, though some constituents will inevitably face secular and permanent declines.

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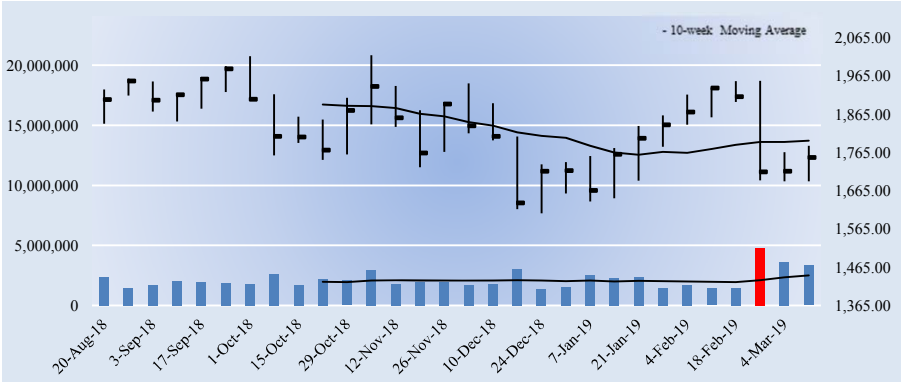
Booking Holdings BKNG FAIRLY VALUED

Buying Index™ 4 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$2133.00	$1706.00 - $2560.00	LARGE-CAP VALUE	Consumer Discretionary	Internet & Catalog Retail

As it rides the wave of secular growth in Internet penetration in travel, Booking Holdings will also benefit from expansion into new markets.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$82,154
Avg Weekly Vol (30 wks)	2,165
30-week Range (USD)	1606.27 - 2019.48
Valuentum Sector	Consumer Discretionary
5-week Return	-6.5%
13-week Return	-2.5%
30-week Return	-5.0%
Dividend Yield %	0.0%
Dividends per Share	0.00
Forward Dividend Payout Ratio	0.0%
Est. Normal Diluted EPS	125.82
P/E on Est. Normal Diluted EPS	13.9
Est. Normal EBITDA	7,536
Forward EV/EBITDA	13.2
EV/Est. Normal EBITDA	11.2
Forward Revenue Growth (5-yr)	8.4%
Forward EPS Growth (5-yr)	12.8%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	28.3%
Return on Assets	12.8%
ROIC, with goodwill	78.2%
ROIC, without goodwill	143.3%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	8,649
Net Debt	2,365
Total Debt/EBITDA	1.5
Net Debt/EBITDA	0.4
EBITDA/Interest	21.4
Current Ratio	2.4
Quick Ratio	2.2

NMF = Not Meaningful

Investment Highlights

• Booking Holdings is a leader in global online hotel reservations. The firm is composed of four primary brands--Booking.com, Booking Holdings.com, Agoda.com, Kayak and Rentalcars.com--and several ancillary brands. Booking growth continues to be excellent across its platforms. The company was founded in 1997 and is headquartered in Connecticut.

• Demand in Booking Holdings' business model is boosted by a virtuous cycle. Its partnerships allow it to offer an enhanced customer experience, driving increased conversion and traffic. Growing traffic levels give it the opportunity to test and improve customer and partner satisfaction.

• Booking Holdings has made a habit of issuing conservative quarterly guidance, which the market tends not to like. Investors should be prepared for material swings on quarterly reports due to such guidance, and the firm's equity may be better served by management not issuing such punitive quarterly guidance. Nevertheless, we continue to have confidence in the firm's fundamentals.

• Booking.com, the company's largest subsidiary and reason behind its name change, accounts for the majority of its gross bookings and operating income with more than 1.5 million listed properties and an average of 1 million bookings per day. Management has suggested that it is open to acquisitions to further expand its portfolio.

• As it rides the wave of secular growth in Internet penetration in travel, Booking Holdings will also benefit from expansion into new markets in North America, the Asia Pacific, and South America. Increasing competition and potentially slowing global economic activity should not be ignored, however.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**VERY BEARISH**
Relative Strength	**WEAK**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Resistance, 10-wk MA	**1796.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueRisk™ \ ValueCreation™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Alibaba	32.8	1.8	87.8%
Amazon.com	NMF	2.6	86.0%
eBay	13.6	2.0	98.1%
Expedia Group	17.6	1.5	81.6%
Peer Median	17.6	1.9	86.9%
Booking Holdings	**17.4**	**1.6**	**82.1%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	12,431	14,527	15,558
Revenue, YoY%	15.7%	16.9%	7.1%
Operating Income	4,538	5,341	5,936
Operating Margin %	36.5%	36.8%	38.2%
Net Income	2,341	3,998	4,712
Net Income Margin %	18.8%	27.5%	30.3%
Diluted EPS	46.86	83.26	100.51
Diluted EPS, YoY %	9.9%	77.7%	20.7%
Free Cash Flow (CFO-capex)	4,375	4,896	4,709
Free Cash Flow Margin %	35.2%	33.7%	30.3%

In Millions of USD (except for per share items)

Structure of the Internet & Catalog Retail Industry — GOOD

The Internet and catalog retail industry benefits as a whole from the secular trend toward consumer digital (online) consumption. The industry consists of a number of exclusive online retailers led by Amazon, which continues to disrupt the broader retail space, and businesses that offer Internet travel services such as Booking Holdings, while online auctions are dominated by eBay. The industry generates high returns on investment due to minimal capital costs, but the landscape will be vastly different in the decades ahead. Still, we like the group.

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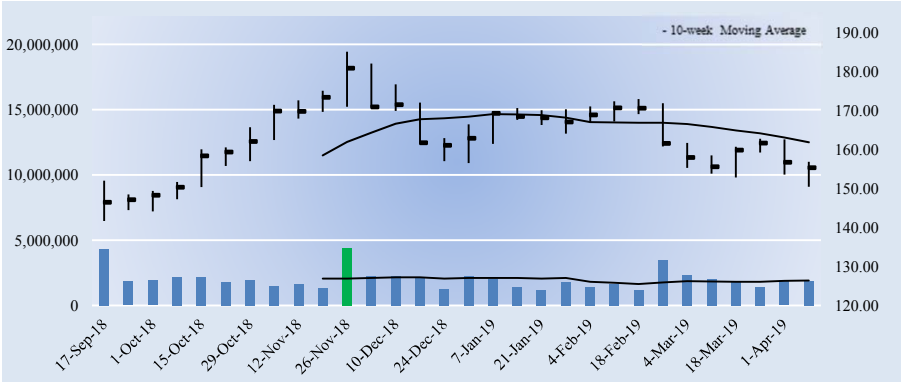
Cracker Barrel CBRL FAIRLY VALUED

Buying Index™ 3 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$159.00	$127.00 - $191.00	MID-CAP VALUE	Consumer Discretionary	Restaurants - Fast Cas & Full Svc

We think Cracker Barrel is a differentiated concept, but it is not immune to margin pressures including wage inflation and food commodity costs.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$3,738
Avg Weekly Vol (30 wks)	2,024
30-week Range (USD)	141.63 - 185
Valuentum Sector	Consumer Discretionary
5-week Return	-1.8%
13-week Return	-8.4%
30-week Return	3.5%
Dividend Yield %	3.2%
Dividends per Share	5.00
Forward Dividend Payout Ratio	54.5%
Est. Normal Diluted EPS	10.44
P/E on Est. Normal Diluted EPS	14.9
Est. Normal EBITDA	418
Forward EV/EBITDA	10.7
EV/Est. Normal EBITDA	9.6
Forward Revenue Growth (5-yr)	2.4%
Forward EPS Growth (5-yr)	2.9%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	39.1%
Return on Assets	14.0%
ROIC, with goodwill	29.5%
ROIC, without goodwill	29.5%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	400
Net Debt	285
Total Debt/EBITDA	1.0
Net Debt/EBITDA	0.7
EBITDA/Interest	25.5
Current Ratio	0.8
Quick Ratio	0.4

NMF = Not Meaningful

Investment Highlights

• Cracker Barrel is principally engaged in the operation of the Cracker Barrel Old Country Store concept. Stores consist of a rustic, old country-store design offering a full-service restaurant menu featuring home-style country food. A typical store serves 1,000 guests a day and employs 100+ people. The company was founded in 1969 and is headquartered in Tennessee.

• The firm is laser-focused on improving margins via re-engineering processes to reduce costs and creating a more efficient box for new stores. However, the company is targeting an operating margin of 9%-9.3% as food commodity and wage inflation continue to impact its profitability levels.

• We think Cracker Barrel is a differentiated concept. The company generates ~20% of revenue from its retail business, while ~40% of its customers are travelers. Its retail shop produces sales per square foot of ~$440 million and gross margins around 50%. The 'Cracker Barrel' experience begins with rockers on its front porch, which are also a top seller in its retail shop.

• Cracker Barrel continues to earn high marks for 'uniqueness' from consumers. The Cracker Barrel experience is full of nostalgia, homemade authenticity, affordable quality, southern country heritage, and is largely viewed as a relaxing, family friendly environment. Such a reputation is irreplaceable.

• Cracker Barrel is working to exploit growth opportunities outside of its core restaurant concept. Key examples include Holler & Dash, its fast casual concept, and its holiday Heat n' Serve catering offering that launched in fiscal 2017 and is aimed at growing its presence in Christmas and Easter.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**MODEST**
Technical Evaluation	**BEARISH**
Relative Strength	**WEAK**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BEARISH**
Near-term Technical Resistance, 10-wk MA	**162.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				■
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Brinker	13.0	1.3	115.1%
Cheesecake Factory	18.6	1.0	90.0%
Chipotle	54.3	2.0	99.7%
Darden Restaurants	18.4	2.6	108.1%
Peer Median	18.5	1.6	103.9%
Cracker Barrel	**16.9**	**2.3**	**97.7%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Jul-17	Jul-18	Jul-19
Revenue	2,926	3,030	3,055
Revenue, YoY%	0.5%	3.6%	0.8%
Operating Income	313	294	281
Operating Margin %	10.7%	9.7%	9.2%
Net Income	202	248	221
Net Income Margin %	6.9%	8.2%	7.2%
Diluted EPS	8.37	10.29	9.18
Diluted EPS, YoY %	6.5%	22.9%	-10.7%
Free Cash Flow (CFO-capex)	211	179	198
Free Cash Flow Margin %	7.2%	5.9%	6.5%

In Millions of USD (except for per share items)

Structure of the Restaurants Industry - Fast Casual & Full Service — NEUTRAL

The restaurant industry has benefited from a long-term trend toward eating out, but the space has become increasingly more competitive as new concepts are introduced and successful chains expand. Not only are there pricing pressures and trade-down threats, but rising costs for commodities and labor have pressured profits. Barriers to entry are low, and many constituents have a difficult time differentiating themselves. We tend to like larger chains that benefit from scale advantages and international expansion opportunities, though niche franchises can be appealing. We're neutral on the structure of the group.

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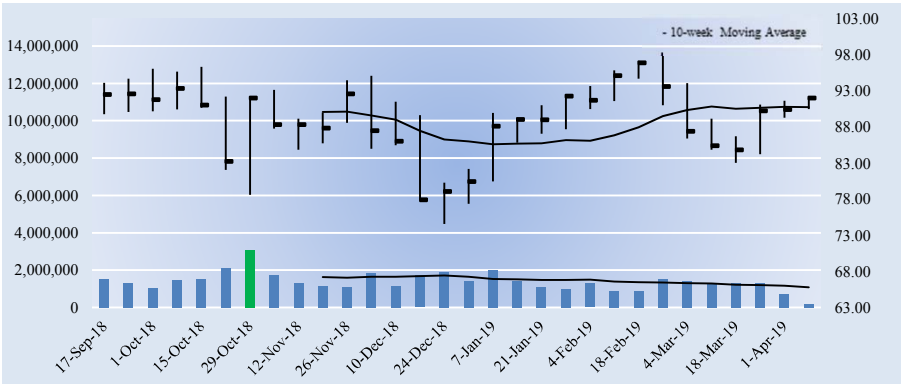
Churchill Downs CHDN FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$80.00	$60.00 - $100.00	MID-CAP CORE	Consumer Discretionary	Gaming & Hotels

Churchill Downs' growth-through-diversification strategy should allow it to overcome the challenges of its traditional racing operations during economic troughs.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**HIGH**
Growth	**MODEST**
Technical Evaluation	**VERY BULLISH**
Relative Strength	**WEAK**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**91.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$3,827
Avg Weekly Vol (30 wks)	1,394
30-week Range (USD)	74.58 - 98.37
Valuentum Sector	Consumer Discretionary
5-week Return	4.7%
13-week Return	4.7%
30-week Return	-1.1%
Dividend Yield %	0.6%
Dividends per Share	0.54
Forward Dividend Payout Ratio	12.2%
Est. Normal Diluted EPS	5.59
P/E on Est. Normal Diluted EPS	16.5
Est. Normal EBITDA	380
Forward EV/EBITDA	14.2
EV/Est. Normal EBITDA	11.9
Forward Revenue Growth (5-yr)	8.1%
Forward EPS Growth (5-yr)	8.6%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Churchill Downs is home of the Kentucky Derby, and the firm continues to evolve. It now owns five racetracks, six casinos, the country's leading online horseracing wagering business (TwinSpires.com), and a variety of other assets. The company was founded in 1928 and is headquartered in Louisville, Kentucky. It recently underwent a 3 for 1 stock split.

• Though the Kentucky Derby is stronger than ever in terms of attendance, wagering, strategic partnerships and overall prominence, the company's growth-through-diversification strategy should allow it to overcome the challenges of its traditional racing operations during economic troughs.

• Churchill Downs is undergoing a transformation, as it considers shedding some of its horseracing assets, where overall attendance and gambling numbers continue to decline, in favor of casino and entertainment businesses. Though its future acquisition plans are fraught with overpayment and selection risk, the market loves the transformation, and management appears to be executing fantastically.

• Churchill Downs sold its mobile gaming subsidiary Big Fish Games for $990 million in cash just three years after it agreed to acquire the business for ~$885 million. We expect the company to be among the largest beneficiaries of legalized sports gambling in the US thanks in part to the leveragability of its existing gambling infrastructure.

• Though organic measures aren't readily available, we've been very surprised by the company's ability to drive top-line expansion and earnings growth. We give management a lot of credit, and it is targeting a net leverage ratio of 3x-4x, though it is willing to go higher for the right strategic investment.

Relative Valuation

	Forward P/E	PEG	Price / FV
Boyd Gaming	17.5	1.3	91.3%
Hilton	26.6	1.3	113.8%
Las Vegas Sands	15.6	2.6	93.6%
Marriott Intl	17.9	2.0	109.1%
Peer Median	17.7	1.7	101.3%
Churchill Downs	**20.6**	**2.4**	**115.0%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	22.6%
Return on Assets	6.3%
ROIC, with goodwill	9.4%
ROIC, without goodwill	20.8%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	883	1,009	1,252
Revenue, YoY%	-32.6%	14.3%	24.1%
Non-GAAP Operating Income	168	199	243
Non-GAAP EBIT %	19.1%	19.7%	19.4%
Non-GAAP Net Income	122	183	184
Non-GAAP NI Margin %	13.9%	18.1%	14.7%
Non-GAAP Diluted EPS	7.65	4.39	4.46
Non-GAAP Dil EPS, YoY %	18.7%	-42.6%	1.7%
Non-GAAP FCF (CFO-capex)	102	48	200
Non-GAAP FCF Margin %	11.5%	4.8%	16.0%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	884
Net Debt	711
Total Debt/EBITDA	3.4
Net Debt/EBITDA	2.7
EBITDA/Interest	6.6
Current Ratio	0.9
Quick Ratio	0.8

NMF = Not Meaningful

Structure of the Gaming and Hotels Industry — NEUTRAL

The gaming industry is heavily regulated and particularly sensitive to discretionary spending. Significant future gaming revenue growth will come from the Asian markets, especially Macao. Possession of a gaming subconcession by the Chinese government is an advantage, though competition remains intense among existing Macao rivals. The hotels industry is highly competitive, with over 900 lodging management companies in the US alone. Demand for hotel rooms is very cyclical, and fluctuations in both occupancy rates and revenue per available room (RevPAR) should be expected. We're generally neutral on the structure of the group.

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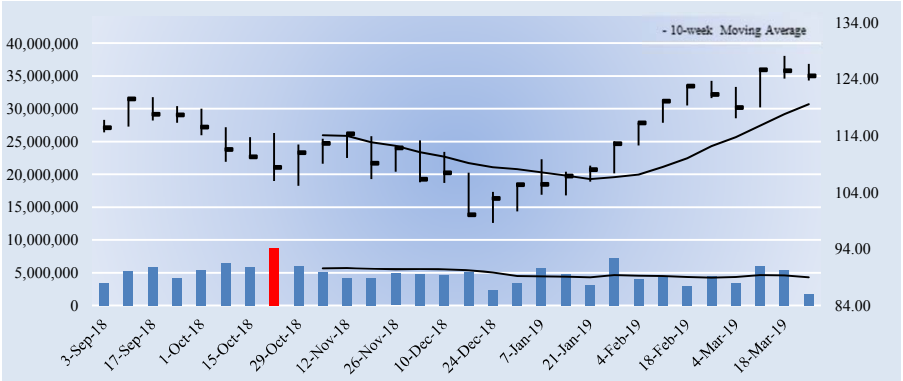
Check Point CHKP FAIRLY VALUED

Buying Index™ 7 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Highest Rated	$122.00	$92.00 - $153.00	LARGE-CAP CORE	Information Technology	Software - security

We've raised our fair value estimate after rolling the model forward and raising near-term expectations. The company's balance sheet health is impressive, but competition is heating up.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$19,858
Avg Weekly Vol (30 wks)	4,777
30-week Range (USD)	98.57 - 128.11
Valuentum Sector	Information Technology
5-week Return	1.3%
13-week Return	20.3%
30-week Return	8.1%
Dividend Yield %	0.0%
Dividends per Share	0.00
Forward Dividend Payout Ratio	0.0%
Est. Normal Diluted EPS	7.01
P/E on Est. Normal Diluted EPS	17.8
Est. Normal EBITDA	1,178
Forward EV/EBITDA	14.8
EV/Est. Normal EBITDA	13.4
Forward Revenue Growth (5-yr)	4.7%
Forward EPS Growth (5-yr)	9.0%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	21.9%
Return on Assets	14.6%
ROIC, with goodwill	71.7%
ROIC, without goodwill	235.7%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	0
Net Debt	-4,039
Total Debt/EBITDA	0.0
Net Debt/EBITDA	NMF
EBITDA/Interest	Excellent
Current Ratio	1.7
Quick Ratio	3.4

NMF = Not Meaningful

Investment Highlights

• Check Point is a leader in securing the Internet, providing customers with protection against all types of threats while reducing security complexity and lowering costs. The company first pioneered the industry with FireWall-1. It was founded in 1993 and is headquartered in San Carlos, California.

• The continuing evolution of threats and attacks on IT systems, heightened regulations on data privacy and compliance, and growth in the need for safe remote connectivity are major factors driving the need for enterprise security.

• Check Point is taking a more aggressive marketing approach, and its competition is not backing down. The company derives its sales primarily through indirect channels, and it depends on a small number of distributors. In 2017, approximately 54% of its sales came from its ten largest distributors, and top two distributors accounted for roughly 36% of its sales.

• Mobile devices are becoming the weak link in cyber security, and Check Point is committed to staying one step ahead of such developing threats. Much like other software and Internet-based industries, mobile offers a material source of growth. Mobile attacks now represent nearly 20% of global cyber attacks.

• We're fans of Check Point's balance sheet. As of the end of 2018, the company had a cash and short-term marketable securities balance of ~$1.8 billion and ~$2.3 billion in long-term marketable securities compared to no debt. This cash position will help the firm stay innovative and competitive.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**120.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Fireeye	NMF	NMF	97.1%
Fortinet	39.0	3.3	115.3%
Symantec	14.5	NMF	91.8%
VeriSign	34.7	5.0	146.0%
Peer Median	34.7	4.2	106.2%
Check Point	**20.4**	**2.7**	**102.1%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	1,855	1,916	2,014
Revenue, YoY%	6.5%	3.3%	5.1%
Operating Income	924	914	1,045
Operating Margin %	49.8%	47.7%	51.9%
Net Income	803	821	955
Net Income Margin %	43.3%	42.9%	47.4%
Diluted EPS	4.82	5.15	6.11
Diluted EPS, YoY %	15.2%	6.9%	18.6%
Free Cash Flow (CFO-capex)	1,081	1,113	1,038
Free Cash Flow Margin %	58.3%	58.1%	51.5%

In Millions of USD (except for per share items)

Structure of the Software (security) Industry — NEUTRAL

Participants in the software security industry focus on protecting important information wherever it resides—whether in servers, computers, mobile devices, or in the cloud. The space is intensely competitive, and some companies may offer their technology for free, engage in aggressive marketing, or pursue competitive partnerships. Firms also face indirect competition from application/operating system providers that may embed security solutions/functions in their own products. Participants must continuously develop new and enhanced services to meet changing customer demands. We're neutral on the group.

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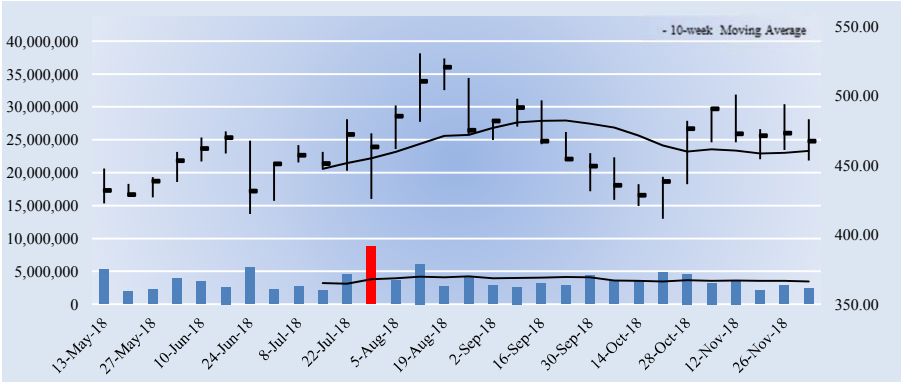
Chipotle CMG FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$469.00	$328.00 - $610.00	LARGE-CAP VALUE	Consumer Discretionary	Restaurants - Fast Cas & Full Svc

Chipotle is working to accelerate its high-growth online, mobile, and catering businesses, and it continues to add to its total restaurant count.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$13,350
Avg Weekly Vol (30 wks)	3,604
30-week Range (USD)	411.55 - 530.68
Valuentum Sector	Consumer Discretionary
5-week Return	-2.0%
13-week Return	-3.2%
30-week Return	9.4%
Dividend Yield %	0.0%
Dividends per Share	0.00
Forward Dividend Payout Ratio	0.0%
Est. Normal Diluted EPS	18.71
P/E on Est. Normal Diluted EPS	25.0
Est. Normal EBITDA	887
Forward EV/EBITDA	25.5
EV/Est. Normal EBITDA	14.5
Forward Revenue Growth (5-yr)	7.9%
Forward EPS Growth (5-yr)	38.5%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	12.3%
Return on Assets	9.2%
ROIC, with goodwill	28.4%
ROIC, without goodwill	28.9%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	0
Net Debt	-509
Total Debt/EBITDA	0.0
Net Debt/EBITDA	NMF
EBITDA/Interest	Excellent
Current Ratio	1.9
Quick Ratio	1.7

NMF = Not Meaningful

Investment Highlights

• Chipotle serves a focused menu of burritos, tacos, burrito bowls (a burrito without the tortilla) and salads, made using fresh ingredients. It prides itself on trying to find the highest-quality ingredients ('Food With Integrity') and providing an exceptional restaurant experience. The company was founded in 1993 and is based in Denver, Colorado.

• Chipotle continues to expand its restaurant count. As of the end of the third quarter of 2018, the firm's total restaurant count was 2,463, and it expects to add 140-155 new restaurants in 2019. The company is also working to accelerate its high-growth online, mobile, and catering businesses.

• Chipotle has been on a rollercoaster ride in the past few years--beginning with the food safety scandal that caused substantial drops in same-store sales beginning in late 2015--and the restaurant is facing strengthening competition from Yum! Brands' Taco Bell, which lost its CEO to Chipotle, and Qdoba. Though top-line growth is back on track, the trajectory of menu price hikes has been disrupted by negative headlines.

• Chipotle is a fantastic company and a great concept with tons of potential growth ahead of it. However, consumer confidence was shattered in the wake of food safety issues. We think Chipotle has righted the ship, but consumers will likely keep the company on a short leash when it comes to public safety or satisfaction concerns.

• Investors should be aware of the generosity in our assumptions. Not only are we expecting mid- to high-single digit revenue growth through 2022, but we assume significant operating margin expansion over the period. Achieving these will be an uphill climb, but are not unrealistic for the reinvigorated company.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**NEUTRAL**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BEARISH**
Near-term Technical Support, 10-week MA	**460.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Brinker	13.0	1.3	115.1%
Cheesecake Factory	18.6	1.0	90.0%
Cracker Barrel	18.7	2.1	107.5%
Darden Restaurants	18.4	2.6	108.1%
Peer Median	18.5	1.7	107.8%
Chipotle	**54.3**	**2.0**	**99.7%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-16	Dec-17	Dec-18
Revenue	3,904	4,476	4,830
Revenue, YoY%	-13.3%	14.7%	7.9%
Operating Income	58	284	327
Operating Margin %	1.5%	6.3%	6.8%
Net Income	23	176	241
Net Income Margin %	0.6%	3.9%	5.0%
Diluted EPS	0.77	6.17	8.61
Diluted EPS, YoY %	NMF	NMF	39.4%
Free Cash Flow (CFO-capex)	90	250	215
Free Cash Flow Margin %	2.3%	5.6%	4.5%

In Millions of USD (except for per share items)

Structure of the Restaurants Industry - Fast Casual & Full Service — NEUTRAL

The restaurant industry has benefited from a long-term trend toward eating out, but the space has become increasingly more competitive as new concepts are introduced and successful chains expand. Not only are there pricing pressures and trade-down threats, but rising costs for commodities and labor have pressured profits. Barriers to entry are low, and many constituents have a difficult time differentiating themselves. We tend to like larger chains that benefit from scale advantages and international expansion opportunities, though niche franchises can be appealing. We're neutral on the structure of the group.

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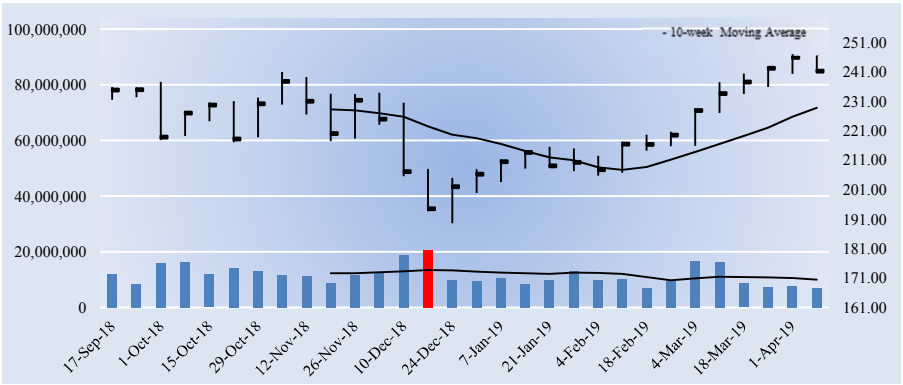
Costco COST FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$207.00	$166.00 - $248.00	LARGE-CAP CORE	Consumer Staples	Food Retailers

Costco has a number of strengths: strong member renewals, fantastic employees that enjoy the higher-than-average pay, great merchandise, and a treasure-hunt atmosphere that consumers love.

Stock Chart (weekly)



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Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**MEDIUM**
Financial Leverage	**LOW**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**NEUTRAL**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**229.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$106,588
Avg Weekly Vol (30 wks)	11,609
30-week Range (USD)	189.51 - 247.09
Valuentum Sector	Consumer Staples
5-week Return	6.0%
13-week Return	15.2%
30-week Return	3.1%
Dividend Yield %	0.9%
Dividends per Share	2.28
Forward Dividend Payout Ratio	28.4%
Est. Normal Diluted EPS	10.98
P/E on Est. Normal Diluted EPS	22.0
Est. Normal EBITDA	8,415
Forward EV/EBITDA	16.4
EV/Est. Normal EBITDA	12.6
Forward Revenue Growth (5-yr)	7.3%
Forward EPS Growth (5-yr)	16.1%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	23.9%
Return on Assets	7.7%
ROIC, with goodwill	28.2%
ROIC, without goodwill	28.2%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	6,487
Net Debt	-772
Total Debt/EBITDA	1.1
Net Debt/EBITDA	NMF
EBITDA/Interest	37.2
Current Ratio	1.0
Quick Ratio	0.4

NMF = Not Meaningful

Investment Highlights

• Costco operates an international chain of warehouses, mainly under the 'Costco Wholesale' name. Costco is open only to members and offers three types of membership: Business, Gold Star (individual) and the Executive membership. It has more than 94 million loyal cardholders. The company was founded in 1976 and is headquartered in Washington.

• Costco's reported same-store sales can be impacted by gasoline price volatility and foreign exchange rates, but underlying core performance has been solid. Total comparable store sales excluding gasoline price deflation and foreign exchange headwinds advanced 6.8% in fiscal 2018.

• Costco targets merchandise that produces high sales volumes and rapid inventory turnover. This turnover, when combined with efficiencies achieved by volume purchasing, efficient distribution and reduced handling of merchandise in no-frills, self-service warehouses, enables Costco to operate profitably at significantly lower gross margins than peers.

• Costco has a number of strengths: strong member renewals, fantastic employees that enjoy the higher-than-average pay, great merchandise, and a treasure-hunt atmosphere that consumers love. Its image speaks of quality, and the public often uses Costco as an example for excellent employee relations.

• Large scale food retailers have been put on notice with Amazon's 2017 acquisition of Whole Foods. We think Costco has staying power, and the firm continues to resonate with all of its stakeholders. The firm is actively pursuing the expansion of its delivery and online businesses.

Relative Valuation

	Forward P/E	PEG	Price / FV
Kroger	13.5	1.6	104.2%
Target	12.5	2.5	90.4%
Walgreens Boots Alliance	8.6	0.9	82.9%
Wal-Mart	19.1	1.6	99.1%
Peer Median	13.0	1.6	94.8%
Costco	**30.0**	**2.1**	**116.5%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Aug-17	Aug-18	Aug-19
Revenue	129,025	141,576	153,752
Revenue, YoY%	8.7%	9.7%	8.6%
Operating Income	4,111	4,480	4,880
Operating Margin %	3.2%	3.2%	3.2%
Net Income	2,679	3,134	3,552
Net Income Margin %	2.1%	2.2%	2.3%
Diluted EPS	6.08	7.09	8.04
Diluted EPS, YoY %	14.1%	16.7%	13.3%
Free Cash Flow (CFO-capex)	4,224	2,805	2,526
Free Cash Flow Margin %	3.3%	2.0%	1.6%

In Millions of USD (except for per share items)

Structure of the Food Retailers Industry — NEUTRAL

Firms in the mature food retailers industry generally have slim profit margins and face significant competition from brick-and-mortar locations (discount, department, drug, dollar, warehouse clubs and supermarkets) as well as Internet-based retailers (including Amazon). Though the industry is not terribly cyclical, economic conditions, disposable income, credit availability, fuel prices, and unemployment levels drive ticket size and traffic trends. Offering consumers a compelling value proposition is a must, even as higher-priced organic food offerings proliferate. We're generally neutral on the group.

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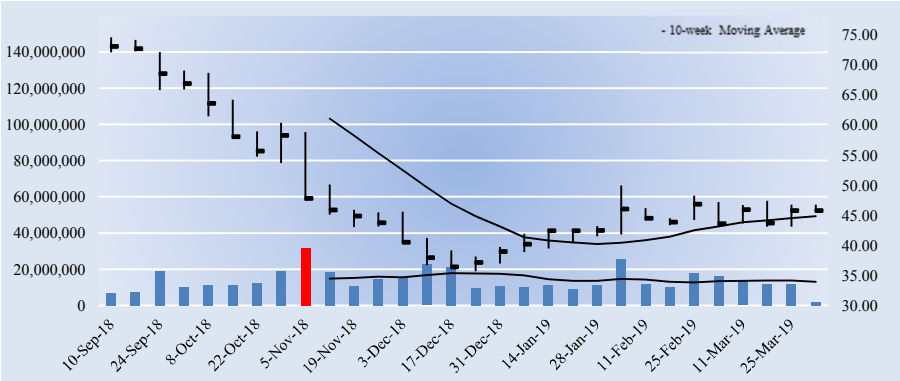
Capri Holdings CPRI FAIRLY VALUED

Buying Index™ 7 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$59.00	$44.00 - $74.00	MID-CAP VALUE	Consumer Discretionary	Luxury - Ultra & Aspirational

Michael Kors changed its name to Capri Holdings following the closing of the Versace acquisition. The company now consists of three iconic global, founder-led brands.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**45.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$6,954
Avg Weekly Vol (30 wks)	13,856
30-week Range (USD)	35.68 - 74.59
Valuentum Sector	Consumer Discretionary
5-week Return	-2.3%
13-week Return	17.0%
30-week Return	-37.0%
Dividend Yield %	0.0%
Dividends per Share	0.00
Forward Dividend Payout Ratio	0.0%
Est. Normal Diluted EPS	5.41
P/E on Est. Normal Diluted EPS	8.5
Est. Normal EBITDA	1,280
Forward EV/EBITDA	7.8
EV/Est. Normal EBITDA	7.2
Forward Revenue Growth (5-yr)	7.2%
Forward EPS Growth (5-yr)	10.0%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Capri Holdings boasts three iconic global, founder-led brands in Michael Kors, Versace, and Jimmy Choo, all of which are leaders in style and trend. As of fiscal 2019, management estimates that Michael Kors accounts for 75% of total pro forma revenue, Versace accounts for nearly 15%, and Jimmy Choo for roughly 10%. The company is headquartered in London.

• Capri Holdings is targeting $8 billion in total revenue, up from $6 billion in pro forma revenue in fiscal 2019. It expects the majority of this growth to come from the Versace brand, while the Michael Kors brand is expected to deliver the lowest top-line growth rate.

• The old Michael Kors followed its Jimmy Choo purchase with the acquisition of Italian fashion label Versace for ~$2.12 billion. The deal is expected to facilitate revenue growth, has expand its portfolio of iconic founder-led brands, and has diversified it geographically. Fiscal 2019 pro forma revenue breaks down as follows: 57% Americas, 24% Europe, and 19% Asia.

• In fiscal 2019, Capri Holdings is expecting total revenue of ~$5.22 billion on a low-single-digit comps decline. Its operating margin guidance comes in at ~17.3%, which marks a notable step down due to ongoing investments in newly acquired brand growth, and diluted earnings per share are projected to be in a range of $4.90-$4.95 in the year.

• Looking ahead to fiscal 2020, Capri expects total revenue of ~$6.1 billion, with an operating margin of ~15.5%, and earnings per share of roughly $4.95. Management expects to reduce its debt load by more than $500 million in fiscal 2020, a prudent priority, in our view.

Relative Valuation

	Forward P/E	PEG	Price / FV
Fossil	NMF	NMF	97.7%
Ralph Lauren	15.3	1.5	88.9%
Tapestry	13.0	1.4	81.7%
Tiffany	17.9	1.5	89.6%
Peer Median	15.3	1.5	89.3%
Capri Holdings	**9.3**	**1.2**	**77.5%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	34.3%
Return on Assets	24.1%
ROIC, with goodwill	56.1%
ROIC, without goodwill	60.2%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Mar-17	Mar-18	Mar-19
Revenue	4,494	4,719	5,219
Revenue, YoY%	-4.6%	5.0%	10.6%
Operating Income	889	884	953
Operating Margin %	19.8%	18.7%	18.3%
Net Income	553	592	745
Net Income Margin %	12.3%	12.5%	14.3%
Diluted EPS	3.29	3.82	4.90
Diluted EPS, YoY %	-26.0%	16.1%	28.4%
Free Cash Flow (CFO-capex)	865	939	690
Free Cash Flow Margin %	19.2%	19.9%	13.2%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	2,534
Net Debt	2,270
Total Debt/EBITDA	2.3
Net Debt/EBITDA	2.1
EBITDA/Interest	49.0
Current Ratio	1.3
Quick Ratio	0.5

NMF = Not Meaningful

Structure of the Luxury Goods Industry — GOOD

Luxury goods firms differentiate themselves based on brand name, perception, and quality in order to generate excess returns on invested capital through the economic cycle. Building a large, successful luxury brand is difficult, leaving those that possess them with intangible competitive advantages that are not easily overcome by new entrants. Growth in emerging middle classes and China will be the key demand drivers going forward, though the strongest brands will also grow successfully via market share gains. Though changes in consumer preferences should be watched closely, we like the structure of the group.

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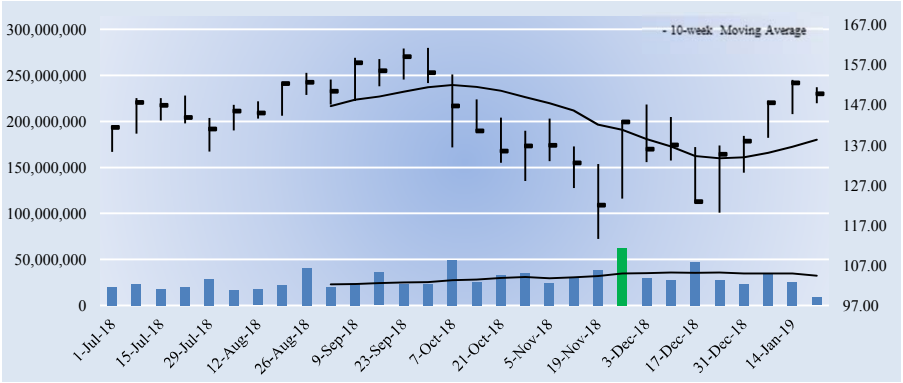
Salesforce.com CRM OVERVALUED 3.8%

Buying Index™ 4 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$120.00	$96.00 - $144.00	LARGE-CAP GROWTH	Information Technology	Software

Salesforce.com's deferred revenue and backlog balances continue to grow, revealing material future expansion potential.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**OVERVALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**AGGRESSIVE**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**138.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				■
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$110,006
Avg Weekly Vol (30 wks)	28,590
30-week Range (USD)	113.6 - 161.19
Valuentum Sector	Information Technology
5-week Return	23.6%
13-week Return	8.4%
30-week Return	10.0%
Dividend Yield %	0.0%
Dividends per Share	0.00
Forward Dividend Payout Ratio	0.0%
Est. Normal Diluted EPS	3.44
P/E on Est. Normal Diluted EPS	43.5
Est. Normal EBITDA	5,046
Forward EV/EBITDA	27.6
EV/Est. Normal EBITDA	21.2
Forward Revenue Growth (5-yr)	18.9%
Forward EPS Growth (5-yr)	92.0%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	1.1%
Return on Assets	0.5%
ROIC, with goodwill	15.1%
ROIC, without goodwill	31.7%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	1,719
Net Debt	-2,802
Total Debt/EBITDA	1.2
Net Debt/EBITDA	NMF
EBITDA/Interest	17.1
Current Ratio	0.9
Quick Ratio	0.8

NMF = Not Meaningful

Investment Highlights

• Salesforce.com is a provider of enterprise cloud computing (software) solutions. The company delivers customer relationship management, or CRM, applications via the Internet, or 'cloud.' The company sells to businesses of all sizes across industries on a subscription basis. The Americas remains its dominant geography.

• Salesforce has done well in expanding its CRM market leadership. As of 2017, its market share sat at ~19.6%, up from 6.3% in 2009, which is higher than its closest competitors Oracle, SAP, and Microsoft, which hold 7.1%, 6.5%, and 4.0% market share, respectively.

• Salesforce expects another year of robust revenue growth in fiscal 2020 as management is guiding its top line to a range of $15.90-$16 billion (up 20%-21% over fiscal 2019). This range is an increase from initial guidance, and if the upper bound is achieved it will make Salesforce the fastest enterprise software company to reach $16 billion in revenue. Minor acquisitions will help it get there.

• The company's deferred revenue and backlog balances continue to grow, revealing material future expansion potential. Salesforce.com expects fiscal 2022 sales to be in a range of $21-$23 billion as its total addressable market grows to ~$120 billion. Cloud software companies may be recession resistant as companies can use their platforms to cut costs.

• Revenue growth is the company's current top priority. Long-term, however, Salesforce.com is targeting a mid-30% operating margin. If it hits this, significant upside to our fair value estimate exists (we're assuming a high-teens normalized operating margin).

Relative Valuation

	Forward P/E	PEG	Price / FV
Adobe Systems	47.1	2.3	108.5%
F5 Networks	14.9	1.7	92.3%
Microsoft	23.8	1.9	93.6%
Oracle	14.3	1.5	83.5%
Peer Median	19.4	1.8	92.9%
Salesforce.com	**57.5**	**9.4**	**124.8%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Jan-17	Jan-18	Jan-19
Revenue	8,392	10,480	13,341
Revenue, YoY%	25.9%	24.9%	27.3%
Non-GAAP Operating Income	64	236	2,538
Non-GAAP EBIT %	0.8%	2.2%	19.0%
Non-GAAP Net Income	180	127	1,952
Non-GAAP NI Margin %	2.1%	1.2%	14.6%
Non-GAAP Diluted EPS	0.26	0.17	2.61
Non-GAAP Dil EPS, YoY %	NMF	NMF	NMF
Non-GAAP FCF (CFO-capex)	1,698	2,204	2,647
Non-GAAP FCF Margin %	20.2%	21.0%	19.8%

In Millions of USD (except for per share items)

Structure of the Software Industry — VERY GOOD

Firms that serve the mature software markets—or those consisting of basic business applications—have powerful distribution channels, large installed bases, and fortress balance sheets. These entrenched competitors benefit from significant customer switching costs, which make it nearly impossible for new entrants to gain a foothold. Participants generally benefit from high-margin license revenue and generate significant returns on investment. Still, the shift to cloud computing has created both opportunities and challenges, and the enterprise software landscape continues to evolve. We like the group.

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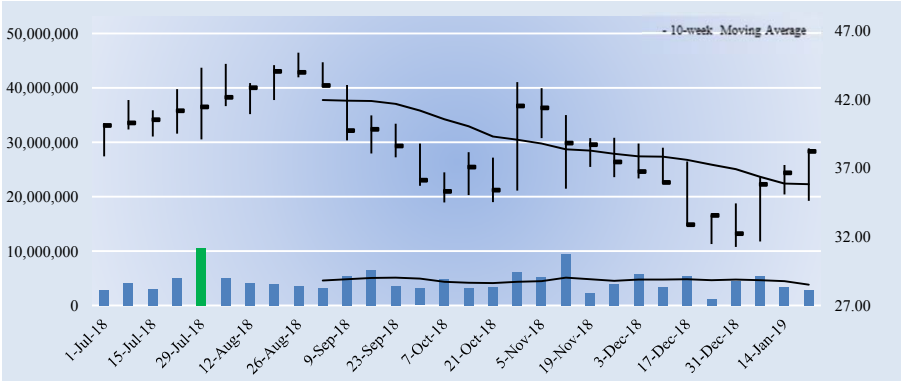
Cirrus Logic CRUS FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$40.00	$30.00 - $50.00	MID-CAP VALUE	Information Technology	Integrated Circuits

Cirrus Logic is optimistic on its design positioning in the long haul, but near-term smartphone demand weakness is expected to weigh on results.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$2,519
Avg Weekly Vol (30 wks)	4,508
30-week Range (USD)	31.25 - 45.39
Valuentum Sector	Information Technology
5-week Return	17.7%
13-week Return	6.2%
30-week Return	0.5%
Dividend Yield %	0.0%
Dividends per Share	0.00
Forward Dividend Payout Ratio	0.0%
Est. Normal Diluted EPS	2.79
P/E on Est. Normal Diluted EPS	13.7
Est. Normal EBITDA	307
Forward EV/EBITDA	7.5
EV/Est. Normal EBITDA	7.4
Forward Revenue Growth (5-yr)	-2.4%
Forward EPS Growth (5-yr)	3.0%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	18.4%
Return on Assets	14.0%
ROIC, with goodwill	29.7%
ROIC, without goodwill	46.5%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	0
Net Debt	-262
Total Debt/EBITDA	0.0
Net Debt/EBITDA	NMF
EBITDA/Interest	298.2
Current Ratio	4.4
Quick Ratio	2.6

NMF = Not Meaningful

Investment Highlights

• Cirrus Logic's vision is to be the world's first choice in high-performance analog and digital signal processing components. A fabless semiconductor firm, it targets fast growing markets such as portable audio and LED lighting. Apple accounts for ~80% of net sales. The company was founded in 1984 and is headquartered in Austin, Texas.

• The firm has a proven track record of engineering execution. It also has strong relationships with tier-one global OEMs that are seeking differentiation. Leveraging initial design-in success into long-term opportunities remains core, and opportunities in audio and voice are present.

• Cirrus Logic is one of Apple's most widely-known suppliers. Though concerns exist at Apple on where incremental growth will come from, Cirrus is optimistic on its design positioning in the long haul. Demand for portable audio products continues to expand at a strong rate, but the risk of being materially tied to any one customer is worth noting. Near-term smartphone demand weakness will impact results.

• Cirrus participates in the fast-growing, yet evolving, portable audio and LED lighting markets. Global smartphone unit sales continue to expand, while the addressable market for replacement LED light bulbs is rapidly expanding. The company is well-positioned, and we like that the strength of its balance sheet can help fuel future growth.

• Cirrus has been able to stay competitive in its rapidly evolving end markets thanks in part to robust R&D spending. In fiscal years 2013-2018, R&D spend at the firm grew at a 26% CAGR to approximately $366 million, or nearly one-quarter of revenue.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**DECLINING**
Technical Evaluation	**VERY BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BEARISH**
Near-term Technical Support, 10-week MA	**36.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Analog Devices	17.6	2.3	112.3%
Nvidia	20.2	2.1	81.2%
Semtech Corp	21.5	2.3	118.9%
Taiwan Semiconductor	16.7	4.4	98.5%
Peer Median	18.9	2.3	105.4%
Cirrus Logic	**14.4**	**5.1**	**95.5%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Mar-17	Mar-18	Mar-19
Revenue	1,539	1,532	1,215
Revenue, YoY%	31.6%	-0.4%	-20.7%
Operating Income	327	262	237
Operating Margin %	21.2%	17.1%	19.5%
Net Income	261	162	172
Net Income Margin %	17.0%	10.6%	14.1%
Diluted EPS	3.92	2.46	2.66
Diluted EPS, YoY %	109.5%	-37.4%	8.1%
Free Cash Flow (CFO-capex)	318	235	213
Free Cash Flow Margin %	20.7%	15.3%	17.5%

In Millions of USD (except for per share items)

Structure of the Integrated Circuits Industry — VERY POOR

The specialized semiconductor industry is intensely competitive and has been characterized by price erosion and rapid technological change. Participants compete with major domestic/international semiconductor companies and often have to defend intellectual property rights against entities that have copied proprietary product lines. Firms are exposed to the global economic cycle, wide supply/demand fluctuations, and continuously face the risk of excess or obsolete inventories. Constituents must introduce new products with more features at higher prices to maintain margins. We don't like the group.

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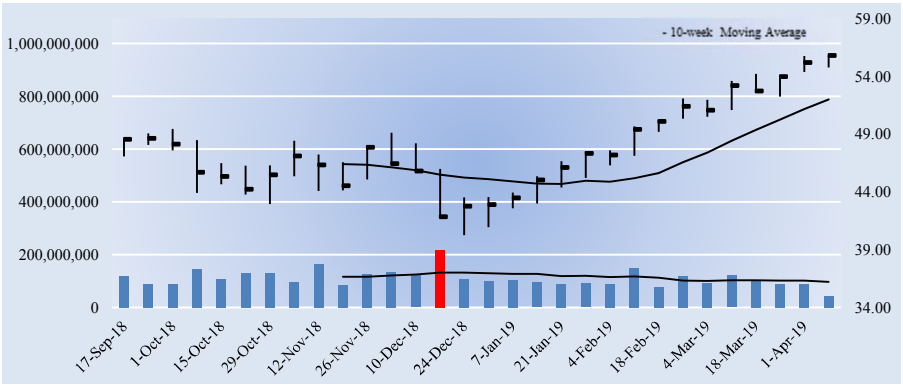
Cisco CSCO FAIRLY VALUED

Buying Index™ 5 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$56.00	$45.00 - $67.00	MEGA-CAP VALUE	Information Technology	Networking Equipment

Cisco's cash hoard gives it tremendous financial flexibility, and its business transition continues to exhibit positive momentum.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$272,457
Avg Weekly Vol (30 wks)	110,861
30-week Range (USD)	40.25 - 55.84
Valuentum Sector	Information Technology
5-week Return	9.2%
13-week Return	29.6%
30-week Return	18.2%
Dividend Yield %	2.5%
Dividends per Share	1.40
Forward Dividend Payout Ratio	45.2%
Est. Normal Diluted EPS	3.60
P/E on Est. Normal Diluted EPS	15.5
Est. Normal EBITDA	22,295
Forward EV/EBITDA	12.5
EV/Est. Normal EBITDA	11.3
Forward Revenue Growth (5-yr)	3.5%
Forward EPS Growth (5-yr)	182.3%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	10.8%
Return on Assets	5.6%
ROIC, with goodwill	26.9%
ROIC, without goodwill	66.4%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	25,569
Net Debt	-20,979
Total Debt/EBITDA	1.7
Net Debt/EBITDA	NMF
EBITDA/Interest	15.8
Current Ratio	2.3
Quick Ratio	2.1

NMF = Not Meaningful

Investment Highlights

• Cisco sells Internet Protocol based networking and other products related to the communications and IT industry. The firm provides a broad line of products for transporting data, voice, and video. It is #1 or #2 across a wide variety of architectures, and we like the progress it is making in its transition to a software and subscription based business model. It was founded in 1984 and is headquartered in California.

• Cisco has been acquisitive as of late. Instead of targeting suppliers to improve its gross margin, the firm's M&A strategy will be focused on disruptive technology and software and cloud acquisitions that will positively impact gross margins.

• We like that Cisco is aggressively buying back stock as our opinion of its valuation has been largely positive of late. In fiscal 2018, it repurchased ~$17.5 billion of its shares. Despite robust returns of cash to shareholders, Cisco's business transition is gaining positive momentum. Recurring revenue accounts for ~32% of revenue, and subscriptions as a percentage of software revenue continues to climb.

• After its fiscal 2019 first quarter, Cisco noted that trade tensions had no impact on demand levels, and it has enacted price increases to combat tariff-related costs in a number of its core networking products. Management points to software subscriptions as a percentage of total software revenue as the most meaningful gauge of its transformation progress.

• Cisco had $46.5 billion in cash and cash equivalents at the end of fiscal 2018. Such a cash hoard gives it tremendous financial flexibility to pursue value-creating acquisitions and/or significantly grow the dividend. While we like shares, we're watching closely the impact buybacks have on its balance sheet.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**NEUTRAL**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**OVERBOUGHT**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**52.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				■
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Finisar	23.7	NMF	91.3%
Juniper Networks	14.7	2.3	84.8%
Knowles Corp	15.4	1.6	93.1%
Nokia	19.8	NMF	88.6%
Peer Median	17.6	2.0	89.9%
Cisco	**18.0**	**13.6**	**99.7%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Jul-17	Jul-18	Jul-19
Revenue	48,005	49,330	51,698
Revenue, YoY%	-2.5%	2.8%	4.8%
Non-GAAP Operating Income	12,729	12,667	17,794
Non-GAAP EBIT %	26.5%	25.7%	34.4%
Non-GAAP Net Income	9,609	110	14,871
Non-GAAP NI Margin %	20.0%	0.2%	28.8%
Non-GAAP Diluted EPS	1.90	0.02	3.10
Non-GAAP Dil EPS, YoY %	-9.8%	NMF	NMF
Non-GAAP FCF (CFO-capex)	12,912	12,832	15,939
Non-GAAP FCF Margin %	26.9%	26.0%	30.8%

In Millions of USD (except for per share items)

Structure of the Networking Equipment Industry — POOR

Firms in the networking equipment industry provide products for transporting data, voice, and video within businesses and around the world. Participants must adapt to address virtualization/cloud-driven needs in the enterprise data center market; the convergence of video, collaboration, and networked mobility technologies; and the move toward programmable, virtual networks. The industry is characterized by low barriers to entry, rapid technological change and significant pricing competition. Gross margins can be volatile and should be watched closely. We don't like the structure of the group.

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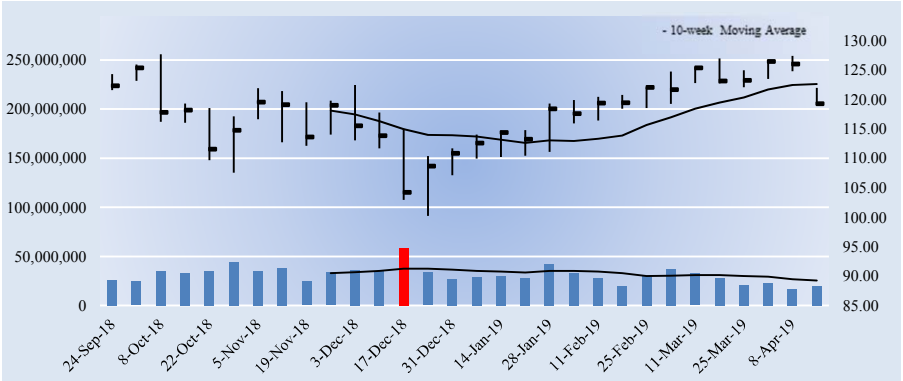
Chevron CVX FAIRLY VALUED

Buying Index™ 3 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Neutral	$116.00	$75.00 - $157.00	MEGA-CAP CORE	Energy	Major Oil & Gas

Chevron has agreed to acquire Anadarko for $33 billion in cash and stock. The deal is expected to enhance Chevron's presence in shale and tight, deepwater, and LNG production.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$228,168
Avg Weekly Vol (30 wks)	31,254
30-week Range (USD)	100.22 - 127.6
Valuentum Sector	Energy
5-week Return	-4.8%
13-week Return	5.4%
30-week Return	-2.2%
Dividend Yield %	4.0%
Dividends per Share	4.76
Forward Dividend Payout Ratio	65.6%
Est. Normal Diluted EPS	8.59
P/E on Est. Normal Diluted EPS	13.9
Est. Normal EBITDA	42,298
Forward EV/EBITDA	6.8
EV/Est. Normal EBITDA	6.0
Forward Revenue Growth (5-yr)	4.3%
Forward EPS Growth (5-yr)	3.9%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	5.3%
Return on Assets	3.1%
ROIC, with goodwill	0.8%
ROIC, without goodwill	0.8%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	34,459
Net Debt	24,114
Total Debt/EBITDA	0.8
Net Debt/EBITDA	0.6
EBITDA/Interest	55.2
Current Ratio	1.3
Quick Ratio	0.9

NMF = Not Meaningful

Investment Highlights

• Chevron is engaged in integrated petroleum operations, chemicals operations, mining activities, power generation and energy services. The upstream and downstream activities of the company are widely dispersed geographically. The company was founded in 1879 and is headquartered in California.

• Deliberate actions to lower Chevron's cost structure to protect against a prolonged scenario of lower energy prices have become the norm. In addition to the benefit of its downstream operations in the face of crude oil volaitlity, the company expects its upstream cash margin to continue growing through 2020.

• Chevron expects free cash flow to improve materially in the near term thanks to higher upstream margins and volumes and a lower and more flexible capital spending program. Crude oil of $50 per barrel (or higher) is expected to lead to positive free cash flow growth, and its total capital and exploratory spending is expected to be $20 billion in 2019 with more a focus on high-return short-cycle projects.

• Chevron has agreed to acquire Anadarko for an equity value of $33 billion in cash and stock. The deal is expected to enhance Chevron's presence in shale and tight, deepwater, and LNG production, and $2 billion in annual run rate synergies are expected within a year of closing, which is expected in the second half of 2019.

• The Anadarko deal is structured as 75% stock and 25% cash, resulting in Chevron paying ~$8 billion in cash and assuming net debt of ~$15 billion. The deal is expected to be accretive to free cash flow one year after closing, assuming $60 Brent prices. We'll be watching dividend implications closely.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**POOR**
ValueRisk™	**HIGH**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**MEDIUM**
Financial Leverage	**LOW**
Growth	**MODEST**
Technical Evaluation	**VERY BEARISH**
Relative Strength	**WEAK**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Resistance, 10-wk MA	**123.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High		■		
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
BP	13.1	1.7	99.7%
ConocoPhillips	16.1	NMF	99.1%
Exxon Mobil	18.8	1.9	109.3%
Royal Dutch Shell	11.8	3.2	94.8%
Peer Median	14.6	1.9	99.4%
Chevron	**16.4**	**2.3**	**102.8%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	141,722	166,339	160,683
Revenue, YoY%	23.8%	17.4%	-3.4%
Operating Income	2,480	21,883	18,363
Operating Margin %	1.7%	13.2%	11.4%
Net Income	9,195	14,824	13,880
Net Income Margin %	6.5%	8.9%	8.6%
Diluted EPS	4.84	7.75	7.25
Diluted EPS, YoY %	NMF	NMF	NMF
Free Cash Flow (CFO-capex)	7,111	16,826	15,556
Free Cash Flow Margin %	5.0%	10.1%	9.7%

In Millions of USD (except for per share items)

Structure of the Oil & Gas (majors) Industry — NEUTRAL

The global oil and gas industry is dominated by state-owned firms, including member nations of OPEC, which have a large influence on pricing. Public constituents are not small, however, as firms in this group make up a large portion of the energy sector's market cap. Oil and gas prices are the key profit driver and largely reflect supply/demand dynamics, though it is not uncommon for speculative/geopolitical price premiums to occur. A firm's estimated reserve life and cost for exploration and development should be monitored closely. We're neutral on the structure of the majors, given their commoditized product.

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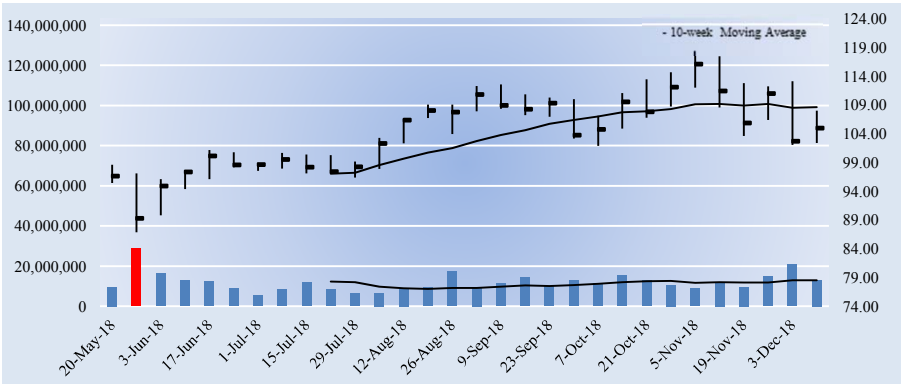
Dollar General DG FAIRLY VALUED

Buying Index™ 3 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$106.00	$85.00 - $127.00	LARGE-CAP VALUE	Consumer Discretionary	Multiline Retail - discount

Dollar General continues to grow its store count in a meaningful way, and its same-store-sales growth stream has been nothing short of impressive.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**MEDIUM**
Financial Leverage	**LOW**
Growth	**MODEST**
Technical Evaluation	**BEARISH**
Relative Strength	**NEUTRAL**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BEARISH**
Near-term Technical Resistance, 10-wk MA	**109.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$28,698
Avg Weekly Vol (30 wks)	11,925
30-week Range (USD)	86.87 - 118.45
Valuentum Sector	Consumer Discretionary
5-week Return	-9.6%
13-week Return	-3.4%
30-week Return	8.1%
Dividend Yield %	1.1%
Dividends per Share	1.16
Forward Dividend Payout Ratio	19.1%
Est. Normal Diluted EPS	7.75
P/E on Est. Normal Diluted EPS	13.5
Est. Normal EBITDA	3,133
Forward EV/EBITDA	12.0
EV/Est. Normal EBITDA	10.0
Forward Revenue Growth (5-yr)	7.0%
Forward EPS Growth (5-yr)	11.3%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Dollar General is the largest discount retailer in the US by number of stores with over 14,600 neighborhood stores in 44 states. It provides products that are frequently used and replenished such as food, snacks, and health and beauty aids. The company helps shoppers: 'Save time, Save money, Every day.' It was founded in 1939 and is headquartered in Tennessee.

• Dollar General expects to grow annual net sales to $30 billion by 2020, which would represent a 50% increase over 2015 levels and 7%-10% annual net sales growth. Our forecasts come in at the low end of this growth pace, suggesting there may be upside to our fair value estimate should it reach this target.

• Dollar General has put up 28 consecutive years of same-store sales growth as of 2017. The firm continues to add new stores to its portfolio and plans to add as many as 900 in 2018 in addition to the remodeling of 1,000 stores and 100 relocations. The company lost the battle for Family Dollar's assets to Dollar Tree, despite a higher offer. It may have been a blessing in disguise.

• Dollar General sees the opportunity for an additional 13,000 locations across the US, many of which will be developed as small format stores with less than 6,000 square feet. These small format stores enable the firm to optimize merchandise mixes in each store and reduce occupancy costs. Such growth initiatives are expected to help drive its 2020 sales goal.

• In fiscal 2018, management is anticipating net sales growth of ~9% and same-store sales growth in the mid-to-high 2% range. Dollar General's operating margin is expected to be modestly lower from 2017, but diluted earnings per share are projected to leap to a range of $5.85-$6.05, compared to $5.63 in fiscal 2017.

Relative Valuation

	Forward P/E	PEG	Price / FV
Big Lots	7.6	NMF	79.2%
Dollar Tree	15.6	NMF	104.7%
Fred's Inc	NMF	NMF	62.7%
PriceSmart	22.6	1.7	94.8%
Peer Median	15.6	1.7	87.0%
Dollar General	**17.3**	**1.6**	**99.0%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	23.6%
Return on Assets	11.3%
ROIC, with goodwill	17.6%
ROIC, without goodwill	33.2%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	3,006
Net Debt	2,739
Total Debt/EBITDA	1.2
Net Debt/EBITDA	1.1
EBITDA/Interest	24.9
Current Ratio	1.4
Quick Ratio	0.1

NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Jan-17	Jan-18	Jan-19
Revenue	21,987	23,471	25,818
Revenue, YoY%	7.9%	6.8%	10.0%
Operating Income	2,063	2,008	2,169
Operating Margin %	9.4%	8.6%	8.4%
Net Income	1,251	1,539	1,626
Net Income Margin %	5.7%	6.6%	6.3%
Diluted EPS	4.43	5.63	6.07
Diluted EPS, YoY %	12.3%	27.0%	7.8%
Free Cash Flow (CFO-capex)	1,044	1,156	1,217
Free Cash Flow Margin %	4.8%	4.9%	4.7%

In Millions of USD (except for per share items)

Structure of the Multiline Retail (discount) Industry — GOOD

The retail discount store industry provides consumable basic needs to customers primarily in the low- and middle-income brackets. More than one third of the industry's customers live in households that earn less than $20,000 per year, making the group's results counter-cyclical--as more households generate lower income due to poor economic conditions, store growth and same-store-sales opportunities increase. Still, competition is fierce among constituents and with many other retailers, including grocery stores. But given the niche low-price strategy of participants and their counter-cyclical nature, we like the group.

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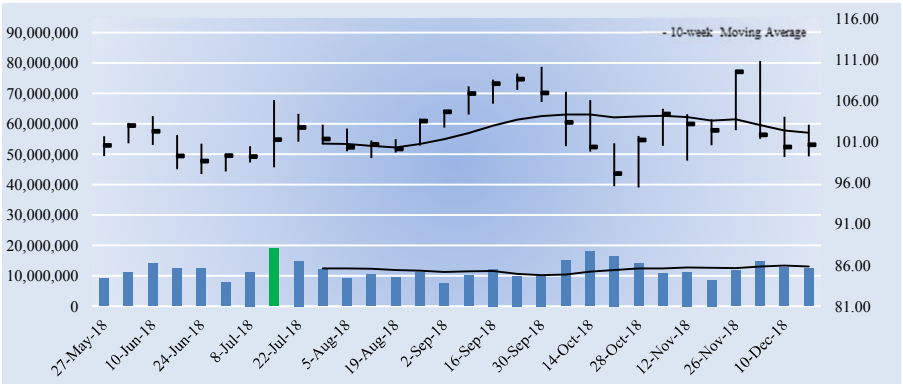
Danaher DHR FAIRLY VALUED

Buying Index™ 3 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$84.00	$67.00 - $101.00	LARGE-CAP CORE	Industrials	Conglomerates

Danaher boasts a strong portfolio of brands and an extensive installed base that helps it drive recurring revenue. It plans to spin off its 'Dental' segment into an independent, publicly-traded company in the second half of 2019.

Stock Chart (weekly)



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Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**BEARISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BEARISH**
Near-term Technical Resistance, 10-wk MA	**102.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueRisk™ \ ValueCreation™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$71,069
Avg Weekly Vol (30 wks)	11,969
30-week Range (USD)	95.44 - 110.86
Valuentum Sector	Industrials
5-week Return	-2.5%
13-week Return	-6.9%
30-week Return	-0.5%
Dividend Yield %	0.6%
Dividends per Share	0.64
Forward Dividend Payout Ratio	14.1%
Est. Normal Diluted EPS	5.16
P/E on Est. Normal Diluted EPS	19.5
Est. Normal EBITDA	6,240
Forward EV/EBITDA	14.6
EV/Est. Normal EBITDA	13.0
Forward Revenue Growth (5-yr)	5.1%
Forward EPS Growth (5-yr)	10.3%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Danaher makes innovative products and provides services to professional, medical, industrial, and commercial customers. Its portfolio of premier brands, including Pall, Cepheid, and Beckman Coulter, is among the most highly recognized in each of the markets it serves. The company was founded in 1969 and is headquartered in Washington, D.C.

• Danaher recently announced plans to spin off its 'Dental' segment into an independent, publicly-traded company in the second half of 2019. As of the first half of 2018, the segment accounted for ~14.5% of Danaher's total revenue, and it expects a more refined focus to benefit its business moving forward.

• Danaher boasts a strong portfolio of brands and an extensive installed base that helps it drive recurring revenue. Roughly 70% of its revenue is generated direct from customers (as opposed to distributors), making its relationships with customers a key dynamic. Its portfolio is geographically diverse as North America accounts for ~40% of revenue, high growth markets for ~30%, and Europe for ~23%.

• Danaher's portfolio is exposed to secular growth drivers such as increasing environmental, healthcare, and food safety regulatory requirements, and China offers expansion opportunities for the firm. We also applaud the firm's free cash flow conversion efforts as 2017 marked the 26th consecutive year in which free cash flow exceeded net income.

• Danaher is one of our favorite industrial firms. Though cyclical, the firm continues to drive gross margins higher. Management plans to target larger acquisition opportunities moving forward as it gains confidence in the sustainability of recent strong free cash flow trends.

Relative Valuation

	Forward P/E	PEG	Price / FV
3M	18.9	1.7	107.3%
General Electric	10.7	NMF	63.8%
Honeywell	16.5	1.8	95.9%
United Technologies	15.7	1.4	95.6%
Peer Median	16.1	1.7	95.8%
Danaher	**22.1**	**2.8**	**119.8%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	10.1%
Return on Assets	5.4%
ROIC, with goodwill	8.9%
ROIC, without goodwill	22.8%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-16	Dec-17	Dec-18
Revenue	16,882	18,330	20,016
Revenue, YoY%	-17.9%	8.6%	9.2%
Non-GAAP Operating Income	2,751	3,021	4,254
Non-GAAP EBIT %	16.3%	16.5%	21.3%
Non-GAAP Net Income	2,153	2,470	3,238
Non-GAAP NI Margin %	12.8%	13.5%	16.2%
Non-GAAP Diluted EPS	3.08	3.53	4.55
Non-GAAP Dil EPS, YoY %	-16.1%	14.7%	28.8%
Non-GAAP FCF (CFO-capex)	2,932	2,858	3,796
Non-GAAP FCF Margin %	17.4%	15.6%	19.0%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	10,522
Net Debt	9,892
Total Debt/EBITDA	2.5
Net Debt/EBITDA	2.3
EBITDA/Interest	26.2
Current Ratio	1.4
Quick Ratio	0.9

NMF = Not Meaningful

Structure of the Conglomerates Industry — GOOD

The industrial conglomerate industry is characterized by firms that operate various business lines on a global scale. Demand for industrial products tends to be cyclical in nature, and most firms couple their manufacturing operations with generally more stable services businesses to mitigate fundamental volatility. Firms tend to have bargaining power over suppliers due to industry dominance and boast substantial resources to adapt to changing conditions or competitive threats. Most sell products under powerful and recognizable brand names and look to emerging markets for future growth. We like the group.

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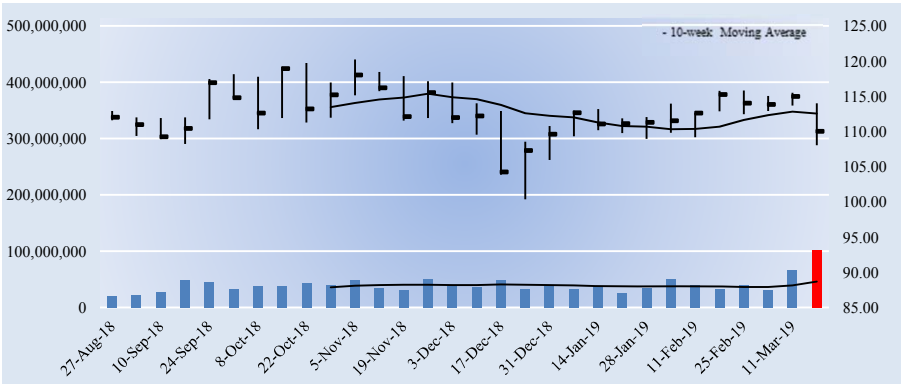
Disney DIS FAIRLY VALUED

Buying Index™ 4 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$114.00	$88.00 - $140.00	LARGE-CAP VALUE	Consumer Discretionary	Media - entertainment

Disney acquired 21st Century Fox for $71.3 billion in cash and stock in a deal that will transform the company and have meaningful implications for the entertainment industry as a whole.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$165,755
Avg Weekly Vol (30 wks)	40,358
30-week Range (USD)	100.35 - 120.2
Valuentum Sector	Consumer Discretionary
5-week Return	-2.6%
13-week Return	6.5%
30-week Return	-2.2%
Dividend Yield %	1.6%
Dividends per Share	1.76
Forward Dividend Payout Ratio	24.8%
Est. Normal Diluted EPS	8.30
P/E on Est. Normal Diluted EPS	13.3
Est. Normal EBITDA	20,331
Forward EV/EBITDA	9.9
EV/Est. Normal EBITDA	9.0
Forward Revenue Growth (5-yr)	4.4%
Forward EPS Growth (5-yr)	3.7%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	24.5%
Return on Assets	11.4%
ROIC, with goodwill	16.4%
ROIC, without goodwill	30.8%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	20,874
Net Debt	16,724
Total Debt/EBITDA	1.2
Net Debt/EBITDA	0.9
EBITDA/Interest	26.2
Current Ratio	0.9
Quick Ratio	0.8

NMF = Not Meaningful

Investment Highlights

• Disney is a diversified entertainment company with operations in five segments: Media Networks, Parks and Resorts, Studio Entertainment, Consumer Products, and Interactive. 'Media Networks' and 'Parks and Resorts' account for more than 70% of revenue. The firm boasts one of the most-recognized brand names. It was founded in 1923 and is headquartered in California.

• Disney has an innate ability to leverage creative success across its entire company. For example, its 'Consumer Products' division has created 11 major franchises that each generate more than $1 billion in annual global retail sales. The timing of movie releases can make such sales somewhat lumpy, however.

• Earnings at Disney continue to be resilient thanks to the strength of its brands and the value of its high-quality creative content. The firm's 'Media Networks' and 'Parks and Resorts' segments continue to lead the charge. ESPN continues to be a solid anchor to 'Cable Networks' revenue--a division included in 'Media Networks'--though the rising threat of 'cord-cutting' should not be ignored.

• Disney acquired 21st Century Fox for $71.3 billion in cash and stock at an overall 50/50 mix of cash and stock after 21st Century was spun off from Fox. Disney now owns Fox's film and TV studio, along with FX and National Geographic networks. $2 billion in cost synergies are expected by 2021, and $13.8 billion in 21st Century Fox's debt was assumed.

• Disney has taken majority control of BAMTech, a global leader in DTC streaming technology, and launched an ESPN-branded sports streaming service in 2018 and a Disney-branded service is coming in 2019. It owns 60% of Hulu after the 21st Century deal. This is a notable shift in Disney's content distribution.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**MODEST**
Technical Evaluation	**VERY BEARISH**
Relative Strength	**NEUTRAL**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**DETERIORATING**
Near-term Technical Resistance, 10-wk MA	**113.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueRisk™ \ ValueCreation™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Cinemark	17.4	1.7	115.2%
IMAX Corp	20.9	1.8	95.2%
Live Nation	NMF	NMF	134.4%
News Corp	NMF	NMF	90.0%
Peer Median	19.1	1.7	105.2%
Disney	**15.5**	**1.5**	**96.5%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Sep-17	Sep-18	Sep-19
Revenue	55,137	59,434	60,504
Revenue, YoY%	-0.9%	7.8%	1.8%
Operating Income	13,873	14,837	15,301
Operating Margin %	25.2%	25.0%	25.3%
Net Income	8,980	12,598	10,501
Net Income Margin %	16.3%	21.2%	17.4%
Diluted EPS	5.69	8.36	7.11
Diluted EPS, YoY %	-0.7%	46.9%	-14.9%
Free Cash Flow (CFO-capex)	8,720	9,830	9,459
Free Cash Flow Margin %	15.8%	16.5%	15.6%

In Millions of USD (except for per share items)

Structure of the Media (entertainment) Industry — NEUTRAL

The media (entertainment) industry spans firms with diversified worldwide entertainment operations to those that specialize primarily in motion picture production and technologies. Firms with media network businesses compete for viewers with other networks, while companies with studio entertainment businesses compete with all forms of entertainment. A significant number of companies produce theatrical/television films, and success depends on unpredictable public preferences. The strongest participants will consistently create filmed entertainment and/or cable programming that consumers want. We're neutral on the group.

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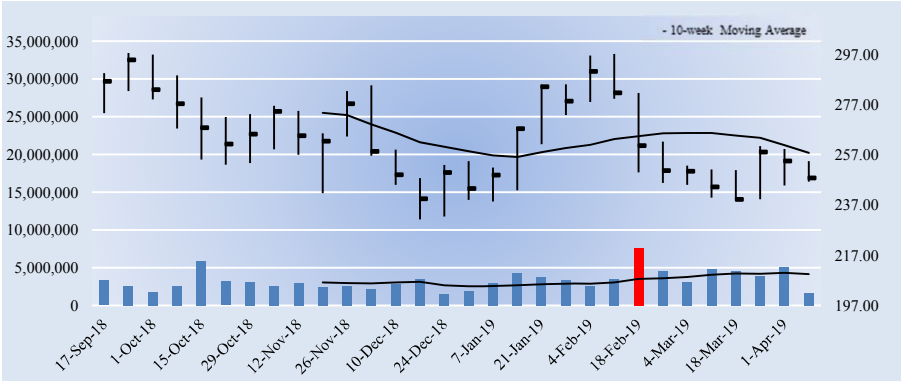
Domino's Pizza DPZ FAIRLY VALUED

Buying Index™ 4 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$236.00	$177.00 - $295.00	LARGE-CAP GROWTH	Consumer Discretionary	Restaurants - Fast Food & Coffee

Domino's Pizza's return on invested capital is simply a sight to see, but we're keeping an eye on its financial leverage. The company is targeting 25,000 stores worldwide and $25 billion in global retail sales by 2025.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**HIGH**
Growth	**HIGH**
Technical Evaluation	**BEARISH**
Relative Strength	**WEAK**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BEARISH**
Near-term Technical Resistance, 10-wk MA	**258.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$10,739
Avg Weekly Vol (30 wks)	3,368
30-week Range (USD)	231.28 - 297.56
Valuentum Sector	Consumer Discretionary
5-week Return	-1.2%
13-week Return	-0.1%
30-week Return	-11.1%
Dividend Yield %	1.0%
Dividends per Share	2.60
Forward Dividend Payout Ratio	27.5%
Est. Normal Diluted EPS	13.60
P/E on Est. Normal Diluted EPS	18.2
Est. Normal EBITDA	923
Forward EV/EBITDA	19.6
EV/Est. Normal EBITDA	15.3
Forward Revenue Growth (5-yr)	9.7%
Forward EPS Growth (5-yr)	17.4%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Domino's Pizza is the number one pizza delivery company in the US, based on reported consumer spending. The firm also has a leading international presence and ranks as the second-largest pizza company in the world, based on number of units and sales. It has an enterprise of more than 15,000 units with ~60% outside of the US market.

• All investors should become familiar with the success of Domino's. Profits are driven primarily by franchise royalties, which account for more than 90% of international operating income. 2018 marked the 22nd consecutive year of positive international same-store sales growth.

• Domino's is an impressive company. Its US annual same-store sales growth has averaged +3.9% since 1997, with particular strength coming during the past few years (+12% in 2015, +10.5% in 2016, +7.7% in 2017, and +6.6% in 2018). The firm's average annual international same-store sales expansion has been even more impressive over this time horizon (+5.6% average).

• The firm's franchise model generates sustainable returns for franchisees ($137k-$140k in annual EBITDA in the US in 2018), revealing healthy internals. It is targeting a mid-range outlook of 6%-8% net unit growth, domestic same store sales growth of 3%-6%, international same store sales growth of 3%-6%, and global retail sales growth of 8%-12%.

• Domino's return on invested capital is simply a sight to see. If it is not the greatest value-generator in our coverage universe, it certainly is within the restaurant space. However, its debt load should not be ignored. Debt-to-EBITDA was near the upper bound of its 3x-6x target at the end of the third quarter of 2018.

Relative Valuation

	Forward P/E	PEG	Price / FV
McDonald's	23.2	2.8	131.1%
Starbucks	27.5	1.5	123.1%
Wendy's Co	28.7	NMF	128.5%
Yum! Brands	25.7	1.9	138.2%
Peer Median	26.6	1.9	129.8%
Domino's Pizza	**26.2**	**1.7**	**105.0%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	-12.1%
Return on Assets	35.2%
ROIC, with goodwill	185.0%
ROIC, without goodwill	200.7%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	2,788	3,433	3,766
Revenue, YoY%	12.8%	23.1%	9.7%
Operating Income	521	572	652
Operating Margin %	18.7%	16.6%	17.3%
Net Income	278	362	402
Net Income Margin %	10.0%	10.5%	10.7%
Diluted EPS	5.83	8.35	9.46
Diluted EPS, YoY %	35.6%	43.3%	13.3%
Free Cash Flow (CFO-capex)	249	274	356
Free Cash Flow Margin %	8.9%	8.0%	9.4%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	3,532
Net Debt	3,339
Total Debt/EBITDA	5.6
Net Debt/EBITDA	5.3
EBITDA/Interest	4.3
Current Ratio	1.5
Quick Ratio	1.0

NMF = Not Meaningful

Structure of the Restaurants Industry - Fast Food & Coffee — NEUTRAL

The restaurant industry has benefited from a long-term trend toward eating out, but the space has become increasingly more competitive as new concepts are introduced and successful chains expand. Not only are there pricing pressures and trade-down threats, but rising costs for commodities and labor have pressured profits. Barriers to entry are low, and many constituents have a difficult time differentiating themselves. We tend to like larger chains that benefit from scale advantages and international expansion opportunities, though niche franchises can be appealing. We're neutral on the structure of the group.

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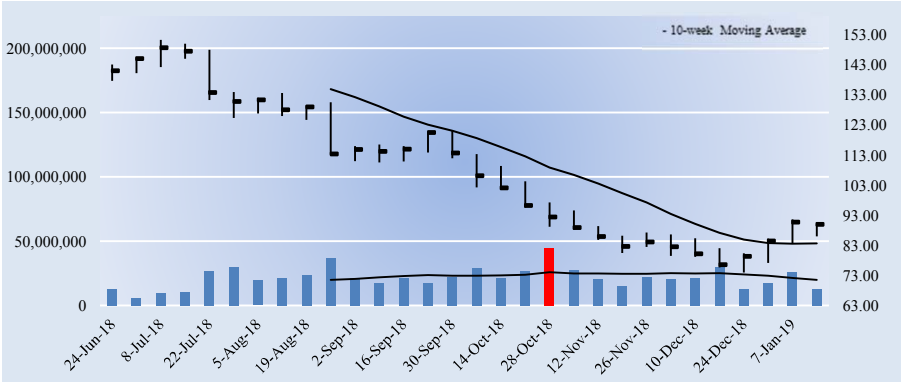
Electronic Arts EA FAIRLY VALUED

Buying Index™ 7 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Highest Rated	$94.00	$66.00 - $122.00	LARGE-CAP VALUE	Information Technology	Software - graphics

Mobile offers a solid long-term growth opportunity for Electronic Arts, even if short-term performance is lumpy, and digital net bookings continue to grow at a solid rate.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**MODEST**
Technical Evaluation	**VERY BULLISH**
Relative Strength	**NEUTRAL**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BEARISH**
Near-term Technical Support, 10-week MA	**84.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$28,055
Avg Weekly Vol (30 wks)	21,547
30-week Range (USD)	73.91 - 151.26
Valuentum Sector	Information Technology
5-week Return	12.2%
13-week Return	-12.5%
30-week Return	-36.1%
Dividend Yield %	0.0%
Dividends per Share	0.00
Forward Dividend Payout Ratio	0.0%
Est. Normal Diluted EPS	5.48
P/E on Est. Normal Diluted EPS	16.4
Est. Normal EBITDA	2,157
Forward EV/EBITDA	12.7
EV/Est. Normal EBITDA	11.0
Forward Revenue Growth (5-yr)	4.5%
Forward EPS Growth (5-yr)	13.1%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	28.1%
Return on Assets	14.5%
ROIC, with goodwill	58.2%
ROIC, without goodwill	245.2%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	992
Net Debt	-4,339
Total Debt/EBITDA	0.6
Net Debt/EBITDA	NMF
EBITDA/Interest	Excellent
Current Ratio	2.4
Quick Ratio	2.3

NMF = Not Meaningful

Investment Highlights

• Electronic Arts develops, markets, publishes and distributes game software content and services that can be played by consumers on a variety of video game machines and electronic devices such as PlayStations 3 and 4, Xbox 360, Xbox One, and Wii. Some of its titles include Battlefield, UFC, and EA Sports offerings for nearly every major American sport.

• EA's revenue from mobile has grown considerably in recent years and is a great opportunity for future growth. The segment's gains have more than offset negative PC trends. Digital net bookings for the twelve month period ending September 2018 grew 11% and made up 69% of total net bookings.

• Multiple industry trends are changing EA's operating environment. Online gameplay and the digital distribution of games are leading the digital transformation. Business models have emerged with focuses on extended product engagement, mobile opportunities, and predictable subscription-based revenue. The importance and dependability of franchises cannot be denied, however.

• New consoles tend to drive growth at EA, so investors should pay close attention to the strategies of Nintendo (Wii and Switch), Microsoft (Xbox One) and Sony (PS). Digital share (mobile/handhelds, extra content, full game downloads) of overall interactive entertainment industry spending has advanced to 70% of the total in recent years.

• The company's portfolio of brands includes wholly-owned brands such as Battlefield, Mass Effect, Need for Speed, The Sims, Bejeweled, and Plants v. Zombies. We like EA's considerable brand recognition and strength.

Relative Valuation

	Forward P/E	PEG	Price / FV
Activision	17.9	2.5	79.9%
Glu Mobile	35.9	NMF	134.6%
Take-Two	21.1	3.5	105.9%
Zynga	25.0	3.0	85.8%
Peer Median	23.0	3.0	95.9%
Electronic Arts	**19.5**	**2.1**	**95.7%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Mar-17	Mar-18	Mar-19
Revenue	4,845	5,150	5,181
Revenue, YoY%	10.2%	6.3%	0.6%
Non-GAAP Operating Income	1,224	1,434	1,724
Non-GAAP EBIT %	25.3%	27.8%	33.3%
Non-GAAP Net Income	967	1,043	1,426
Non-GAAP NI Margin %	20.0%	20.3%	27.5%
Non-GAAP Diluted EPS	3.08	3.34	4.62
Non-GAAP Dil EPS, YoY %	NMF	8.6%	38.1%
Non-GAAP FCF (CFO-capex)	1,455	1,585	1,523
Non-GAAP FCF Margin %	30.0%	30.8%	29.4%

In Millions of USD (except for per share items)

Structure of the Software (graphics) Industry — POOR

The software (graphics) industry is composed of a variety of firms from online gaming entities to technology-based-language learning companies. Industry constituents compete for the leisure time, attention and discretionary spending of consumers. The social gaming space, in particular, is evolving rapidly, and new entrants will inevitably drive down outsize returns over time. Performance of many participants is "hit" driven. If companies don't deliver "hit" products to the market, operating results will suffer. Rapid technological change makes obsolescence a possibility. We don't like the group's structure.

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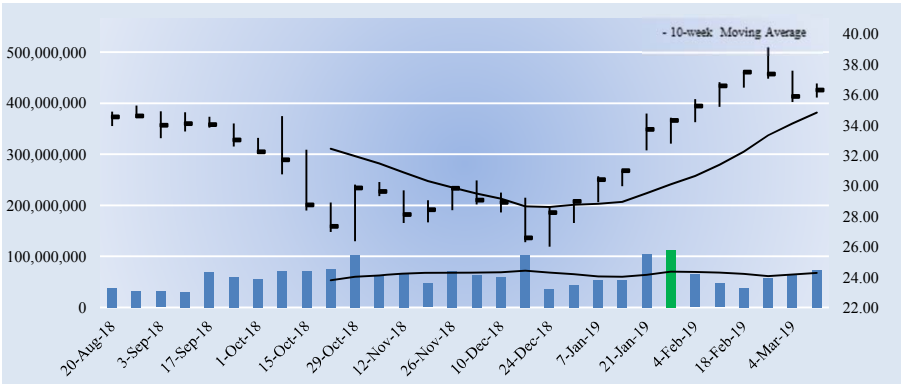
eBay EBAY FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$37.00	$28.00 - $46.00	LARGE-CAP VALUE	Consumer Discretionary	Internet & Catalog Retail

eBay recently announced a series of strategic initiatives, and competition is intensifying. GMV growth is expected to be subdued in the near term.

Stock Chart (weekly)



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Company Vitals

Market Cap (USD)	$35,973
Avg Weekly Vol (30 wks)	62,122
30-week Range (USD)	26.01 - 39.14
Valuentum Sector	Consumer Discretionary
5-week Return	2.3%
13-week Return	26.1%
30-week Return	6.1%
Dividend Yield %	1.5%
Dividends per Share	0.56
Forward Dividend Payout Ratio	20.9%
Est. Normal Diluted EPS	3.19
P/E on Est. Normal Diluted EPS	11.4
Est. Normal EBITDA	4,480
Forward EV/EBITDA	10.1
EV/Est. Normal EBITDA	9.0
Forward Revenue Growth (5-yr)	3.1%
Forward EPS Growth (5-yr)	7.2%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	36.5%
Return on Assets	13.8%
ROIC, with goodwill	18.1%
ROIC, without goodwill	30.4%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	9,231
Net Debt	4,316
Total Debt/EBITDA	2.9
Net Debt/EBITDA	1.3
EBITDA/Interest	9.8
Current Ratio	1.6
Quick Ratio	1.3

NMF = Not Meaningful

Investment Highlights

• eBay is a global commerce and payments company that connects buyers and sellers worldwide. Activist investor Carl Icahn no longer holds shares in this security, and it has been separated from PayPal since July 2015. It also owns online ticket platform StubHub. The company was founded in 1995 and is headquartered in San Jose, California.

• eBay is still a powerhouse even after letting go of its prized PayPal. In 2018, the firm processed ~$95 billion in gross merchandise value (up ~5% in constant currency from 2017), and it exited the year with from nearly 180 million active buyers. Increased competition in e-commerce is impacting expectations.

• International operations continue to account for an increasing portion of overall GMV, but management has noted a deceleration in GMV in European markets more recently. eBay continues to focus on innovation in big data, personalization, and artificial intelligence, but it is scaling back on user experience plans and taking a more disciplined approach to marketing, which will constrain GMV in the short term.

• In 2019, eBay is expecting to grow GMV by ~1% and revenue by 1%-3% in constant currency. Operating margin is expected to come in at 28%-29% in 2019, roughly 1 percentage point higher than 2018 at the midpoint. Non-GAAP earnings per share guidance comes in a range of $2.62-$2.68 for the year, and free cash flow is expected to be $2.1-$2.3 billion.

• eBay announced a series of new initiatives in March 2019, including a strategic review of assets such as StubHub and eBay Classifieds Group, and it is working with activist investors Elliot Management and Starboard Value. It also initiated a quarterly dividend and is targeting a 1.5x net debt-to-EBITDA ratio.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**35.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Alibaba	32.8	1.8	87.8%
Amazon.com	NMF	2.6	86.0%
Booking Holdings	17.4	1.6	82.1%
Expedia Group	17.6	1.5	81.6%
Peer Median	17.6	1.7	84.1%
eBay	**13.6**	**2.0**	**98.1%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	- Actual -	Split Adjusted	Post - Proj
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	9,567	10,746	10,853
Revenue, YoY%	6.5%	12.3%	1.0%
Non-GAAP Operating Income	2,537	2,508	3,304
Non-GAAP EBIT Margin %	26.5%	23.3%	30.4%
Non-GAAP Net Income	-1,012	2,528	2,586
Non-GAAP NI Margin %	-10.6%	23.5%	23.8%
Non-GAAP Diluted EPS	-0.95	2.55	2.68
Non-GAAP Dil EPS, YoY %	NMF	NMF	NMF
Free Cash Flow (CFO-capex)	2,480	2,007	2,205
Free Cash Flow Margin %	25.9%	18.7%	20.3%

In Millions of USD (except for per share items)

Structure of the Internet & Catalog Retail Industry — GOOD

The Internet and catalog retail industry benefits as a whole from the secular trend toward consumer digital (online) consumption. The industry consists of a number of exclusive online retailers led by Amazon, which continues to disrupt the broader retail space, and businesses that offer Internet travel services such as Booking Holdings, while online auctions are dominated by eBay. The industry generates high returns on investment due to minimal capital costs, but the landscape will be vastly different in the decades ahead. Still, we like the group.

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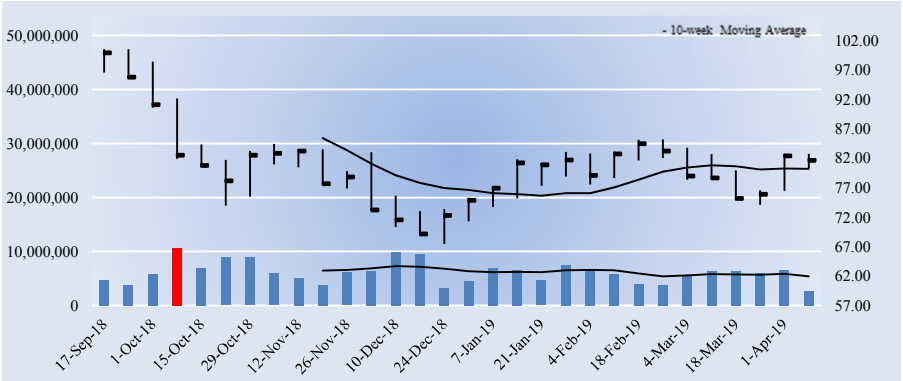
Eastman Chemical EMN FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$97.00	$78.00 - $116.00	LARGE-CAP VALUE	Materials	Chemicals - broad

Roughly two-thirds of Eastman Chemical's sales comes from product lines with leading market positions, from additives to advanced materials to fibers.

Stock Chart (weekly)



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Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**GOOD**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**VERY BULLISH**
Relative Strength	**WEAK**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**80.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low			■	
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$11,665
Avg Weekly Vol (30 wks)	6,131
30-week Range (USD)	67.4 - 100.51
Valuentum Sector	Materials
5-week Return	2.7%
13-week Return	7.0%
30-week Return	-16.1%
Dividend Yield %	3.0%
Dividends per Share	2.48
Forward Dividend Payout Ratio	28.2%
Est. Normal Diluted EPS	9.78
P/E on Est. Normal Diluted EPS	8.3
Est. Normal EBITDA	2,473
Forward EV/EBITDA	7.5
EV/Est. Normal EBITDA	7.1
Forward Revenue Growth (5-yr)	2.2%
Forward EPS Growth (5-yr)	6.3%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Eastman Chemical is a global specialty chemical company that produces a broad range of advanced materials, additives and functional products, specialty chemicals, and fibers. The company's strategic shift away from 'commodity' chemicals has brightened its future. It was founded in 1920 and is headquartered in Tennessee.

• Near-term growth drivers include its portfolio of specialty businesses creating their own growth markets, growth in high-margin innovative products, and productivity to offset inflation. Headwinds include higher raw material and energy costs, global economic uncertainty, and higher spending for growth.

• Eastman Chemical is targeting core revenue growth in line with end markets, but it expects specialty products sales to grow at least 2x as fast as underlying markets. It is also targeting a 23% and growing EBITDA margin driven by the aforementioned improving product mix, $1+ billion and growing annual free cash flow, and 10%-15% and growing ROIC.

• Two thirds of the company's sales comes from product lines with leading market positions, from additives (cellulosic polymers, insoluble sulfurs) to advanced materials (copolyester, PVB resin) to fibers (acetate tow, acetate yarn). Capital spending will continue to support organic growth projects throughout the company.

• Eastman Chemical stands to benefit from long-term global trends such as energy efficiency, a rising middle class in emerging economies, and increased health and wellness. The company is targeting an earnings per share CAGR of 8%-12% from 2018-2020.

Relative Valuation

	Forward P/E	PEG	Price / FV
DowDuPont	12.2	1.4	83.7%
Ecolab	30.6	2.5	153.4%
LyondellBasell	8.5	0.9	88.7%
PPG Industries	18.2	1.6	113.8%
Peer Median	15.2	1.5	101.2%
Eastman Chemical	**9.3**	**1.7**	**84.2%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	22.5%
Return on Assets	7.0%
ROIC, with goodwill	9.7%
ROIC, without goodwill	14.6%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	9,549	10,151	10,354
Revenue, YoY%	6.0%	6.3%	2.0%
Operating Income	1,540	1,523	1,722
Operating Margin %	16.1%	15.0%	16.6%
Net Income	1,384	1,080	1,231
Net Income Margin %	14.5%	10.6%	11.9%
Diluted EPS	9.47	7.56	8.79
Diluted EPS, YoY %	64.6%	-20.2%	16.3%
Free Cash Flow (CFO-capex)	1,008	1,015	1,250
Free Cash Flow Margin %	10.6%	10.0%	12.1%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	6,168
Net Debt	5,942
Total Debt/EBITDA	2.9
Net Debt/EBITDA	2.8
EBITDA/Interest	9.1
Current Ratio	1.8
Quick Ratio	0.9

NMF = Not Meaningful

Structure of the Chemicals Industry — POOR

The broad chemicals industry includes firms that make thousands of different chemical substances, ranging from basic raw materials to advanced specialty chemicals. Making chemicals is a cyclical and energy-intensive business, with volatile oil/gas prices influencing feedstock, operation, and transportation costs. Specialty providers can carve out niches, but commodity chemicals producers are largely undifferentiated, making it impossible to gain a sustainable competitive edge. The industry is very capital intensive, and large swings in prices and volume should be expected. We don't like the industry structure.

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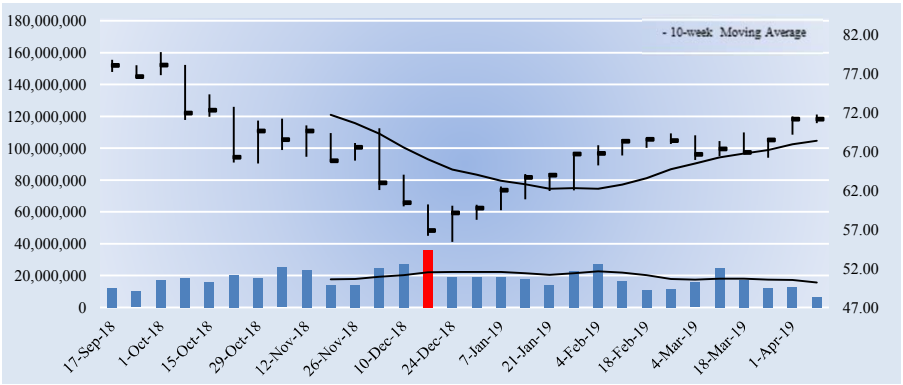
Emerson Electric EMR FAIRLY VALUED

Buying Index™ 5 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$63.00	$50.00 - $76.00	LARGE-CAP CORE	Industrials	Electrical Equipment

There are a number of moving parts in Emerson Electric's business, but its free cash flow generating capacity continues to impress as it consistently reports a cash conversion rate of 100%+.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**MODEST**
Technical Evaluation	**NEUTRAL**
Relative Strength	**NEUTRAL**
Money Flow Index (MFI)	**OVERBOUGHT**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**68.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$45,189
Avg Weekly Vol (30 wks)	18,252
30-week Range (USD)	55.39 - 79.7
Valuentum Sector	Industrials
5-week Return	7.1%
13-week Return	15.7%
30-week Return	-8.2%
Dividend Yield %	2.8%
Dividends per Share	1.96
Forward Dividend Payout Ratio	52.6%
Est. Normal Diluted EPS	4.56
P/E on Est. Normal Diluted EPS	15.6
Est. Normal EBITDA	4,811
Forward EV/EBITDA	11.9
EV/Est. Normal EBITDA	10.2
Forward Revenue Growth (5-yr)	5.3%
Forward EPS Growth (5-yr)	9.3%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Emerson offers a wide range of products and services in the industrial, commercial and consumer markets through its 'Automation Solutions' and 'Commercial & Residential Solutions' segments, the latter of which is made up of its 'Climate Technologies' and 'Tools & Home Products' businesses. The company was founded in 1890 and is headquartered in St. Louis, Missouri.

• Emerson expects global demand trends to continue improving, with strength in Asia and North America leading the way. Organic growth will be bolstered by bolt-on acquisitions, including its purchase agreement for GE's Intelligent Platforms business, which should boost its position in automation.

• There are a number of moving parts in Emerson's business. The firm recently sold its network power division for $4 billion and its motor and generator business for $1.2 billion, and it purchased Pentair's valves and controls business for $3.15 billion. It also acquired Textron's Tools & Test business for $810 million and smart pneumatics technology producer Aventics for €527 million.

• In fiscal 2019, Emerson is expecting net sales growth of 4%-7% to be primarily driven by its 'Automation Solutions' segment. GAAP EPS guidance has been set in a range of $3.60-$3.75 (~4%-8% growth over 2018), and operating cash flow is expected to be ~$3.2 billion. 100%+ free cash flow conversion is being targeted in the year.

• You can't talk about Emerson without mentioning its fantastic dividend growth profile and impressive track record. Management plans to reduce its dividend-to-free cash flow ratio to 40%-50% by fiscal 2020 from 56% in 2017. The firm's dividend yield and Dividend Cushion ratio offer an enticing combination.

Relative Valuation

	Forward P/E	PEG	Price / FV
Barnes Group	17.7	1.7	101.5%
Parker-Hannifin	13.5	1.5	86.3%
Pentair	17.1	2.8	93.6%
Roper Technologies	25.1	3.3	125.2%
Peer Median	17.4	2.2	97.5%
Emerson Electric	**19.1**	**2.2**	**112.9%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	22.1%
Return on Assets	8.9%
ROIC, with goodwill	19.5%
ROIC, without goodwill	36.2%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	4,760
Net Debt	3,667
Total Debt/EBITDA	1.2
Net Debt/EBITDA	0.9
EBITDA/Interest	24.9
Current Ratio	1.1
Quick Ratio	0.7

NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Sep-17	Sep-18	Sep-19
Revenue	15,264	17,408	18,957
Revenue, YoY%	5.1%	14.0%	8.9%
Operating Income	2,786	3,202	3,291
Operating Margin %	18.3%	18.4%	17.4%
Net Income	1,643	2,203	2,344
Net Income Margin %	10.8%	12.7%	12.4%
Diluted EPS	2.55	3.47	3.73
Diluted EPS, YoY %	3.9%	35.8%	7.5%
Free Cash Flow (CFO-capex)	1,436	2,275	2,583
Free Cash Flow Margin %	9.4%	13.1%	13.6%

In Millions of USD (except for per share items)

Structure of the Electrical Equipment Industry — NEUTRAL

The fragmented electrical equipment industry includes firms that primarily provide flow control and electrical components. Order trends and backlog are largely driven by the overall health of the economy, while all constituents must deal with volatile raw material prices. Most operate high fixed-cost business models, where operating leverage should be monitored closely, and face intense global competition. Still, we like the group's exposure to recurring maintenance, repair, and overhaul (MRO) revenue and its large and growing emerging-market opportunities. We're generally neutral on the industry's structure.

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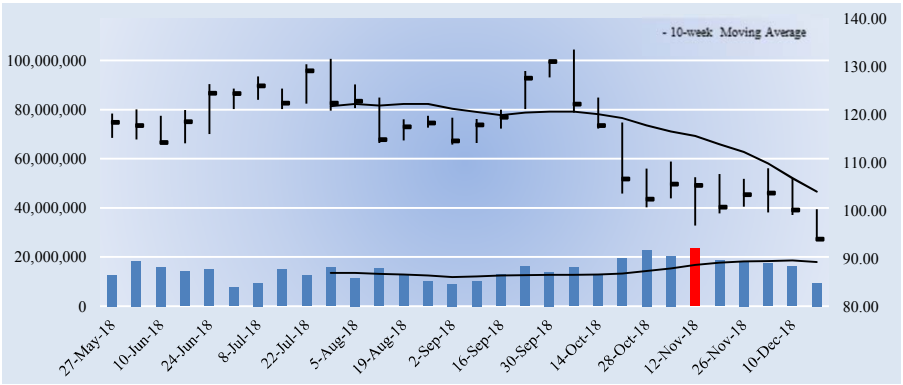
EOG Resources EOG FAIRLY VALUED

Buying Index™ 3 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Neutral	$98.00	$78.00 - $118.00	LARGE-CAP BLEND	Energy	Independent Oil & Gas

EOG Resources is committed to operating within its internally generated cash flow, and we like its prudent focus on return on capital employed.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$54,403
Avg Weekly Vol (30 wks)	14,777
30-week Range (USD)	93.71 - 133.53
Valuentum Sector	Energy
5-week Return	-9.6%
13-week Return	-22.6%
30-week Return	-19.0%
Dividend Yield %	0.9%
Dividends per Share	0.88
Forward Dividend Payout Ratio	14.9%
Est. Normal Diluted EPS	6.62
P/E on Est. Normal Diluted EPS	14.2
Est. Normal EBITDA	8,960
Forward EV/EBITDA	7.3
EV/Est. Normal EBITDA	6.7
Forward Revenue Growth (5-yr)	18.1%
Forward EPS Growth (5-yr)	9.1%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	-6.9%
Return on Assets	-3.3%
ROIC, with goodwill	12.5%
ROIC, without goodwill	12.5%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	6,387
Net Debt	5,553
Total Debt/EBITDA	1.3
Net Debt/EBITDA	1.2
EBITDA/Interest	17.5
Current Ratio	1.2
Quick Ratio	0.9

NMF = Not Meaningful

Investment Highlights

• EOG operates primarily in the US, Canada, Trinidad, UK, China, and Argentina. The firm is the largest crude oil producer in the South Texas Eagle Ford Shale and North Dakota Bakken, which should drive significant reserve and production growth. EOG has a prudent focus on return on capital employed and targets the metric to grow at a double-digit rate over the long haul.

• Collapsing crude oil prices put EOG on the defensive. The company was able to reduce its all-in reserve replacement costs per BOE by 43% from 2013 to 2017 (to $8.71 from $15.23) and is expecting further reductions in 2018 and 2019 thanks in part to its focus on premium drilling.

• EOG boasts the highest production per employee in its peer group, giving it a labor efficiency advantage. A shift to focus on premium drilling (90%+ of total wells expected in 2018) should drive capital efficiency, and a recent increase in capital spending is expected to allow it to retain high performing service providers and provide service continuity as it targets well cost reductions through 2019.

• EOG expects to generate positive free cash flow at $50/bbl oil prices in the near term, and it is committed to operating within its internally generated cash flow, a focus we like. Management plans to develop its capital budget with assumptions of $40 oil and $2.50 natural gas prices to remain prudent, and it hopes to repay $3 billion in debt by 2021.

• EOG's total debt outstanding was roughly $6.4 billion at the end of the third quarter of 2018 for a debt-to-total capitalization ratio of ~26%. On a net debt basis, the company's leverage is slightly better at ~$5.2 billion. The firm is in better shape than some of its peers, but its net debt load shouldn't be ignored.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**GOOD**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**WEAK**
Financial Leverage	**MEDIUM**
Growth	**AGGRESSIVE**
Technical Evaluation	**BEARISH**
Relative Strength	**WEAK**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BEARISH**
Near-term Technical Resistance, 10-wk MA	**104.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low			■	
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Anadarko	17.1	NMF	87.3%
Devon Energy	15.4	1.9	81.4%
Occidental Petroleum	12.1	1.4	87.7%
Southwestern Energy	3.7	NMF	73.2%
Peer Median	13.7	1.6	84.3%
EOG Resources	**15.9**	**2.3**	**95.9%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-16	Dec-17	Dec-18
Revenue	7,651	11,208	17,407
Revenue, YoY%	-12.6%	46.5%	55.3%
Operating Income	-505	1,406	4,681
Operating Margin %	-6.6%	12.5%	26.9%
Net Income	-1,097	2,583	3,481
Net Income Margin %	-14.3%	23.0%	20.0%
Diluted EPS	-1.98	4.46	5.91
Diluted EPS, YoY %	-76.1%	NMF	NMF
Free Cash Flow (CFO-capex)	-224	140	977
Free Cash Flow Margin %	-2.9%	1.3%	5.6%

In Millions of USD (except for per share items)

Structure of the Independent Oil & Gas Industry — POOR

The oil and gas business is highly competitive in the exploration, acquisition, and production of reserves. Changes in deepwater drilling laws and other regulatory initiatives can add uncertainty to operations. The trajectory of global economic growth, the actions of OPEC, and political and environmental uncertainty are other key factors. A strong balance sheet to manage through the commodity price cycle is necessary for survival. With the group's profitability largely driven by the volatile prices of oil, natural-gas and NGLs, we're not that excited about the structure of this commodity-producing space.

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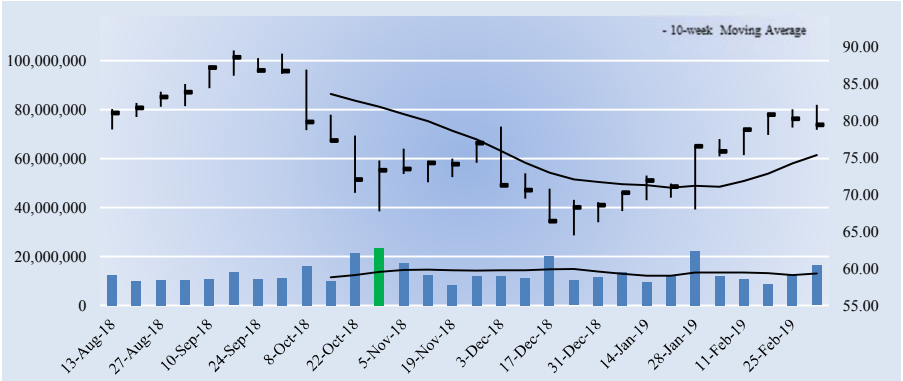
Eaton ETN FAIRLY VALUED

Buying Index™ 7 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$87.00	$70.00 - $104.00	LARGE-CAP VALUE	Industrials	Electrical Equipment - industrial

Eaton expects solid organic growth in the near term, and management is confident it will be able to offset the impact of tariff-related costs in 2019.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$34,475
Avg Weekly Vol (30 wks)	13,118
30-week Range (USD)	64.46 - 89.46
Valuentum Sector	Industrials
5-week Return	3.5%
13-week Return	11.5%
30-week Return	-2.6%
Dividend Yield %	3.6%
Dividends per Share	2.84
Forward Dividend Payout Ratio	47.8%
Est. Normal Diluted EPS	6.81
P/E on Est. Normal Diluted EPS	11.6
Est. Normal EBITDA	4,271
Forward EV/EBITDA	10.5
EV/Est. Normal EBITDA	9.7
Forward Revenue Growth (5-yr)	2.8%
Forward EPS Growth (5-yr)	9.5%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	14.7%
Return on Assets	7.5%
ROIC, with goodwill	8.7%
ROIC, without goodwill	18.7%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	7,521
Net Debt	7,081
Total Debt/EBITDA	1.9
Net Debt/EBITDA	1.8
EBITDA/Interest	14.3
Current Ratio	1.5
Quick Ratio	0.8

NMF = Not Meaningful

Investment Highlights

• Eaton is a leader in diversified power management solutions that make electrical, hydraulic and mechanical power operate more efficiently. The firm serves the electrical, hydraulics, aerospace, truck and automotive end markets. Electrical accounts for ~60% of sales. It was founded in 1916 and is headquartered in Ireland. It plans to spin-off its Lighting business by the end of 2019.

• Eaton expects a majority of its businesses to experience solid growth in their respective end markets in 2019 with overall market growth of ~3%-4% expected. It is confident it wil be able to offset tariff-related costs, which are projected at ~$110 million in 2019, in the year.

• Multiple secular trends are driving Eaton's business over the long haul: population growth is pushing electricity demand higher; environmental concerns and increased regulation are requiring increased innovation, as is the case with the push for greater energy efficiency; and intelligent products and connectivity are driving new avenues for value creation.

• The firm continues to focus on improving segment operating margins via margin-accretive acquisitions, innovative new products, and through restructuring. Management estimates it has reduced earnings volatility through the economic cycle by 40%, and it is targeting a segment operating margin of 17%-18% in 2020, up from 15% in 2015-2017.

• Eaton's 2018-2020 goals include 3%-4% organic revenue growth, 1%-3% acquisition revenue growth, ~170 basis points of segment operating margin expansion, an EPS growth CAGR of 11%-12%, and free cash flow at 10%+ of sales. Share repurchases amount to 1%-2% of its market cap per year.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**DETERIORATING**
Near-term Technical Support, 10-week MA	**75.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				■
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Ametek	19.2	3.0	121.0%
AO Smith Corp	18.6	2.5	97.8%
Littelfuse	20.0	2.0	107.8%
Rockwell Automation	19.2	1.9	114.8%
Peer Median	19.2	2.2	111.3%
Eaton	**13.4**	**1.7**	**91.2%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	20,404	21,609	22,387
Revenue, YoY%	3.3%	5.9%	3.6%
Operating Income	2,499	2,966	3,246
Operating Margin %	12.2%	13.7%	14.5%
Net Income	2,985	2,145	2,528
Net Income Margin %	14.6%	9.9%	11.3%
Diluted EPS	6.72	4.94	5.94
Diluted EPS, YoY %	59.5%	-26.5%	20.2%
Free Cash Flow (CFO-capex)	2,146	2,093	2,491
Free Cash Flow Margin %	10.5%	9.7%	11.1%

In Millions of USD (except for per share items)

Structure of the Industrial Electrical Equipment Industry — NEUTRAL

Demand for products in the industrial electrical equipment space is highly cyclical, and industry constituents are exposed to volatile raw-material costs, which at times can be difficult to pass along to customers. Product development and quality initiatives are sources of competitive strengths, but rivals often compete aggressively on price to gain share. The industrial electrical equipment market should grow at a GDP-like pace in the developed world and a multiple of that trajectory in emerging markets. We're neutral on the space.

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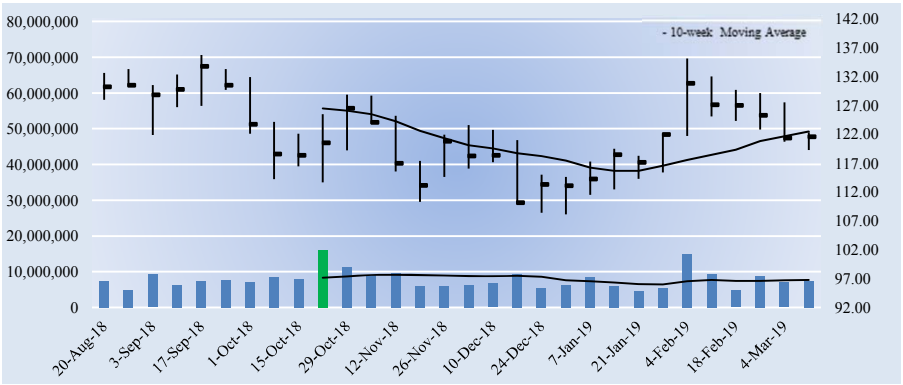
Expedia Group EXPE FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$149.00	$119.00 - $179.00	LARGE-CAP VALUE	Consumer Discretionary	Internet & Catalog Retail

We've raised our fair value estimate for Expedia Group after raising near-term expectations. Momentum in gross bookings has impressed of late, and its low international penetration rates imply a solid runway for potential growth.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**WEAK**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**IMPROVING**
Near-term Technical Resistance, 10-wk MA	**122.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$18,585
Avg Weekly Vol (30 wks)	7,856
30-week Range (USD)	108.11 - 135.69
Valuentum Sector	Consumer Discretionary
5-week Return	-7.2%
13-week Return	3.3%
30-week Return	-7.1%
Dividend Yield %	1.1%
Dividends per Share	1.28
Forward Dividend Payout Ratio	18.5%
Est. Normal Diluted EPS	8.72
P/E on Est. Normal Diluted EPS	13.9
Est. Normal EBITDA	3,054
Forward EV/EBITDA	7.7
EV/Est. Normal EBITDA	6.4
Forward Revenue Growth (5-yr)	7.8%
Forward EPS Growth (5-yr)	30.8%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Expedia Group is one of the largest online travel companies, with an extensive portfolio of online travel brands. The firm covers virtually every aspect of researching, planning, and booking travel. It was founded in 1996. Liberty Interactive owns ~16% of the company; Barry Diller controls roughly 54% of total voting power.

• Expedia's technology platform would be nearly impossible for a new entrant to replicate, and the company boasts deep global supplier relationships and multiple, diverse sources of demand (leisure, corporate, travel agency). Overall travel demand levels are healthy.

• Expedia truly has a dynamic portfolio of travel brands, including Expedia.com, Hotels.com, Hotwire.com, Egencia, eLong, and others. As one of the world's largest online travel companies, its gross bookings still represent only ~6% of total worldwide travel spending. Growth prospects are bright, but consolidation among hotels could impact negotiations regarding take rates for online travel companies.

• Expedia is investing in mobile in an attempt to drive growth and engagement. Roughly one-third of all transactions are booked via mobile as of the full year 2018, and transactions in its mobile app grew by nearly 50% in 2018, suggesting its digital investments are paying off. Expedia app users are more than twice as likely to be repeat users than the average user.

• Expedia is not afraid to make a deal. In December 2015, the company completed its acquisition of HomeAway in a cash and stock deal valued at almost $4 billion. The firm also purchased rival Orbitz in a deal with an enterprise value of ~$1.6 billion.

Relative Valuation

	Forward P/E	PEG	Price / FV
Alibaba	32.8	1.8	87.8%
Amazon.com	NMF	2.6	86.0%
Booking Holdings	17.4	1.6	82.1%
eBay	13.6	2.0	98.1%
Peer Median	17.4	1.9	86.9%
Expedia Group	**17.6**	**1.5**	**81.6%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	7.9%
Return on Assets	2.0%
ROIC, with goodwill	7.3%
ROIC, without goodwill	23.9%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	10,060	11,223	12,334
Revenue, YoY%	14.7%	11.6%	9.9%
Non-GAAP Operating Income	667	783	1,451
Non-GAAP EBIT %	6.6%	7.0%	11.8%
Non-GAAP Net Income	378	406	1,047
Non-GAAP NI Margin %	3.8%	3.6%	8.5%
Non-GAAP Diluted EPS	2.42	2.66	6.92
Non-GAAP Dil EPS, YoY %	32.5%	9.9%	160.5%
Non-GAAP FCF (CFO-capex)	1,089	1,097	1,460
Non-GAAP FCF Margin %	10.8%	9.8%	11.8%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	3,717
Net Debt	987
Total Debt/EBITDA	2.1
Net Debt/EBITDA	0.6
EBITDA/Interest	9.4
Current Ratio	0.6
Quick Ratio	0.6

NMF = Not Meaningful

Structure of the Internet & Catalog Retail Industry — GOOD

The Internet and catalog retail industry benefits as a whole from the secular trend toward consumer digital (online) consumption. The industry consists of a number of exclusive online retailers led by Amazon, which continues to disrupt the broader retail space, and businesses that offer Internet travel services such as Booking Holdings, while online auctions are dominated by eBay. The industry generates high returns on investment due to minimal capital costs, but the landscape will be vastly different in the decades ahead. Still, we like the group.

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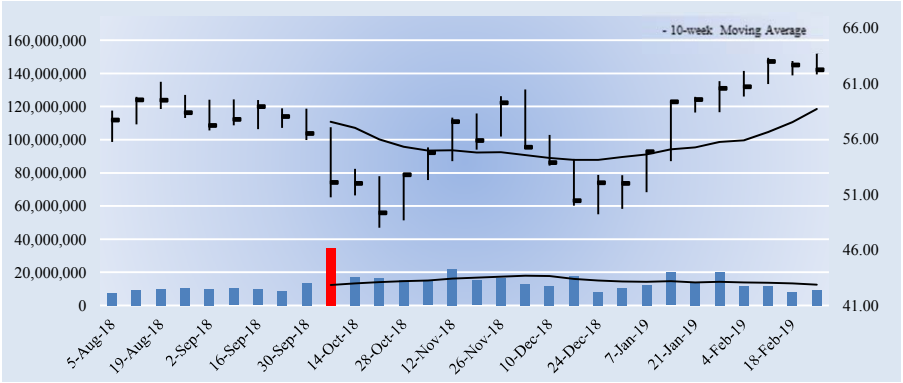
Fastenal FAST FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$52.00	$39.00 - $65.00	LARGE-CAP CORE	Industrials	Distributors

Given the prevalence of cost inflation and tariffs, Fastenal is working to evaluate and execute pricing strategies that will enhance long-term margin potential.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$17,872
Avg Weekly Vol (30 wks)	13,650
30-week Range (USD)	48.01 - 63.72
Valuentum Sector	Industrials
5-week Return	5.8%
13-week Return	3.7%
30-week Return	11.2%
Dividend Yield %	2.8%
Dividends per Share	1.72
Forward Dividend Payout Ratio	60.0%
Est. Normal Diluted EPS	3.43
P/E on Est. Normal Diluted EPS	18.1
Est. Normal EBITDA	1,476
Forward EV/EBITDA	14.5
EV/Est. Normal EBITDA	12.3
Forward Revenue Growth (5-yr)	7.7%
Forward EPS Growth (5-yr)	9.2%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	29.9%
Return on Assets	21.4%
ROIC, with goodwill	29.5%
ROIC, without goodwill	29.5%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	500
Net Debt	333
Total Debt/EBITDA	0.4
Net Debt/EBITDA	0.3
EBITDA/Interest	89.9
Current Ratio	5.3
Quick Ratio	2.0

NMF = Not Meaningful

Investment Highlights

• Each of Fastenal's ~3,400 stores is a local, one-stop shop for a variety of OEM, MRO and construction supplies, and it also has more than 600 onsite locations. The firm's value proposition to customers centers on working within a decentralized environment to deliver local product to local people. The company was founded in 1967 and is headquartered in Minnesota.

• Fastenal's motto is 'Growth through Customer Service.' The firm believes it can grow market share by providing the greatest value to the customer. Fastenal's ability to grow is amplified if it can service the customer at the closest economic point of contact. Execution remains critical.

• Fastenal believes its local store network, along with its increasing 'keep-fill' initiatives close to customer locations, gives it an important structural advantage over other distributors who have embraced e-commerce. The company's strategic focus will continue to be on becoming the best same-day supplier of industrial and construction products worldwide.

• Fastenal's revenue breakdown by industry is: ~40% manufacturing, ~26% heavy equipment, ~13% construction, ~10% resellers, and ~11% other. It continues to look for growth from national accounts (roughly 50% of revenue) as well as its vending and e-business. The number of Onsite locations, which serve single customers, continues to grow.

• As it relates to operations, Fastenal is our favorite distributor, and its platform can't be easily replicated by peers. Recent results have shown the impact of rising employee, occupancy, and transportation related expenses, all of which could continue to impact margin performance in the near term.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**59.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Anixter	9.4	1.5	82.4%
MSC Industrial	14.3	1.9	97.5%
W.W. Grainger	16.6	1.6	104.3%
WESCO	10.1	1.6	81.6%
Peer Median	12.2	1.6	89.9%
Fastenal	**21.7**	**2.6**	**119.7%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	4,391	4,965	5,496
Revenue, YoY%	10.8%	13.1%	10.7%
Operating Income	881	999	1,105
Operating Margin %	20.1%	20.1%	20.1%
Net Income	579	752	819
Net Income Margin %	13.2%	15.1%	14.9%
Diluted EPS	2.01	2.62	2.87
Diluted EPS, YoY %	16.2%	30.4%	9.6%
Free Cash Flow (CFO-capex)	465	498	622
Free Cash Flow Margin %	10.6%	10.0%	11.3%

In Millions of USD (except for per share items)

Structure of the Industrial Distributors Industry — GOOD

Though consolidating, the industrial distributors industry remains fragmented and highly competitive. Delivering cost savings, convenience, and product availability are the major competitive factors. Some rivals use vans to sell products in markets away from their warehouses, while others rely on mail order, websites or telemarketing sales. Still, others operate stores and use centralized distribution centers to supply their networks. The industry is economically-sensitive and exposed to the threat of aggressive pricing strategies, but we generally like the group's massive distribution platforms that are difficult to replicate.

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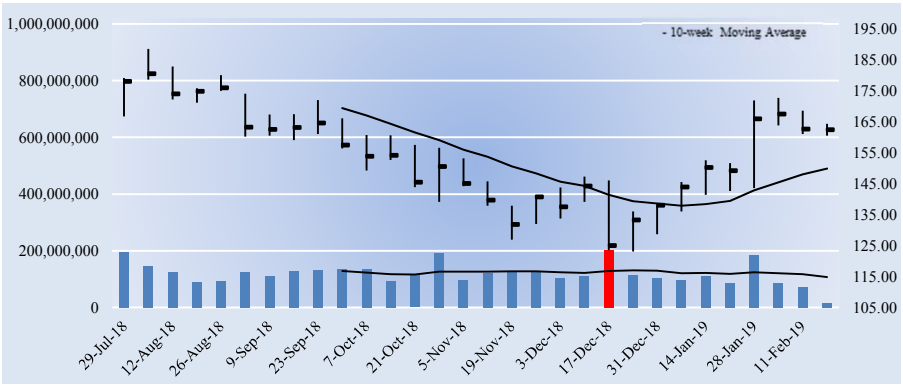
Facebook FB UNDERVALUED 12.1%

Buying Index™ 10 **Value Rating** ✓

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$228.00	$182.00 - $274.00	MEGA-CAP BLEND	Information Technology	Internet Software & Svcs

Facebook's number of mobile users continues to grow, and its free cash flow generation and balance sheet are strong sources of reassurance in the face of social and political pressures.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**UNDERVALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**AGGRESSIVE**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**150.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueRisk™ \ ValueCreation™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$474,049
Avg Weekly Vol (30 wks)	119,478
30-week Range (USD)	123.02 - 188.3
Valuentum Sector	Information Technology
5-week Return	8.8%
13-week Return	22.0%
30-week Return	-7.4%
Dividend Yield %	0.0%
Dividends per Share	0.00
Forward Dividend Payout Ratio	0.0%
Est. Normal Diluted EPS	10.43
P/E on Est. Normal Diluted EPS	15.6
Est. Normal EBITDA	41,571
Forward EV/EBITDA	14.2
EV/Est. Normal EBITDA	10.4
Forward Revenue Growth (5-yr)	17.7%
Forward EPS Growth (5-yr)	12.0%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Facebook's mission is to make the world more open and connected. People use Facebook to stay in touch with friends/family, to learn about the latest news, and to share and express what matters to them, and the company continues to expand its reach with businesses such as the popular social media platform Instagram. The company was founded in 2004 and is headquartered in California.

• It's unfair to lump Facebook in with other social media companies. Facebook is generating tens of billions in revenue and is throwing off gobs of excess free cash flow, but capital spending is on the rise. The company's balance sheet is pristine with more than $41 billion in cash and no debt at the end of 2018.

• Facebook's number of mobile users continues to grow, with mobile ad revenue accounting for 93% of total ad revenue in the fourth quarter of 2018, up from 83% in full-year 2016. Data privacy and security remain paramount. Its operating margin guidance for the years ahead disappointed due to increased levels of spending in areas such as product development and infrastructure, safety and security, and AR/VR.

• Facebook's free cash flow generation and balance sheet are strong sources of reassurance, but investors must be cognizant of the low barriers to entry in the social media space as well as the potentially fickle nature of its users. Recent social and political pressures have impacted public perception, and it is reportedly seeking a major cybersecurity acquisition.

• Facebook's monthly active users (MAUs) count is still growing at a solid rate. Overall MAUs sat at 2.32 billion at the end of 2018, while daily active users sat at 1.52 billion, both of which grew 9% from a year earlier. Concerns over user growth in the important Europe and US & Canada regions have cropped up.

Relative Valuation

	Forward P/E	PEG	Price / FV
Alphabet	25.7	1.9	74.2%
Baidu	17.4	1.8	84.7%
Twitter	19.5	NMF	104.8%
Ultimate Software	60.8	8.1	99.8%
Peer Median	22.6	1.9	92.3%
Facebook	**21.5**	**1.4**	**71.2%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	23.8%
Return on Assets	21.2%
ROIC, with goodwill	58.1%
ROIC, without goodwill	123.4%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	40,653	55,838	68,960
Revenue, YoY%	47.1%	37.4%	23.5%
Operating Income	20,203	24,913	25,239
Operating Margin %	49.7%	44.6%	36.6%
Net Income	15,920	22,111	21,833
Net Income Margin %	39.2%	39.6%	31.7%
Diluted EPS	5.39	7.57	7.56
Diluted EPS, YoY %	54.6%	40.6%	-0.1%
Free Cash Flow (CFO-capex)	17,483	15,359	7,244
Free Cash Flow Margin %	43.0%	27.5%	10.5%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	0
Net Debt	-41,114
Total Debt/EBITDA	0.0
Net Debt/EBITDA	NMF
EBITDA/Interest	Excellent
Current Ratio	7.2
Quick Ratio	6.9

NMF = Not Meaningful

Structure of the Internet Software & Services Industry — NEUTRAL

The Internet software/services industry is composed of a variety of companies with rapidly-changing business models. Most focus on improving the ways people connect with information, either via Internet search or by social media platforms, and generate revenue primarily by delivering cost-effective online advertising. Constituents earn significant returns on invested capital due to their capital-light operations, though competition remains fierce. We expect most companies in this group to look substantially different 10 years from now than they do today. Overall, we're neutral on the structure.

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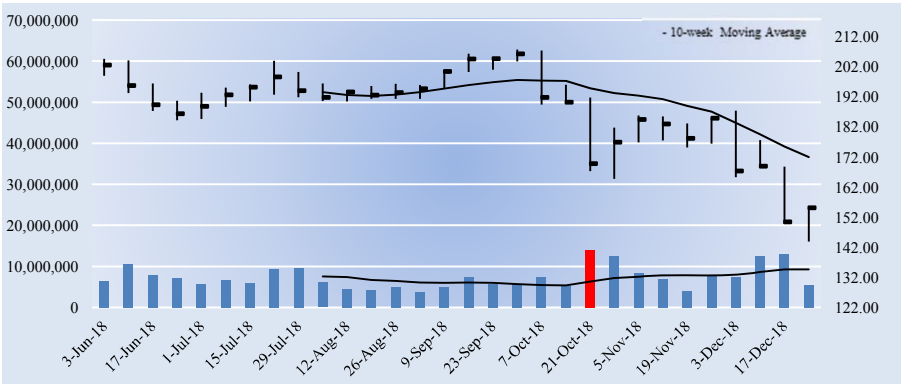
General Dynamics GD FAIRLY VALUED

Buying Index™ 4 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$184.00	$147.00 - $221.00	LARGE-CAP VALUE	Industrials	A&D Prime

General Dynamics has an impressive backlog, and its aerospace segment boasts strong operating leverage.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**BEARISH**
Relative Strength	**WEAK**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**DETERIORATING**
Near-term Technical Resistance, 10-wk MA	**172.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueRisk™ \ ValueCreation™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$47,250
Avg Weekly Vol (30 wks)	7,397
30-week Range (USD)	143.87 - 207.72
Valuentum Sector	Industrials
5-week Return	-13.6%
13-week Return	-24.7%
30-week Return	-23.9%
Dividend Yield %	2.4%
Dividends per Share	3.72
Forward Dividend Payout Ratio	33.0%
Est. Normal Diluted EPS	14.34
P/E on Est. Normal Diluted EPS	10.8
Est. Normal EBITDA	5,885
Forward EV/EBITDA	12.2
EV/Est. Normal EBITDA	10.1
Forward Revenue Growth (5-yr)	8.9%
Forward EPS Growth (5-yr)	13.6%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	26.5%
Return on Assets	8.9%
ROIC, with goodwill	21.2%
ROIC, without goodwill	71.1%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	13,081
Net Debt	12,071
Total Debt/EBITDA	2.8
Net Debt/EBITDA	2.6
EBITDA/Interest	39.5
Current Ratio	1.4
Quick Ratio	0.5

NMF = Not Meaningful

Investment Highlights

• General Dynamics is a leader in business aviation; combat vehicles/systems, armaments, and munitions; shipbuilding/marine systems; and information systems and technology. The firm's product line-up ranges from Gulfstream business jets to nuclear-powered submarines. It was founded in 1899 and is based in Virginia.

• As of the end of the third quarter of 2018, the firm's total backlog of unfulfilled business orders was $69.5 billion, up from ~$60 million at the end of 2016. Contract activity has been solid across most business groups of late, with particular strength coming from its 'Marine Systems' segment.

• The modest growth across General Dynamics' business is expected to begin projecting higher. In its Aerospace segment, the return to full production and delivery of its G500 model in 2018 and the G600 model in 2019 will be a key growth driver. The company is forecasting sales to rise by an average of 5.6% annually through 2020 (without CSRA), which is roughly in line with our forecasts.

• Management remains focused on improving margins, generating cash, and improving returns on capital. Strong operating leverage in its aerospace segment, resilient performance in combat systems, and healthy navy construction work offer an optimistic outlook. It recently acquired CSRA, which is now part of its 'Information Technology' segment for ~$9.7 billion.

• The firm continues to raise its dividend annually. Strong free cash flow generation and a focus on return on invested capital make continued increases a likelihood. However, recent deals have pushed its total debt load to $13.1 billion at the end of the third quarter of 2018 from ~$4 billion at the end of 2017.

Relative Valuation

	Forward P/E	PEG	Price / FV
Boeing	20.8	1.7	96.1%
Lockheed Martin	14.8	1.3	95.5%
Northrop Grumman	12.4	1.1	91.1%
Raytheon	15.2	1.3	92.5%
Peer Median	15.0	1.3	94.0%
General Dynamics	**13.8**	**1.2**	**84.3%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-16	Dec-17	Dec-18
Revenue	31,353	30,973	36,176
Revenue, YoY%	-0.4%	-1.2%	16.8%
Operating Income	4,309	4,177	4,358
Operating Margin %	13.7%	13.5%	12.0%
Net Income	3,062	2,912	3,362
Net Income Margin %	9.8%	9.4%	9.3%
Diluted EPS	9.87	9.56	11.26
Diluted EPS, YoY %	8.7%	-3.1%	17.8%
Free Cash Flow (CFO-capex)	1,806	3,451	2,380
Free Cash Flow Margin %	5.8%	11.1%	6.6%

In Millions of USD (except for per share items)

Structure of the Aerospace and Defense Industry — GOOD

The global commercial aerospace duopoly is being challenged by encroaching international competitors who are intent on increasing market share, but Boeing and Airbus continue to dominate the large commercial aircraft segment. Long-term demand for commercial aircraft is cyclical and depends on the health of the credit markets, airline customers, and lessors, but massive backlogs and a strong multi-decade demand outlook are reasons for confidence. The defense industry has strong competition in all market segments and remains dependent on government funding decisions and competing budget priorities.

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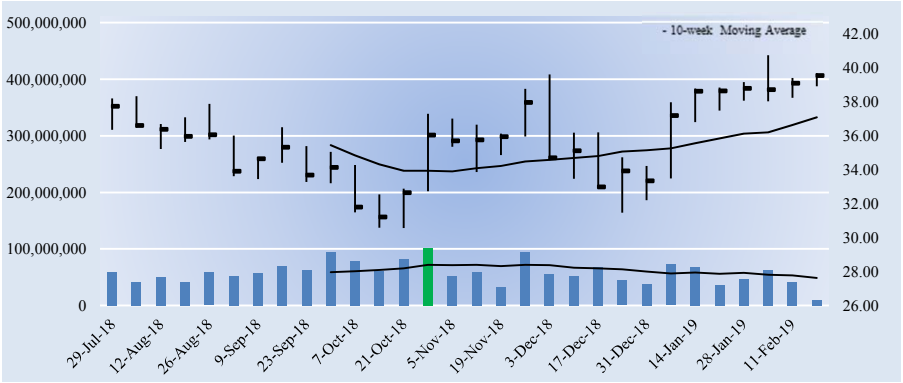
General Motors GM FAIRLY VALUED

Buying Index™ 7 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$51.00	$38.00 - $64.00	LARGE-CAP VALUE	Consumer Discretionary	Auto Manufacturers

Near-term headwinds for General Motors include commodity cost inflation, tariffs, SUV launch downtime, and China industry pressures, but it continues to expect to achieve cost savings from its transformation plan.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$56,567
Avg Weekly Vol (30 wks)	58,159
30-week Range (USD)	30.56 - 40.74
Valuentum Sector	Consumer Discretionary
5-week Return	3.3%
13-week Return	9.4%
30-week Return	5.0%
Dividend Yield %	3.8%
Dividends per Share	1.52
Forward Dividend Payout Ratio	23.0%
Est. Normal Diluted EPS	7.09
P/E on Est. Normal Diluted EPS	5.6
Est. Normal EBITDA	23,056
Forward EV/EBITDA	5.9
EV/Est. Normal EBITDA	5.8
Forward Revenue Growth (5-yr)	0.5%
Forward EPS Growth (5-yr)	7.8%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	14.9%
Return on Assets	2.8%
ROIC, with goodwill	5.9%
ROIC, without goodwill	5.9%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	104,951
Net Debt	78,141
Total Debt/EBITDA	5.8
Net Debt/EBITDA	4.3
EBITDA/Interest	27.7
Current Ratio	0.9
Quick Ratio	0.7

NMF = Not Meaningful; Debt excludes debt associated with the finance sub.

Investment Highlights

• General Motors makes cars, crossovers, trucks and parts. The firm's brand names include Buick, Cadillac, Chevrolet, and GMC, among others. Founded in 1908 in Detroit, General Motors has become synonymous with American manufacturing. A 'new' and leaner GM emerged from bankruptcy in July 2009.

• GM's transformation plan is expected to help it develop into a leader in next-gen personal mobility. It is targeting annual run-rate cash savings of ~$6 billion by year-end 2020, and will prioritize electric and autonomous vehicle programs by doubling resources allocated to such programs over the next two years.

• GM has significantly improved its break-even point, which has helped drive margin improvements. It recently received a large investment from SoftBank in Cruise Automation, aimed at 'massive scale' next-gen production, which we view as a large positive. Management is targeting EPS-diluted-adjusted to be in a range of $6.50-$7.00, and it expects to achieve an adjusted ROIC of 20%+.

• Though there will be hiccups along the way, we don't think GM is finished expanding operating margins. Its intermediate-term goal is for EBIT-adjusted margins to be greater than 10% in North America. Near-term headwinds include commodity cost inflation, tariffs, SUV launch downtime, and China industry pressures.

• China will become the world's largest auto market, and GM has used its first-mover advantage to become a key player in the country. Slowing economic growth in China has materially impacted its auto market. GM's sale of its European operations was part of its strategy to focus on North America.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**POOR**
ValueRisk™	**MEDIUM**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**MEDIUM**
Financial Leverage	**HIGH**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**37.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium		■		
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Ford	7.2	0.5	73.6%
Harley-Davidson	11.6	1.8	90.5%
Honda	7.0	NMF	78.7%
Toyota	19.1	1.2	99.6%
Peer Median	9.4	1.2	84.6%
General Motors	**6.0**	**0.9**	**77.5%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	145,588	147,049	146,755
Revenue, YoY%	-12.5%	1.0%	-0.2%
Operating Income	10,016	4,445	9,044
Operating Margin %	6.9%	3.0%	6.2%
Net Income	348	8,084	9,263
Net Income Margin %	0.2%	5.5%	6.3%
Diluted EPS	0.23	5.60	6.61
Diluted EPS, YoY %	-96.1%	NMF	NMF
Free Cash Flow (CFO-capex)	8,875	6,495	11,050
Free Cash Flow Margin %	6.1%	4.4%	7.5%

In Millions of USD (except for per share items)

Structure of the Auto Manufacturers Industry — VERY POOR

The auto manufacturers industry is characterized by high fixed costs, substantial operating leverage, and intense competition. Vehicle sales are impacted by general economic conditions, which are largely out of the control of participants, and by the cost of credit and fuel. Excess capacity, price discounting and other marketing initiatives can pressure the top line, while rising raw material and labor costs can squeeze the bottom line. Changing consumer preferences in type, model and fuel-efficiency can cause abrupt shifts in market share. The structural characteristics of the group are very poor.

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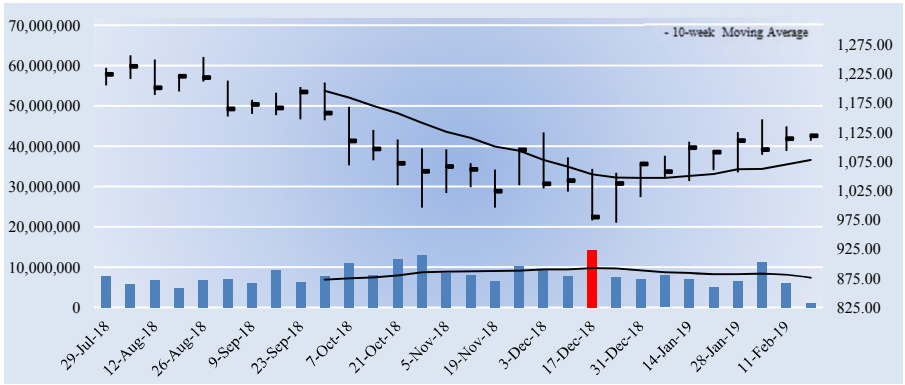
Alphabet GOOG UNDERVALUED 9%

Buying Index™ 7 **Value Rating** ✓

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$1524.00	$1219.00 - $1829.00	MEGA-CAP BLEND	Information Technology	Internet Software & Svcs

Alphabet has a strong future in search, and we continue to be in awe of the strength in this division.



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$786,666
Avg Weekly Vol (30 wks)	7,910
30-week Range (USD)	970.11 - 1256.5
Valuentum Sector	Information Technology
5-week Return	2.8%
13-week Return	7.7%
30-week Return	-8.9%
Dividend Yield %	0.0%
Dividends per Share	0.00
Forward Dividend Payout Ratio	0.0%
Est. Normal Diluted EPS	64.98
P/E on Est. Normal Diluted EPS	17.2
Est. Normal EBITDA	69,383
Forward EV/EBITDA	13.3
EV/Est. Normal EBITDA	9.8
Forward Revenue Growth (5-yr)	14.9%
Forward EPS Growth (5-yr)	13.9%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	14.1%
Return on Assets	11.2%
ROIC, with goodwill	50.4%
ROIC, without goodwill	70.3%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	4,012
Net Debt	-105,128
Total Debt/EBITDA	0.1
Net Debt/EBITDA	NMF
EBITDA/Interest	Excellent
Current Ratio	3.9
Quick Ratio	3.8

NMF = Not Meaningful

Investment Highlights

• Known for its search dominance that it maintains, Alphabet is a tech company focused on a number of things: Android, ads, YouTube, Chrome, and research. We think the company will have some megahits in the years ahead, and we now value shares at more than $1,500 each. It reported an operating loss of ~$3.4 billion in 'Other Bets' in 2018, suggesting core levels of profitability are higher than reported.

• Alphabet offers investors a compelling combination of attractive valuation, growth potential, cash-flow generation and competitive profile. Very few firms are more attractive on a fundamental basis, in our view, and its impressive free cash flow conversion rates (consistently above 100%) speak to this.

• Alphabet is pleased with momentum in its mobile division, particularly within mobile advertising. The mobile Internet space will be key for the firm. Facebook is not backing down, and Amazon may be entering digital advertising in a big way. YouTube and programmatic advertising offer upside potential, but we're watching spending levels, which have spiked due in part to higher traffic acquisition costs.

• Alphabet has a strong future in search, and we continue to be in awe of the strength in this division. Its massive net cash position (~$105.1 billion at the end of 2018) gives the company a substantial cushion to fall back on as it invests in high-return opportunities and new concepts such as smart home features, Glass, Fiber, or other innovative ideas.

• Alphabet has three different stock classes with two different tickers. GOOGL is Class A stock, and GOOG represents the non-voting Class C stock that was created by a stock split in 2014 in order for Google founders to maintain majority control.

Investment Considerations

DCF Valuation	**UNDERVALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**HIGH**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**IMPROVING**
Near-term Technical Support, 10-week MA	**1077.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				■
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Baidu	17.4	1.8	84.7%
Facebook	21.5	1.4	71.2%
Twitter	19.5	NMF	104.8%
Ultimate Software	60.8	8.1	99.8%
Peer Median	20.5	1.8	92.3%
Alphabet	**23.5**	**1.8**	**73.4%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	110,855	136,819	163,636
Revenue, YoY%	22.8%	23.4%	19.6%
Operating Income	28,882	31,392	40,501
Operating Margin %	26.1%	22.9%	24.8%
Net Income	12,662	30,736	33,413
Net Income Margin %	11.4%	22.5%	20.4%
Diluted EPS	18.00	43.70	47.51
Diluted EPS, YoY %	-35.4%	142.8%	8.7%
Free Cash Flow (CFO-capex)	23,907	22,832	19,945
Free Cash Flow Margin %	21.6%	16.7%	12.2%

In Millions of USD (except for per share items)

Structure of the Internet Software & Services Industry — NEUTRAL

The Internet software/services industry is composed of a variety of companies with rapidly-changing business models. Most focus on improving the ways people connect with information, either via Internet search or by social media platforms, and generate revenue primarily by delivering cost-effective online advertising. Constituents earn significant returns on invested capital due to their capital-light operations, though competition remains fierce. We expect most companies in this group to look substantially different 10 years from now than they do today. Overall, we're neutral on the structure.

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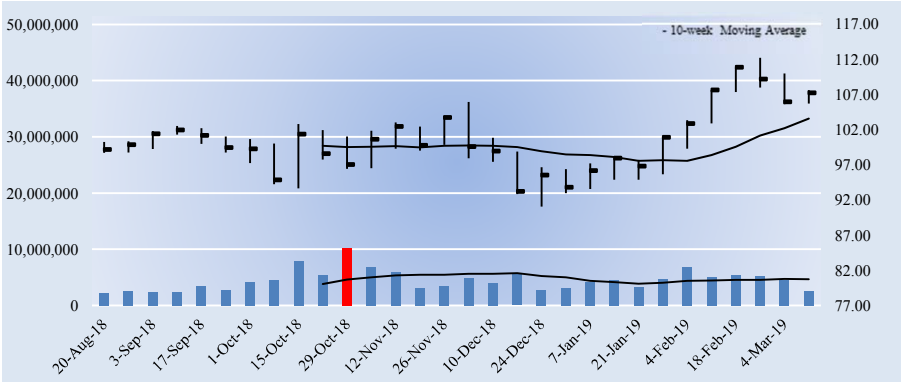
Genuine Parts GPC FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$92.00	$74.00 - $110.00	LARGE-CAP CORE	Consumer Discretionary	Specialty Retail - auto

Genuine Parts continues to be encouraged by trends in automotive aftermarket fundamentals. The company's track record of consistency is impressive.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**MEDIUM**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**104.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$15,780
Avg Weekly Vol (30 wks)	4,482
30-week Range (USD)	91.04 - 112.18
Valuentum Sector	Consumer Discretionary
5-week Return	3.9%
13-week Return	8.5%
30-week Return	8.3%
Dividend Yield %	2.8%
Dividends per Share	3.05
Forward Dividend Payout Ratio	50.8%
Est. Normal Diluted EPS	7.32
P/E on Est. Normal Diluted EPS	14.6
Est. Normal EBITDA	1,752
Forward EV/EBITDA	12.3
EV/Est. Normal EBITDA	10.6
Forward Revenue Growth (5-yr)	3.1%
Forward EPS Growth (5-yr)	10.4%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Genuine Parts distributes auto parts and accessory items. It operates under a widely-recognized brand (NAPA), but the auto parts distribution business is highly competitive, and we don't expect weakening competition in any of its four business segments. Its 'Automotive Group' accounts for more than 50% of sales, and three-quarters of sales are generated in the US. The company is based in Georgia.

• Management continues to be encouraged by trends in automotive aftermarket fundamentals. The prime years for aftermarket repair start in year 6, and vehicles that are 6+ years of age make up more than 70% of the fleet. Genuine Parts holds ~7.5% of the global automotive aftermarket.

• Genuine Parts recently acquired Alliance Automotive Group (AAG) for ~$2 billion in cash. As the second largest European parts distribution platform, AAG focuses on light vehicle and commercial vehicle replacement parts and gives the firm access to the European markets with meaningful scale. Annual synergies of ~$25 million are expected to be achieved within three years.

• Genuine Parts' long-term annual objectives include annual sales growth of 6%-8%, steadily expand operating margin, and grow earnings per share by 7%-10%. 2019 sales growth is expected to come in at 3%-4% on an as-reported basis, and adjusted earnings per share guidance is a range of $5.81-$5.96, up from $5.68 in 2018.

• The firm has paid a cash dividend every year since going public in 1948. 2018 marks its 62nd consecutive year that it has increased annual dividends paid to shareholders. It has also managed to grow sales in 86 of its 91 year history and profit in 75 of its 91 year history.

Relative Valuation

	Forward P/E	PEG	Price / FV
AutoNation	8.1	1.4	73.4%
AutoZone	15.3	1.9	126.6%
CarMax	12.8	0.9	110.7%
O'Reilly Automotive	20.5	2.2	128.4%
Peer Median	14.0	1.6	118.6%
Genuine Parts	**17.8**	**1.9**	**116.5%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	21.3%
Return on Assets	6.8%
ROIC, with goodwill	15.4%
ROIC, without goodwill	21.0%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	16,309	18,735	19,260
Revenue, YoY%	6.3%	14.9%	2.8%
Operating Income	1,020	1,110	1,268
Operating Margin %	6.3%	5.9%	6.6%
Net Income	617	810	875
Net Income Margin %	3.8%	4.3%	4.5%
Diluted EPS	4.18	5.50	6.01
Diluted EPS, YoY %	-9.0%	31.8%	9.2%
Free Cash Flow (CFO-capex)	659	912	838
Free Cash Flow Margin %	4.0%	4.9%	4.4%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	3,143
Net Debt	2,810
Total Debt/EBITDA	2.3
Net Debt/EBITDA	2.1
EBITDA/Interest	13.3
Current Ratio	1.3
Quick Ratio	0.5

NMF = Not Meaningful

Structure of the Retail Auto Parts Industry — GOOD

The retail auto parts industry is characterized by stiff competition in many areas, including brand recognition, customer service, and price. The industry is impacted by both the age and number of vehicles in service, especially those that are no longer under manufacturer's warranties (typically seven years old and older). Demand for retail auto parts can best be described as counter-cyclical: as consumers' cash flows decrease, drivers tend to keep their vehicles longer, leading to more retail auto parts sales. Though competition among constituents is intense, we like the industry's defensive characteristics.

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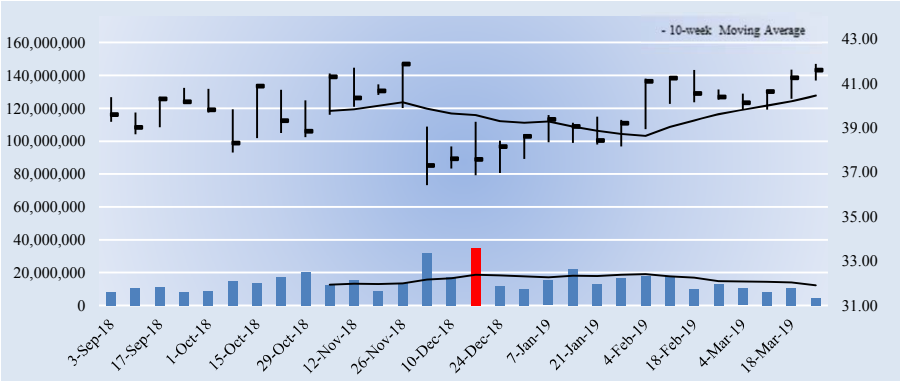
GlaxoSmithKline GSK FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$45.00	$36.00 - $54.00	LARGE-CAP VALUE	Health Care	Pharmaceuticals - Big

There are a number of moving parts at GlaxoSmithKline, and management is optimistic about its potential in oncology.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$103,397
Avg Weekly Vol (30 wks)	14,314
30-week Range (USD)	36.41 - 41.91
Valuentum Sector	Health Care
5-week Return	2.4%
13-week Return	8.8%
30-week Return	3.1%
Dividend Yield %	5.7%
Dividends per Share (in GBP)	2.39
Forward Dividend Payout Ratio	296.3%
Est. Normal Diluted EPS (in GBP	0.92
P/E on Est. Normal Diluted EPS	34.1
Est. Normal EBITDA (in GBP)	8,892
Forward EV/EBITDA	12.4
EV/Est. Normal EBITDA	11.2
Forward Revenue Growth (5-yr)	2.3%
Forward EPS Growth (5-yr)	7.1%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	211.1%
Return on Assets	4.2%
ROIC, with goodwill	24.1%
ROIC, without goodwill	29.4%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of GBP

Total Debt	26,064
Net Debt	22,106
Total Debt/EBITDA	3.0
Net Debt/EBITDA	2.6
EBITDA/Interest	10.8
Current Ratio	0.8
Quick Ratio	0.5

NMF = Not Meaningful

Investment Highlights

• GSK is a UK-based global healthcare company. The firm has a significant global commercial presence in 150+ markets, a network of 80+ manufacturing sites in 35+ countries and large R&D centers in the UK, USA, Spain, Belgium and China. Pharmaceuticals account for ~60% of sales. The company was founded in 1935.

• From 2016-2020 GSK is expecting a low-to-mid single digit compound annual growth rate in sales, as well as mid-to-high single digit constant exchange rate compound annual growth rate in core earnings per share. A restructuring of its recently augmented Consumer Healthcare should help long-term earnings.

• Thanks in part to GSK's progress in oncology, the firm has the potential to file up to 20 new molecular entities (NMEs) and product line extensions (PLEs) by 2020. The company currently has more than 40 NMEs with significant data readouts coming in 2018-2020. It recently acquired Tesaro for ~$5.1 billion, and it is creating a JV with Pfizer in consumer health in which it will own a majority stake.

• Roughly one-third of GSK's overall business is outside the US and Europe, though sales in the US remain resilient. The company continues to deliver on restructuring benefits as it capitalizes on its drug pipeline, and management expects annual cost savings of £1 billion by 2020. It is also targeting free cash flow coverage of dividends of 1.25x-1.5x by 2020.

• GSK has been working closely with Novartis, but it recently acquired Novartis' stake in their Consumer Healthcare business collaboration for ~$13 billion. GSK is targeting an operating margin in the mid-20s for the segment by 2022, and the deal could help it achieve improved credit ratings.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**HIGH**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**NEUTRAL**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**40.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				■
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Abbott	24.4	2.5	116.2%
Eli Lilly	22.9	2.1	123.6%
Merck	20.3	2.5	113.6%
Pfizer	14.5	1.7	94.3%
Peer Median	21.6	2.3	114.9%
GlaxoSmithKline	**NMF**	**6.0**	**92.4%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	30,186	30,821	31,838
Revenue, YoY%	8.2%	2.1%	3.3%
Non-GAAP Operating Income	5,696	6,772	6,158
Non-GAAP EBIT %	18.9%	22.0%	19.3%
Non-GAAP Net Income	1,532	3,623	4,009
Non-GAAP NI Margin %	5.1%	11.8%	12.6%
Non-GAAP Diluted EPS	0.31	0.73	0.81
Non-GAAP Dil EPS, YoY %	66.9%	135.1%	10.7%
Non-GAAP FCF (CFO-capex)	4,716	6,635	6,716
Non-GAAP FCF Margin %	15.6%	21.5%	21.1%

In Millions of GBP (except for per share items)

Structure of the Big Pharma Industry — GOOD

The big pharma industry is primarily composed of makers of branded drugs. Intellectual property protection is vital to the successful commercialization of medicines and offers makers of branded drugs a unique competitive advantage via patents, which can extend for decades. When branded drugs lose market exclusivity, however, makers of generic pharmaceuticals can generate intense price competition, causing drastic revenue losses on unprotected therapies. Long-term success for branded pharma companies depends on a strong and diverse drug pipeline, which can be augmented by M&A activity. We generally like the group and expect continued industry consolidation.

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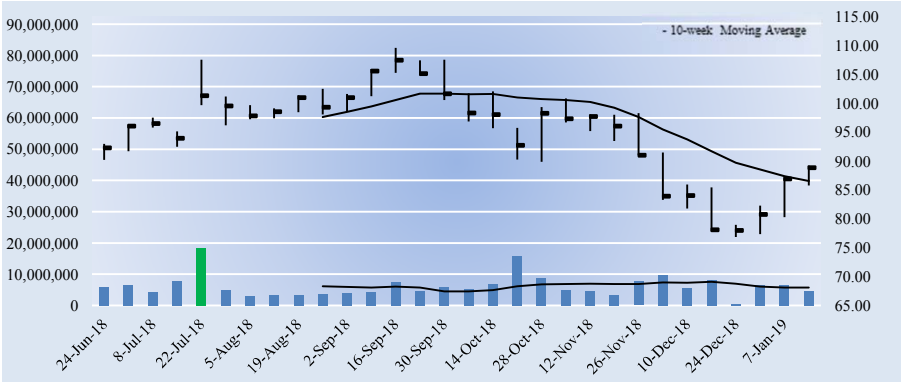
Hasbro HAS FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$95.00	$76.00 - $114.00	LARGE-CAP VALUE	Consumer Discretionary	Leisure

Hasbro expects to move beyond some recent top-line challenges in 2019, and its high-margin 'Entertainment and Licensing' segment has material long-term potential.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**VERY BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BEARISH**
Near-term Technical Support, 10-week MA	**87.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$11,287
Avg Weekly Vol (30 wks)	6,252
30-week Range (USD)	76.84 - 109.6
Valuentum Sector	Consumer Discretionary
5-week Return	6.0%
13-week Return	-1.8%
30-week Return	-2.6%
Dividend Yield %	2.8%
Dividends per Share	2.52
Forward Dividend Payout Ratio	59.3%
Est. Normal Diluted EPS	5.73
P/E on Est. Normal Diluted EPS	15.5
Est. Normal EBITDA	1,146
Forward EV/EBITDA	12.6
EV/Est. Normal EBITDA	10.1
Forward Revenue Growth (5-yr)	2.6%
Forward EPS Growth (5-yr)	17.9%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	26.8%
Return on Assets	9.4%
ROIC, with goodwill	38.9%
ROIC, without goodwill	54.5%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	1,849
Net Debt	267
Total Debt/EBITDA	1.8
Net Debt/EBITDA	0.3
EBITDA/Interest	10.4
Current Ratio	2.9
Quick Ratio	2.4

NMF = Not Meaningful

Investment Highlights

• Hasbro's products include toys/games, television programming, motion pictures and digital gaming. The firm owns well-known brands such as Transformers, Nerf, Playskool, My Little Pony, G.I. Joe, Magic: The Gathering, and Monopoly. The company was founded in 1923 and is headquartered in Rhode Island.

• Though concerns over the demise of physical toys may not be completely unfounded in this digital age, Hasbro is less a toy company than it is a licensing firm. Its high-margin 'Entertainment and Licensing' segment has performed well of late, but the firm is not immune to fluctuations in toy demand.

• Hasbro's strategic merchandizing relationship with Disney Consumer Products for the Disney Princess and Frozen properties is a huge win, and we expect the company to benefit from the relationship for years to come. A rapidly changing landscape in Europe and the US (retail inventory down significantly) and the liquidation of Toys 'R' Us is weighing on its near-term outlook.

• Hasbro's medium-term objectives include low- to mid-single digit growth in developed economies via brand innovation and market share gains, double-digit growth in emerging markets, operating profit margin sustainment with slight growth in the near term, and annual operating cash flow in a range of $600-$700 million. Its debt-to-EBITDA target is 2x-2.5x.

• Hasbro has been paying dividends since 1977, and it has raised the payout at a 13% CAGR over the past 10 years. Share repurchases will be ongoing, and rumors continue to swirl regarding a potential takeover of Mattel, which rejected Hasbro's latest offer.

Relative Valuation

	Forward P/E	PEG	Price / FV
Carnival Corp	12.3	1.1	93.0%
Intl Game Technology	12.6	NMF	76.3%
Mattel	NMF	NMF	82.9%
Royal Caribbean	12.2	1.1	98.5%
Peer Median	12.3	1.1	88.0%
Hasbro	**20.9**	**1.6**	**93.5%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-16	Dec-17	Dec-18
Revenue	5,020	5,210	4,725
Revenue, YoY%	12.9%	3.8%	-9.3%
Operating Income	788	810	722
Operating Margin %	15.7%	15.6%	15.3%
Net Income	551	397	536
Net Income Margin %	11.0%	7.6%	11.3%
Diluted EPS	4.34	3.12	4.25
Diluted EPS, YoY %	21.8%	-28.1%	36.2%
Free Cash Flow (CFO-capex)	663	589	655
Free Cash Flow Margin %	13.2%	11.3%	13.9%

In Millions of USD (except for per share items)

Structure of the Leisure Industry — NEUTRAL

The leisure industry is composed of firms that span the cruise line business to those that make toys and children's products. The cruise business has grown significantly in recent years, but still remains relatively small compared to the overall vacation industry (including land-based destinations). Competition among toy companies is intensifying due to recent trends toward shorter toy life cycles, the increasing use of technology in toys, and the proliferation of electronic consumer products and video games. All industry participants compete for consumer discretionary income. We're neutral on the structure of the group.

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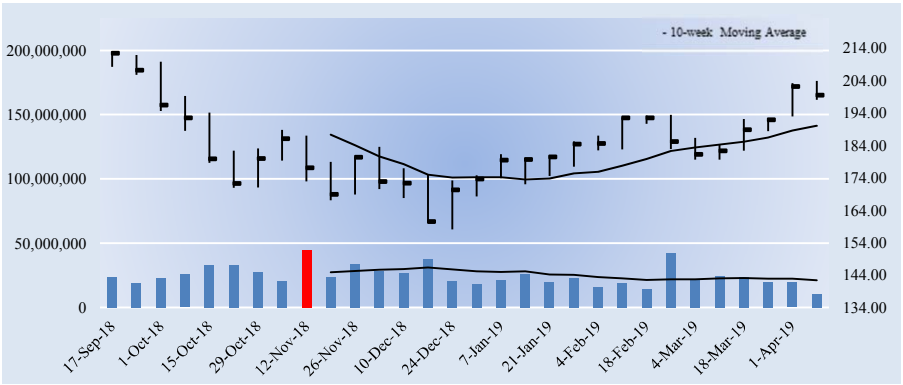
Home Depot HD FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$175.00	$140.00 - $210.00	MEGA-CAP CORE	Consumer Discretionary	Specialty Retailers

Home Depot's financial performance depends in part on the stability of the housing, residential construction and home improvement markets, which have been resilient of late.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**NEUTRAL**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**190.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueRisk™ \ ValueCreation™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$227,948
Avg Weekly Vol (30 wks)	24,682
30-week Range (USD)	158.09 - 212.67
Valuentum Sector	Consumer Discretionary
5-week Return	9.6%
13-week Return	12.3%
30-week Return	-4.6%
Dividend Yield %	2.7%
Dividends per Share	5.44
Forward Dividend Payout Ratio	53.3%
Est. Normal Diluted EPS	12.43
P/E on Est. Normal Diluted EPS	16.0
Est. Normal EBITDA	20,880
Forward EV/EBITDA	14.1
EV/Est. Normal EBITDA	12.2
Forward Revenue Growth (5-yr)	4.7%
Forward EPS Growth (5-yr)	8.8%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Home Depot is the world's largest home improvement specialty retailer. Its stores sell an assortment of building materials, home improvement and lawn/garden products. Its stores average ~104,000 square feet of enclosed space, with ~24,000 additional square feet of outside garden area. The company was founded in 1978 and is based in Atlanta, Georgia.

• Home Depot's financial performance depends in part on the stability of the housing, residential construction and home improvement markets, which have been resilient of late. However, these markets can and do experience wild swings over the course of a full economic cycle.

• Home Depot has an interesting growth strategy. Canada and Mexico are core pieces in this strategy, where it is the #1 home improvement retailer. As of the end of fiscal 2018 (ended January 2019) ~13% of the firm's total stores were in Canada or Mexico. The strategy also involves saying no to international expansion into new geographies and large acquisitions to 'buy' sales.

• Home Depot serves three primary customer groups: Do-It-Yourself customers, Do-It-For-Me customers, and professional customers (tradesmen). Home Depot plans to focus more on its professional customers, where average tickets are substantially larger. Providing recurring MRO needs is among its core initiatives in this area.

• Home Depot's impressive financial performance of late, specifically its strong free cash flow generation, has allowed it to raise its dividend in a big way. Management is targeting revenue of $115-$120 billion, an operating margin of 14.4%-15.0%, and ROIC of 40%+ in fiscal 2020.

Relative Valuation

	Forward P/E	PEG	Price / FV
Bed Bath & Beyond	7.6	NMF	69.2%
Best Buy	10.8	1.7	84.3%
Lowe's	22.0	2.1	140.4%
Office Depot	8.6	1.2	73.5%
Peer Median	9.7	1.7	78.9%
Home Depot	**19.6**	**2.3**	**114.0%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	-1599.4%
Return on Assets	21.2%
ROIC, with goodwill	43.1%
ROIC, without goodwill	46.9%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Jan-18	Jan-19	Jan-20
Revenue	100,904	108,203	112,639
Revenue, YoY%	6.7%	7.2%	4.1%
Operating Income	14,681	15,777	16,193
Operating Margin %	14.5%	14.6%	14.4%
Net Income	8,630	11,121	11,427
Net Income Margin %	8.6%	10.3%	10.1%
Diluted EPS	7.29	9.73	10.20
Diluted EPS, YoY %	13.0%	33.5%	4.8%
Free Cash Flow (CFO-capex)	10,134	10,596	11,388
Free Cash Flow Margin %	10.0%	9.8%	10.1%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	29,202
Net Debt	27,424
Total Debt/EBITDA	1.7
Net Debt/EBITDA	1.6
EBITDA/Interest	16.8
Current Ratio	1.1
Quick Ratio	0.2

NMF = Not Meaningful

Structure of the Specialty Retailers Industry — NEUTRAL

The specialty retail segment is fragmented, highly competitive, and economically-sensitive. The group covers a broad array of businesses and is dominated by retailers with large brick-and-mortar store footprints. Though some constituents may be insulated from e-commerce competition, others risk obsolescence as product distribution moves to digital means, and online retailers offer lower prices for identical goods and services. We're fairly neutral on the structure of the industry, though some constituents will inevitably face secular and permanent declines.

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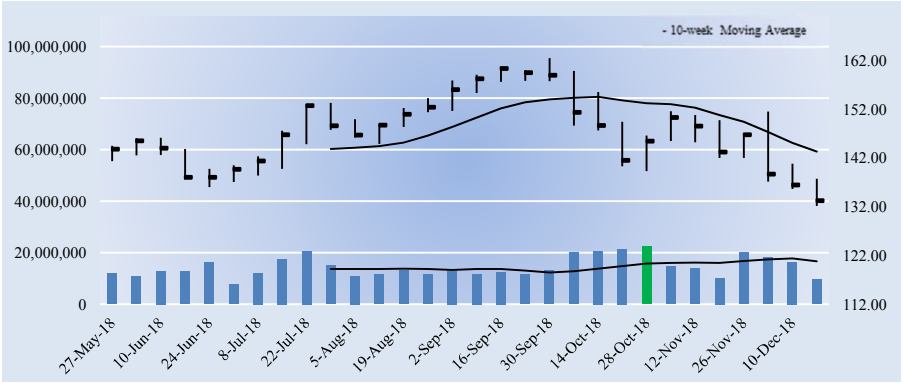
Honeywell HON FAIRLY VALUED

Buying Index™ 3 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$139.00	$111.00 - $167.00	LARGE-CAP VALUE	Industrials	Conglomerates

Honeywell has spun-off its 'Homes and ADI Global Distribution' business and will spin-off its 'Transportation Systems' business and will then be focused on six key end markets.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**DECLINING**
Technical Evaluation	**BEARISH**
Relative Strength	**WEAK**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BEARISH**
Near-term Technical Resistance, 10-wk MA	**143.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$102,890
Avg Weekly Vol (30 wks)	14,444
30-week Range (USD)	132.15 - 162.52
Valuentum Sector	Industrials
5-week Return	-10.2%
13-week Return	-16.6%
30-week Return	-7.1%
Dividend Yield %	2.5%
Dividends per Share	3.28
Forward Dividend Payout Ratio	40.6%
Est. Normal Diluted EPS	8.48
P/E on Est. Normal Diluted EPS	15.7
Est. Normal EBITDA	9,569
Forward EV/EBITDA	11.9
EV/Est. Normal EBITDA	11.5
Forward Revenue Growth (5-yr)	-0.2%
Forward EPS Growth (5-yr)	34.3%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Honeywell is a conglomerate operating in the following areas: aerospace, automation and controls solutions, performance materials and technologies, and transportation systems. Its aerospace products are used on virtually every aircraft, and its warehouse automation business is gaining steam. The company was founded in 1920 and is based in New Jersey.

• For an industrial giant, Honeywell generates nice margins. Its 'Performance Materials and Technology' segment boasts its highest profit margins in the low- to mid-20% range, followed by its 'Aerospace' segment in the low 20% range. It is working to optimize fixed costs in its manufacturing and logistics facilities.

• Honeywell expects continued macro strength across is major end markets in 2019 including commercial aviation, defense, and process automation, which will be drive by flight hours growth, robust defense budgets, and warehouse building. It expects the impact of tariffs enacted thus far to be manageable and is targeting a $340 million reduction in corporate and other stranded costs by the end of the year.

• Honeywell's long-term financial targets include 3%-5% annual organic sales growth, 30-50 basis points of margin expansion per year, EPS growth greater than peers, a cash conversion rate greater than 100%, and the maintenance of investment grade credit ratings. Management is also targeting dividend growth in-line with earnings growth.

• Honeywell has spun-off its Homes and ADI Global Distribution business ($4.5 billion annual revenue), which is now Resideo (REZI), and will spin-off its Transportation Systems business ($3 billion revenue). Honeywell will then be focused on six key end markets.

Relative Valuation

	Forward P/E	PEG	Price / FV
3M	18.9	1.7	107.3%
Danaher	22.1	2.8	119.8%
General Electric	10.7	NMF	63.8%
United Technologies	15.7	1.4	95.6%
Peer Median	17.3	1.7	101.5%
Honeywell	**16.5**	**1.8**	**95.9%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	20.7%
Return on Assets	7.5%
ROIC, with goodwill	20.5%
ROIC, without goodwill	49.5%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	17,882
Net Debt	7,065
Total Debt/EBITDA	2.2
Net Debt/EBITDA	0.9
EBITDA/Interest	25.8
Current Ratio	1.4
Quick Ratio	1.0

NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-16	Dec-17	Dec-18
Revenue	39,302	40,534	42,196
Revenue, YoY%	1.9%	3.1%	4.1%
Operating Income	6,683	7,151	8,169
Operating Margin %	17.0%	17.6%	19.4%
Net Income	4,809	1,655	6,231
Net Income Margin %	12.2%	4.1%	14.8%
Diluted EPS	6.20	2.14	8.07
Diluted EPS, YoY %	2.7%	-65.4%	276.5%
Free Cash Flow (CFO-capex)	3,992	4,935	5,902
Free Cash Flow Margin %	10.2%	12.2%	14.0%

In Millions of USD (except for per share items)

Structure of the Conglomerates Industry — GOOD

The industrial conglomerate industry is characterized by firms that operate various business lines on a global scale. Demand for industrial products tends to be cyclical in nature, and most firms couple their manufacturing operations with generally more stable services businesses to mitigate fundamental volatility. Firms tend to have bargaining power over suppliers due to industry dominance and boast substantial resources to adapt to changing conditions or competitive threats. Most sell products under powerful and recognizable brand names and look to emerging markets for future growth. We like the group.

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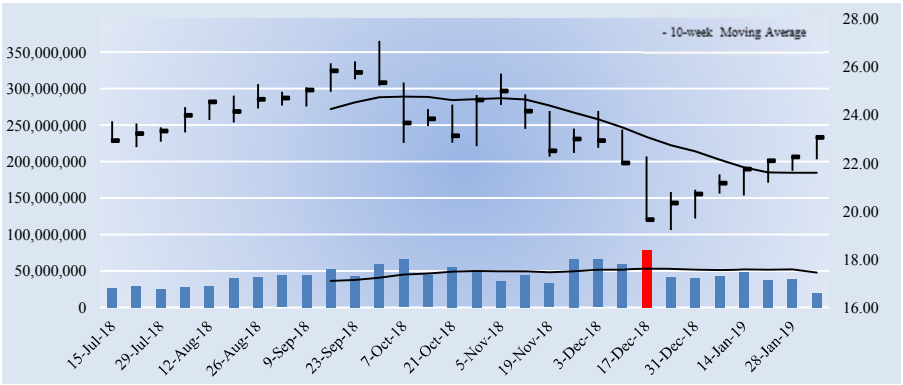
Hewlett-Packard HPQ FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$29.00	$20.00 - $38.00	LARGE-CAP VALUE	Information Technology	Computer Hardware

Hewlett-Packard remains tied to the struggling PC market, and the potential slowing of economic growth in China and the growing popularity and power of smartphones continue to work against the market.

Stock Chart (weekly)



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Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**WEAK**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**22.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$37,696
Avg Weekly Vol (30 wks)	44,593
30-week Range (USD)	19.22 - 27.08
Valuentum Sector	Information Technology
5-week Return	11.2%
13-week Return	-6.9%
30-week Return	-2.6%
Dividend Yield %	2.8%
Dividends per Share	0.64
Forward Dividend Payout Ratio	28.8%
Est. Normal Diluted EPS	2.41
P/E on Est. Normal Diluted EPS	9.6
Est. Normal EBITDA	5,264
Forward EV/EBITDA	7.6
EV/Est. Normal EBITDA	7.3
Forward Revenue Growth (5-yr)	1.5%
Forward EPS Growth (5-yr)	-4.5%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Hewlett-Packard's recent split has resulted in two independent companies, HP and HP Enterprise. HP provides products, technologies, software, solutions, and services to individual consumers and small- and medium-sized businesses, as well as to the government, health, and education sectors. HP Enterprise provides technology solutions to business and public sector enterprises.

• HP remains tied to the struggling PC market as nearly 40% of net revenue comes from notebooks and another 20% from desktops. However, its 'Printing' segment makes up 70%+ of non-GAAP operating profit despite accounting for only ~35% of net revenue as it carries a ~16% operating margin.

• The global PC market remains under pressure, but some observers see it stabilizing on the back of improved all-in-one PC demand. The potential slowing of economic growth in China and the growing popularity and power of smartphones are underlying factors that continue to work against the market. The firm's market share sits at 22.5% as of the end of fiscal 2018.

• Though the company derives roughly 35% of net revenue from the US, it has a nicely balanced portfolio geographically speaking. The Americas account for ~45% of net revenue, followed by the EMEA region at 34% and the Asia-Pacific and Japan region at 21% as of the third quarter of fiscal 2018.

• HP is working to take part in the disruptive 3D printing industry with its HP Metal Jet, which is designed for mass production. Its expects to build up to broad availability of the Metal Jet in 2021, and its Multi Jet Fusion is the most used industrial 3D printer in the world.

Relative Valuation

	Forward P/E	PEG	Price / FV
Apple	14.4	1.8	80.3%
BlackBerry	NMF	NMF	83.1%
Cray	NMF	NMF	107.6%
IBM	14.3	1.1	93.4%
Peer Median	14.3	1.4	88.2%
Hewlett-Packard	**10.4**	**NMF**	**79.6%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	-103.4%
Return on Assets	9.3%
ROIC, with goodwill	30.3%
ROIC, without goodwill	67.3%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Oct-17	Oct-18	Oct-19
Revenue	52,056	58,472	59,583
Revenue, YoY%	7.9%	12.3%	1.9%
Operating Income	4,012	4,326	4,548
Operating Margin %	7.7%	7.4%	7.6%
Net Income	2,526	5,327	3,558
Net Income Margin %	4.9%	9.1%	6.0%
Diluted EPS	1.48	3.26	2.22
Diluted EPS, YoY %	-3.0%	119.7%	-31.8%
Free Cash Flow (CFO-capex)	3,275	3,982	3,356
Free Cash Flow Margin %	6.3%	6.8%	5.6%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	5,987
Net Debt	821
Total Debt/EBITDA	1.2
Net Debt/EBITDA	0.2
EBITDA/Interest	15.6
Current Ratio	0.9
Quick Ratio	0.4

NMF = Not Meaningful

Structure of the Computer Hardware Industry — NEUTRAL

The computer hardware space, which spans the personal computer to the iPhone and iPad, is highly competitive. The industry is characterized by frequent product introductions and rapid technological advances that can cause dramatic market share shifts. Though some firms benefit from a strong brand, participants often price aggressively, pressuring margins. Firms are also subject to potential component shortages/disruptions, which can punish performance. Obsolescence may be an eventuality for some, and services revenue has become critical for others. We're neutral on the space.

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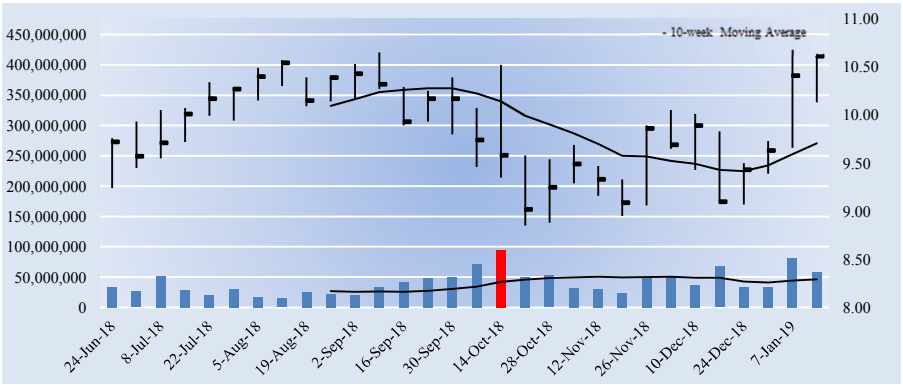
Infosys Ltd INFY FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$10.00	$8.00 - $13.00	LARGE-CAP CORE	Information Technology	IT Services

Infosys expects its business to continue evolving from a cost-based, human-only model to one in which human efforts are amplified by software platforms and artificial intelligence.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**IMPROVING**
Near-term Technical Support, 10-week MA	**10.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$46,157
Avg Weekly Vol (30 wks)	41,121
30-week Range (USD)	8.85 - 10.68
Valuentum Sector	Information Technology
5-week Return	8.0%
13-week Return	10.9%
30-week Return	13.7%
Dividend Yield %	3.1%
Dividends per Share	0.33
Forward Dividend Payout Ratio	64.1%
Est. Normal Diluted EPS	0.63
P/E on Est. Normal Diluted EPS	16.7
Est. Normal EBITDA	3,784
Forward EV/EBITDA	13.4
EV/Est. Normal EBITDA	11.1
Forward Revenue Growth (5-yr)	6.5%
Forward EPS Growth (5-yr)	-7.4%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Infosys is a global leader in consulting, technology and outsourcing solutions. The company is headquartered in India, which is widely recognized as the premier destination for offshore technology services. Offshore outsourcing is global mega trend. The firm was founded in 1981 and is headquartered in India. It recently underwent a 2-for-1 stock split.

• Continued automation increases at Infosys will increase productivity and lower cost of ownership to clients, while advancing agility through client value based models will increase the firm's service differentiation compared to peers. We're fans of its cash-rich balance sheet.

• Infosys expects its business to continue evolving from a cost-based, human-only model to one in which human efforts are amplified by software platforms and artificial intelligence. Such an evolution frees up resources for innovation in areas that are strategic to client specific businesses. Investing in such innovation is not necessarily beholden to geopolitical factors.

• Infosys is executing its strategy of software enabled services and accelerating growth in its new services portfolio, and it continues to focus on operational efficiencies in delivering stable margins. The company's client base continues to grow and has advanced to 1,191 as of the third quarter of fiscal 2018 from 798 at the end of fiscal 2013.

• Infosys has dubbed its transformation as a 'Renew-New' strategy in which it aims to renew its core business and reimagine core service lines and improve productivity while innovating into new businesses. Total digital revenue accounts for ~28% of its business.

Relative Valuation

	Forward P/E	PEG	Price / FV
Cognizant Tech	14.4	1.5	92.7%
DXC Technology	7.4	1.6	75.7%
ManTech Intl	25.8	2.0	117.7%
Wipro	18.5	NMF	104.8%
Peer Median	16.5	1.6	98.7%
Infosys Ltd	**20.6**	**NMF**	**106.1%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	22.8%
Return on Assets	18.7%
ROIC, with goodwill	55.9%
ROIC, without goodwill	66.3%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Mar-17	Mar-18	Mar-19
Revenue	10,208	10,939	11,781
Revenue, YoY%	7.4%	7.2%	7.7%
Operating Income	2,520	2,659	2,844
Operating Margin %	24.7%	24.3%	24.1%
Net Income	2,140	2,486	2,241
Net Income Margin %	21.0%	22.7%	19.0%
Diluted EPS	0.94	1.10	0.52
Diluted EPS, YoY %	4.3%	17.7%	-53.2%
Free Cash Flow (CFO-capex)	1,688	1,947	2,069
Free Cash Flow Margin %	16.5%	17.8%	17.6%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	0
Net Debt	-4,023
Total Debt/EBITDA	0.0
Net Debt/EBITDA	NMF
EBITDA/Interest	Excellent
Current Ratio	3.5
Quick Ratio	3.1

NMF = Not Meaningful

Structure of the IT Services Industry — NEUTRAL

The IT services industry is composed of offshore entities that provide outsourced IT infrastructure at a low cost and contractors that provide a variety of services to US government agencies. Success is often dependent on the talent of a firm's technology professionals and the effective execution of service offerings. Most constituents generate significant cash flow and high returns on investment due to minimal capital requirements. Still, competition remains fierce, and recent government actions to stimulate rivalry and reduce the number of sole source awards has weighed on some participants. We're neutral on the group.

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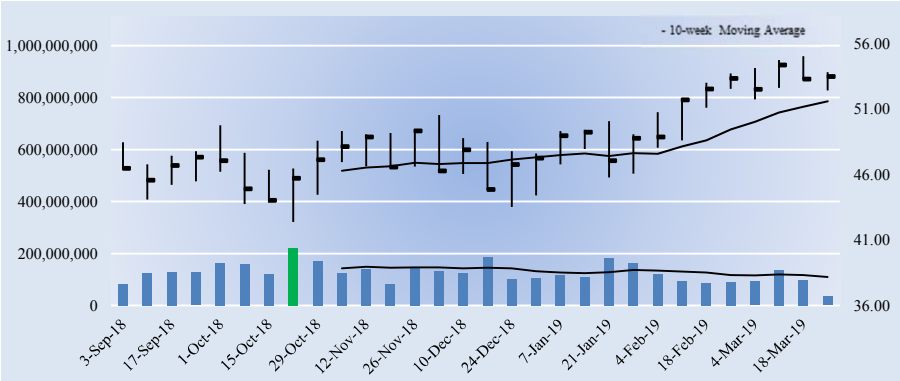
Intel INTC FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$56.00	$45.00 - $67.00	MEGA-CAP VALUE	Information Technology	Broad Line Semiconductors

Intel continues to shift its portfolio from PC-centric to data-centric, and its revenue mix was roughly evenly split between the two groupings in 2018.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$251,221
Avg Weekly Vol (30 wks)	125,889
30-week Range (USD)	42.36 - 54.99
Valuentum Sector	Information Technology
5-week Return	0.7%
13-week Return	13.5%
30-week Return	10.5%
Dividend Yield %	2.4%
Dividends per Share	1.26
Forward Dividend Payout Ratio	27.7%
Est. Normal Diluted EPS	5.07
P/E on Est. Normal Diluted EPS	10.5
Est. Normal EBITDA	35,112
Forward EV/EBITDA	8.1
EV/Est. Normal EBITDA	7.6
Forward Revenue Growth (5-yr)	2.7%
Forward EPS Growth (5-yr)	4.6%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	19.9%
Return on Assets	11.5%
ROIC, with goodwill	24.7%
ROIC, without goodwill	33.6%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	26,359
Net Debt	14,709
Total Debt/EBITDA	0.8
Net Debt/EBITDA	0.5
EBITDA/Interest	69.1
Current Ratio	1.7
Quick Ratio	1.1

NMF = Not Meaningful

Investment Highlights

• Intel designs and manufactures advanced integrated digital technology platforms, which are used in PCs, servers, tablets, smartphones, automobiles, automated factory systems, and medical devices. The company bought Altera in a near-$17 billion deal that has enabled it to compete in new classes of products in its high-growth Data Center and Internet of Things segments, but competition is fierce.

• Intel continues to shift its portfolio from PC-centric to data-centric, and its revenue mix was 52/48 PC/data in 2018 compared to 72/28 in 2012. Management expects to deliver ~$4.60 in non-GAAP earnings per share and $16 billion in free cash flow in 2019.

• Intel believes it has a virtuous cycle of growth as we move into 'the next Industrial Revolution,' or the Internet of Things. Intel's products speed up the connectivity of devices to data centers and the cloud while enabling larger amounts of storage at a lower cost. As more devices are equipped with such technology, demand for the same technology should increase on the data center end, and vice versa.

• Intel's purchase of Mobileye positions it as a leader in the provision of end-to-end solutions in the automated driving market, expanding the reach of its virtuous cycle of growth. Annual cost synergies of $195 million are being targeted by 2019, but its balance sheet has been weakened. We love what the deal brings in terms of broadening Intel's TAM.

• Intel's delayed launch of its 10-nm chips came at an inopportune time as rivals such as AMD are gaining steam, and it expects the launch to take place in time for the 2019 holiday season. We continue to like the long-term opportunity at Intel, and its robust free cash flow generation drives its dividend strength.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**52.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				■
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Advanced Micro Devices	75.8	6.8	129.0%
Broadcom	12.9	1.6	111.6%
STMicroelectronics	11.3	1.9	93.7%
Texas Instruments	18.3	2.6	117.2%
Peer Median	15.6	2.3	114.4%
Intel	**11.7**	**2.6**	**95.4%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	62,761	70,848	71,061
Revenue, YoY%	5.7%	12.9%	0.3%
Non-GAAP Operating Income	18,320	23,244	23,708
Non-GAAP EBIT %	29.2%	32.8%	33.4%
Non-GAAP Net Income	9,601	21,053	20,985
Non-GAAP NI Margin %	15.3%	29.7%	29.5%
Non-GAAP Diluted EPS	1.99	4.48	4.56
Non-GAAP Dil EPS, YoY %	-6.2%	125.5%	1.7%
Non-GAAP Free Cash Flow	10,332	14,251	15,747
Non-GAAP FCF Margin %	16.5%	20.1%	22.2%

In Millions of USD (except for per share items)

Structure of the Broad Line Semiconductor Industry — POOR

The broad line semiconductor industry is characterized by intense competition, rapid technological change, and frequent product introductions. The number and variety of computing devices have expanded rapidly, creating a connected landscape between suppliers and competitors. New market segments have emerged rapidly (smartphones, tablets), and constituents must continuously innovate to maintain share as traditional PC demand faces pressure. Though some firms may gain advantages via the combination of their manufacturing/test facilities with their design teams, we think the structure of the group is poor.

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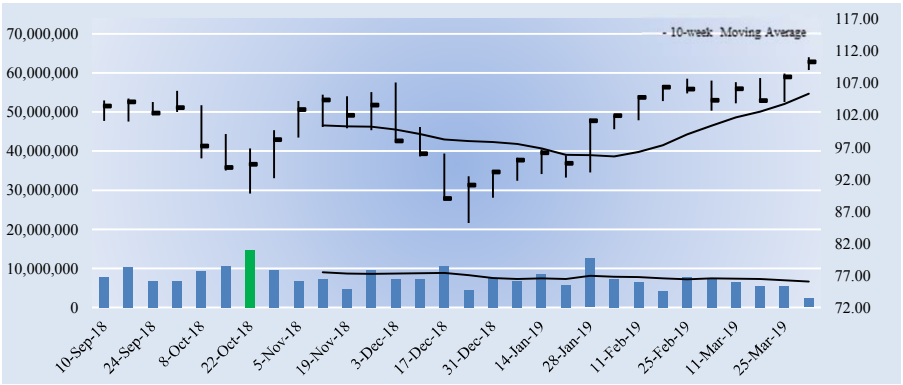
Ingersoll-Rand IR FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$97.00	$78.00 - $116.00	LARGE-CAP CORE	Industrials	Machinery & Tools

Ingersoll-Rand will continue to aggressively pursue procurement, pricing, and productivity actions to mitigate tariff and inflation impacts on margins.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**105.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$27,576
Avg Weekly Vol (30 wks)	7,636
30-week Range (USD)	85.15 - 111
Valuentum Sector	Industrials
5-week Return	3.3%
13-week Return	18.4%
30-week Return	9.1%
Dividend Yield %	1.9%
Dividends per Share	2.12
Forward Dividend Payout Ratio	33.3%
Est. Normal Diluted EPS	7.37
P/E on Est. Normal Diluted EPS	15.0
Est. Normal EBITDA	2,833
Forward EV/EBITDA	11.8
EV/Est. Normal EBITDA	10.9
Forward Revenue Growth (5-yr)	3.5%
Forward EPS Growth (5-yr)	8.7%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Ingersoll-Rand's diverse portfolio of industrial products have well-recognized brand names, including Ingersoll-Rand, American Standard, and Trane. Following the spinoff of Allegion, the company restructured from four reporting business segments to two—Climate and Industrial. The firm was founded in 1872 and is headquartered in Ireland.

• Ingersoll-Rand estimates that 75% of infrastructure globally that will exist in 2050 has yet to be built, offering it a significant sustainable growth opportunity. India offers above average growth opportunity, where 85% of buildings that will exist in 2050 have yet to be built.

• Ingersoll-Rand is well-positioned to capitalize on the needs driven by the global urban population, which is expected to expand to 6.4 billion by 2050 or a 70%-85% increase from recent levels. The firm has an excellent position to leverage its large installed equipment base to expand higher-margin services revenue.

• Ingersoll-Rand expects total reported revenue growth of 4%-5% in 2019 with growth in both segments. It will be utilizing its business operating system to actively manage pricing and productivity and continue to aggressively pursue procurement, pricing, and productivity action to mitigate tariff and inflation impacts on margins in 2019.

• Management expects 30-80 basis points of adjusted operating margin expansion in 2019, with both segments contributing positively. Adjusted earnings per share guidance comes in a range of $6.15-$6.35 for the year, and it expects free cash flow to be greater than 100% of net income.

Relative Valuation

	Forward P/E	PEG	Price / FV
Dover	16.2	1.8	106.6%
Flowserve	21.1	1.8	115.7%
Graco	24.3	3.6	127.0%
Illinois Tool Works	18.5	2.8	119.0%
Peer Median	19.8	2.3	117.4%
Ingersoll-Rand	**17.3**	**2.3**	**113.7%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	20.8%
Return on Assets	7.9%
ROIC, with goodwill	11.1%
ROIC, without goodwill	21.7%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	14,198	15,668	16,405
Revenue, YoY%	5.1%	10.4%	4.7%
Operating Income	1,665	1,917	2,226
Operating Margin %	11.7%	12.2%	13.6%
Net Income	1,328	1,359	1,560
Net Income Margin %	9.4%	8.7%	9.5%
Diluted EPS	5.15	5.43	6.36
Diluted EPS, YoY %	-6.7%	5.6%	17.1%
Free Cash Flow (CFO-capex)	1,302	1,042	1,629
Free Cash Flow Margin %	9.2%	6.7%	9.9%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	4,091
Net Debt	3,188
Total Debt/EBITDA	1.8
Net Debt/EBITDA	1.4
EBITDA/Interest	10.3
Current Ratio	1.3
Quick Ratio	0.8

NMF = Not Meaningful

Structure of the Machinery & Tools Industry — GOOD

The machinery and tools industry is fragmented and highly competitive. Most constituents offer a wide range of products in a myriad of markets. Firms are heavily exposed to fluctuating raw material prices (steel, resins, chemicals) and the vicissitudes of the global economic cycle, including customer capital/maintenance budgets. Several companies are recognized worldwide for their strong brand names and reputation for quality, innovation and value, and we view such attributes as material competitive advantages. Though pricing competition is not absent, we like the structural characteristics of the group.

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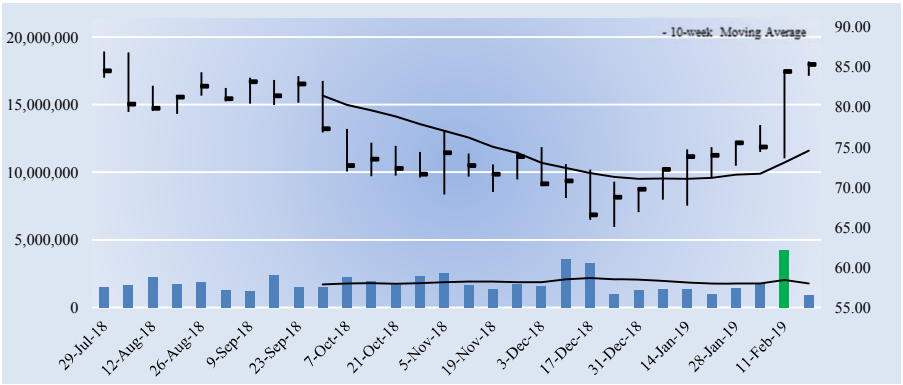
j2 Global JCOM FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$100.00	$75.00 - $125.00	MID-CAP VALUE	Information Technology	Business Services

j2 Global's 'Digital Media' segment continues to account for a growing percentage of total revenue, and the trend is expected to continue in the near term.

Stock Chart (weekly)



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Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**75.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$4,154
Avg Weekly Vol (30 wks)	1,850
30-week Range (USD)	65.07 - 86.9
Valuentum Sector	Information Technology
5-week Return	16.1%
13-week Return	17.3%
30-week Return	-1.1%
Dividend Yield %	2.1%
Dividends per Share	1.78
Forward Dividend Payout Ratio	68.8%
Est. Normal Diluted EPS	5.83
P/E on Est. Normal Diluted EPS	14.6
Est. Normal EBITDA	561
Forward EV/EBITDA	13.5
EV/Est. Normal EBITDA	8.6
Forward Revenue Growth (5-yr)	6.2%
Forward EPS Growth (5-yr)	16.8%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	15.6%
Return on Assets	7.2%
ROIC, with goodwill	20.9%
ROIC, without goodwill	58.2%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	1,002
Net Debt	651
Total Debt/EBITDA	2.4
Net Debt/EBITDA	1.6
EBITDA/Interest	6.2
Current Ratio	2.3
Quick Ratio	2.2

NMF = Not Meaningful

Investment Highlights

• j2 Global is a leading provider of Internet services through its two business segments 'Business Cloud Services' and 'Digital Media.' Its 'Business Cloud Services' segment provides cloud services to businesses of all sizes and licenses its intellectual property, while its 'Digital Media' segment specializes in the technology and gaming markets. The firm was founded in 1995 and is headquartered in Los Angeles.

• Over 80% of j2 Global's 'Cloud Services' segment revenue (more than 40% of total revenue) is generated via fixed subscriptions; variable cost subscriptions and other license reveneus account for the balance in the segment. We like the visibility this revenue stream provides.

• j2 Global's 'Digital Media' segment continues to account for a growing percentage of total revenue, and this measure was just over 50% in 2018 compared to ~48% in 2017. The trend should continue in 2019 as the segment is expecting revenue growth in excess of 10% compared to ~5% revenue growth guidance for its 'Cloud Services' segment. Adjusted earnings per share guidance comes in at $6.65-$6.95.

• j2 Global is exposed to the economic cycle via its customers, and any downturn could lead to a material reduction in usage rates, customer acquisitions, and retention. Acquisitions are core to its growth strategy, opening it up to identification, integration, and execution risk. Large deals are not typical, but its balance sheet health should be monitored.

• In addition to its visible revenue stream, j2 Global's 'Cloud Services' segment has a scalable subscription-based business model, and its focus on small businesses helps its diversity (customer base of over 3.2 million). Acquisitions should continue complimenting organic growth.

Relative Valuation

	Forward P/E	PEG	Price / FV
Accenture	21.9	2.5	114.1%
Amdocs	13.3	1.4	80.4%
IHS Markit	20.6	1.9	108.2%
VMware	27.1	2.8	122.0%
Peer Median	21.2	2.2	111.2%
j2 Global	**33.0**	**1.2**	**85.3%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-16	Dec-17	Dec-18
Revenue	874	1,118	1,207
Revenue, YoY%	21.3%	27.9%	8.0%
Non-GAAP Operating Income	243	246	228
Non-GAAP EBIT %	27.7%	22.0%	18.9%
Non-GAAP Net Income	152	139	126
Non-GAAP NI Margin %	17.4%	12.5%	10.4%
Non-GAAP Diluted EPS	3.18	2.86	2.59
Non-GAAP Dil EPS, YoY %	14.4%	-9.9%	-9.7%
Non-GAAP FCF (CFO-capex)	253	222	344
Non-GAAP FCF Margin %	28.9%	19.8%	28.5%

In Millions of USD (except for per share items)

Structure of the Business Services Industry — NEUTRAL

Firms in the business services space primarily focus on management consulting, technology/data-integration services/software and outsourcing solutions. Participants generate high returns on invested capital, but the business services marketplace is very competitive, and firms can often face pressure from off-shore service providers in lower-cost locations (India, Philippines and China). Such competition may inhibit firms' ability to obtain sufficient pricing for services, and economic conditions may hinder the capability of clients to pay for such services. Still, we're generally neutral on the group.

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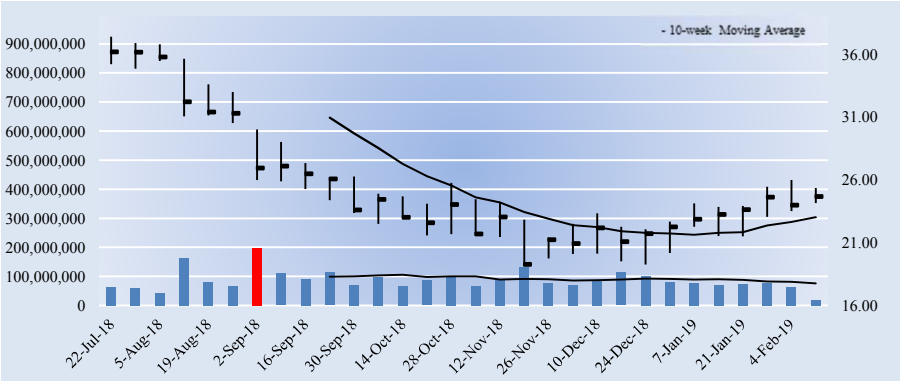
JD.com JD FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$37.00	$24.00 - $50.00	LARGE-CAP BLEND	Information Technology	Internet Software & Svcs

JD.com has ambitious plans for its international growth in coming years.

Stock Chart (weekly)



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Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**HIGH**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**WEAK**
Financial Leverage	**HIGH**
Growth	**AGGRESSIVE**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**23.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$35,927
Avg Weekly Vol (30 wks)	87,029
30-week Range (USD)	19.21 - 37.4
Valuentum Sector	Information Technology
5-week Return	10.9%
13-week Return	9.9%
30-week Return	-31.3%
Dividend Yield %	0.0%
Dividends per Share	0.00
Forward Dividend Payout Ratio	0.0%
Est. Normal Diluted EPS	0.98
P/E on Est. Normal Diluted EPS	25.1
Est. Normal EBITDA	2,926
Forward EV/EBITDA	24.6
EV/Est. Normal EBITDA	11.5
Forward Revenue Growth (5-yr)	18.3%
Forward EPS Growth (5-yr)	-355.7%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• JD.com is China's largest e-commerce company as well as its largest retailer by revenue. Its goal is to provide consumers with an enjoyable online experience through its content-rich and user-friendly website and mobile apps. The company has its own nationwide fulfillment infrastructure in China, supporting both its online direct sales and online marketplace businesses.

• JD.com recently opened its first US facility, a R&D center in Silicon Valley. It allows for easier interactions between the firm and US retailers, partners, and brands seeking to expand their presence in China. It plans to fully enter the US market via a new facility in Los Angeles by end of 2018.

• Though explosive growth at JD.com is anticipated to continue, there are risks associated with the pace of economic growth in China. The fragmented Chinese retail market provides ongoing opportunity. China online retail penetration has grown of late as well, hitting 15% in 2017 compared to 6.2% in 2012. The China online retail market is expected to grow at a 21% CAGR through 2020.

• In ten years, JD.com plans to have revenue split 50/50 between domestic and foreign markets. It plans to take on Amazon head on in the US, a bold yet risky strategy. Significant investments are being made in its logistics segment, but we're not sold this will prove to be a sustainable competitive advantage. It is planning an IPO of its logistics business public in coming years.

• JD.com is expecting its international momentum to blossom in coming years, and this should enable the firm to attract world-class products. However, headline risk related to its CEO's recent arrest does not bode well for shares as he owns nearly 80% of its voting rights and 16% of shares outstanding.

Relative Valuation

	Forward P/E	PEG	Price / FV
Alphabet	25.7	1.9	74.2%
Baidu	17.4	1.8	84.7%
Facebook	22.1	2.1	74.0%
Twitter	19.5	NMF	104.8%
Peer Median	20.8	1.9	79.4%
JD.com	**94.0**	**NMF**	**66.7%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	-12.0%
Return on Assets	-5.0%
ROIC, with goodwill	22.7%
ROIC, without goodwill	27.8%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-16	Dec-17	Dec-18
Revenue	37,462	55,689	72,285
Revenue, YoY%	34.2%	48.7%	29.8%
Operating Income	-300	-128	530
Operating Margin %	-0.8%	-0.2%	0.7%
Net Income	-557	-24	382
Net Income Margin %	-1.5%	0.0%	0.5%
Diluted EPS	-0.40	-0.02	0.26
Diluted EPS, YoY %	NMF	NMF	NMF
Free Cash Flow (CFO-capex)	621	2,451	724
Free Cash Flow Margin %	1.7%	4.4%	1.0%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	3,659
Net Debt	-2,241
Total Debt/EBITDA	7.1
Net Debt/EBITDA	NMF
EBITDA/Interest	3.5
Current Ratio	1.0
Quick Ratio	0.6

NMF = Not Meaningful

Structure of the Internet Software & Services Industry — NEUTRAL

The Internet software/services industry is composed of a variety of companies with rapidly-changing business models. Most focus on improving the ways people connect with information, either via Internet search or by social media platforms, and generate revenue primarily by delivering cost-effective online advertising. Constituents earn significant returns on invested capital due to their capital-light operations, though competition remains fierce. We expect most companies in this group to look substantially different 10 years from now than they do today. Overall, we're neutral on the structure.

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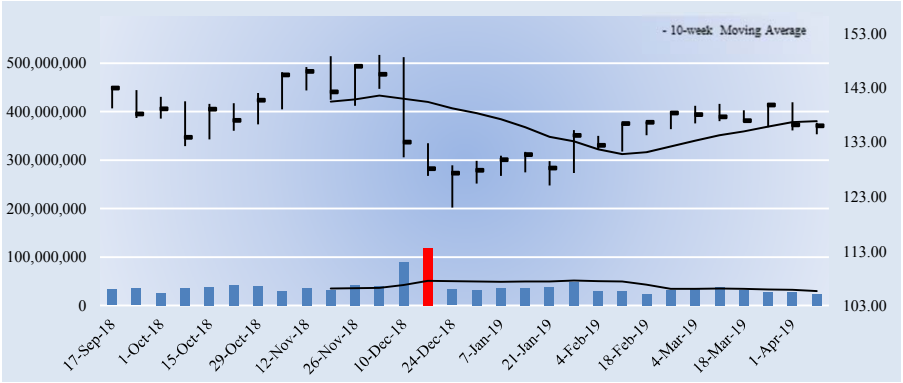
Johnson & Johnson JNJ FAIRLY VALUED

Buying Index™ 7 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$147.00	$118.00 - $176.00	MEGA-CAP VALUE	Consumer Staples	Household Products

Near-term headwinds for Johnson & Johnson include the loss of exclusivity of key drugs and an increased presence of generics and biosimilars, which together will provide ongoing pricing pressures.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**WEAK**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Resistance, 10-wk MA	**137.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$371,049
Avg Weekly Vol (30 wks)	38,703
30-week Range (USD)	121 - 148.99
Valuentum Sector	Consumer Staples
5-week Return	-1.5%
13-week Return	5.6%
30-week Return	-2.4%
Dividend Yield %	2.6%
Dividends per Share	3.60
Forward Dividend Payout Ratio	41.9%
Est. Normal Diluted EPS	9.56
P/E on Est. Normal Diluted EPS	14.2
Est. Normal EBITDA	38,334
Forward EV/EBITDA	10.7
EV/Est. Normal EBITDA	10.0
Forward Revenue Growth (5-yr)	2.7%
Forward EPS Growth (5-yr)	13.2%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• J&J has built one of the most comprehensive health care businesses, generating approximately 70% of revenue from top positions in its respective markets. The firm is focused on innovation while broadening its geographic presence. Consumer product sales are roughly 17% of its operations. The company was founded in 1885 and is headquartered in New Brunswick, New Jersey.

• J&J has 26 platforms/products that boast $1+ billion in annual sales as of the end of 2018. It plows ~10% of annual sales into R&D, a focus we like, but litigation risk continues to cast a shadow over shares. Management has been productive in reducing net debt of late.

• J&J's pharma portfolio is impressive. REMICADE has ~90% share of the US market for IV immunology products by volume, but the therapy's US exclusivity expired in 2018. STELARA (exclusivity through 2023 in US) and SIMPONI (exclusivity through 2024 in US) are also key profit drivers. Biosimilars competition is accelerating, but J&J's Oncology division is growing at a tremendous pace.

• Top-line growth at Johnson & Johnson will be driven by its impressive pharma portfolio pipeline, which will be supported by its steady consumer product business. The firm has at least 10 new molecular entities it believes have $1+ billion in individual annual sales potential that it expects to launch or file for approval from 2017-2021.

• J&J's has raised its dividend for 56 years consecutive years as of 2018. Its annual payout has advanced from just $0.43/share in 1997 to its current robust payout. J&J is a holding in both simulated newsletter portfolios, and we expect future dividend growth to be driven by robust free cash flow generation.

Relative Valuation

	Forward P/E	PEG	Price / FV
Clorox	24.4	3.6	134.0%
Colgate-Palmolive	24.1	2.5	118.6%
Kimberly-Clark	18.5	1.7	120.8%
Procter & Gamble	23.4	2.2	125.1%
Peer Median	23.7	2.4	122.9%
Johnson & Johnson	**15.8**	**1.8**	**92.5%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	17.0%
Return on Assets	7.6%
ROIC, with goodwill	23.3%
ROIC, without goodwill	33.5%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	76,450	81,581	81,092
Revenue, YoY%	6.3%	6.7%	-0.6%
Non-GAAP Operating Income	19,122	21,175	28,676
Non-GAAP EBIT %	25.0%	26.0%	35.4%
Non-GAAP Net Income	1,300	15,297	23,192
Non-GAAP NI Margin %	1.7%	18.8%	28.6%
Non-GAAP Diluted EPS	0.47	5.61	8.59
Non-GAAP Dil EPS, YoY %	-92.0%	1083.9%	NMF
Non-GAAP FCF (CFO-capex)	17,777	18,531	23,138
Non-GAAP FCF Margin %	23.3%	22.7%	28.5%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	30,480
Net Debt	10,793
Total Debt/EBITDA	1.1
Net Debt/EBITDA	0.4
EBITDA/Interest	28.0
Current Ratio	1.5
Quick Ratio	1.1

NMF = Not Meaningful

Structure of the Household Products Industry — GOOD

Firms in the household products industry sell some of the most recognized branded consumer packaged goods in the world and often hold a significant market share position in a variety of product categories. Though the industry is characterized by stiff competition from retailers' private-label brands, constituents tend to boast meaningful competitive advantages due to their brand strength/reputation and generate high returns on invested capital. Household products companies remain tied to the vicissitudes of consumer spending, but we tend to like the structure of the group.

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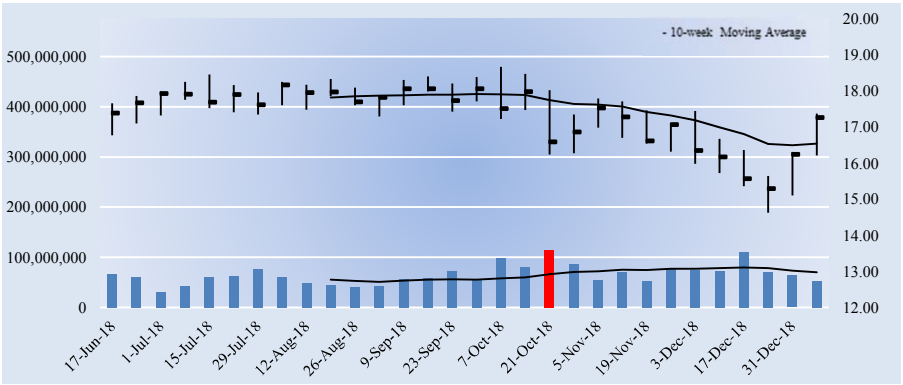
Kinder Morgan KMI FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Neutral	$23.00	$15.00 - $31.00	LARGE-CAP VALUE	Energy	Oil & Gas Pipelines

Kinder Morgan has made notable progress on its capital allocation plans, and management has high expectations for distribution growth in coming years.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**POOR**
ValueRisk™	**HIGH**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**HIGH**
Growth	**MODEST**
Technical Evaluation	**VERY BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BEARISH**
Near-term Technical Support, 10-week MA	**17.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High		■		
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$38,490
Avg Weekly Vol (30 wks)	65,537
30-week Range (USD)	14.62 - 18.67
Valuentum Sector	Energy
5-week Return	6.6%
13-week Return	-1.7%
30-week Return	2.7%
Dividend Yield %	4.6%
Dividends per Share	0.80
Forward Dividend Payout Ratio	88.7%
Est. Normal Diluted EPS	1.08
P/E on Est. Normal Diluted EPS	16.0
Est. Normal EBITDA	7,688
Forward EV/EBITDA	9.9
EV/Est. Normal EBITDA	8.8
Forward Revenue Growth (5-yr)	3.4%
Forward EPS Growth (5-yr)	151.2%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	1.1%
Return on Assets	0.5%
ROIC, with goodwill	6.1%
ROIC, without goodwill	6.4%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	33,541
Net Debt	28,976
Total Debt/EBITDA	5.8
Net Debt/EBITDA	5.0
EBITDA/Interest	3.2
Current Ratio	0.4
Quick Ratio	0.3

NMF = Not Meaningful; Debt excludes debt associated with the finance sub.

Investment Highlights

• Kinder Morgan is one of the largest midstream energy companies in North America, with ~80,000 miles of pipelines and 152 terminals. It re-consolidated its holdings in Kinder Morgan Energy Partners (KMP), El Paso Pipeline Partners (EPB) and Kinder Morgan Management (KMR). Kinder Morgan's operations are conducted through the following business segments: Natural Gas Pipelines (56% of EBDA), CO2, Products Pipelines, Terminals, and Kinder Morgan Canada. Management estimates that ~96% of cash flows are derived from take-or-pay and other fee-based contracts or are hedged.

• Kinder Morgan's business strategy is to 1) focus on stable, fee-based energy transportation/storage assets, 2) increase utilization of its assets while controlling costs, 3) leverage scale from incremental acquisitions and expansions of assets that fit within its strategy, and 4) maximize the benefits of its financial structure. The company is doing a good job executing upon its strategy, but its capital structure has worked against dividend growth plans, creating a not-so-virtuous cycle for stakeholders. The firm targets a net debt-to-adjusted EBITDA ratio of 4.5 times over the long haul, and the measure was 4.6x at the end of the third quarter of 2018.

• Kinder Morgan boasts an investment-grade credit rating, but only because it slashed its dividend payout, much to the dismay of income investors. Though it continues to work to improve its balance sheet health, management is looking for significant growth in the payout through 2020. A $2 billion share repurchase program began in December 2017. It expects distributable cash flow and annual dividends per share to be $2.20 and $1.00, respectively, in 2019.

Relative Valuation

	Forward P/E	PEG	Price / FV
Enbridge	23.2	0.7	88.4%
Enterprise Product Partners	14.7	2.1	90.6%
NuStar	-17.9	NMF	93.7%
Plains All American	12.9	1.5	92.5%
Peer Median	13.8	1.5	91.6%
Kinder Morgan	**19.1**	**NMF**	**75.0%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-16	Dec-17	Dec-18
Revenue	13,058	13,705	14,198
Revenue, YoY%	-9.3%	5.0%	3.6%
Operating Income	3,958	3,556	4,491
Operating Margin %	30.3%	25.9%	31.6%
Net Income	708	183	2,061
Net Income Margin %	5.4%	1.3%	14.5%
Diluted EPS	0.25	0.01	0.90
Diluted EPS, YoY %	139.1%	NMF	NMF
Free Cash Flow (CFO-capex)	1,913	1,413	2,648
Free Cash Flow Margin %	14.7%	10.3%	18.6%

In Millions of USD (except for per share items)

Structure of the Oil & Gas Pipeline Industry — NEUTRAL

Firms in the oil and gas pipeline industry own or operate thousands of miles of pipelines and terminals—assets that are nearly impossible/uneconomical to replicate. Most companies act as a toll road and receive a fee for transporting natural gas, crude oil and other refined products (and generally avoid commodity price risk). Though there is much to like, most constituents operate as master limited partnerships and pay out hefty distributions that can stretch their balance sheets. Additional unit issuance (dilution) has become common, and capital-market dependence is a key risk. We're neutral on the group.

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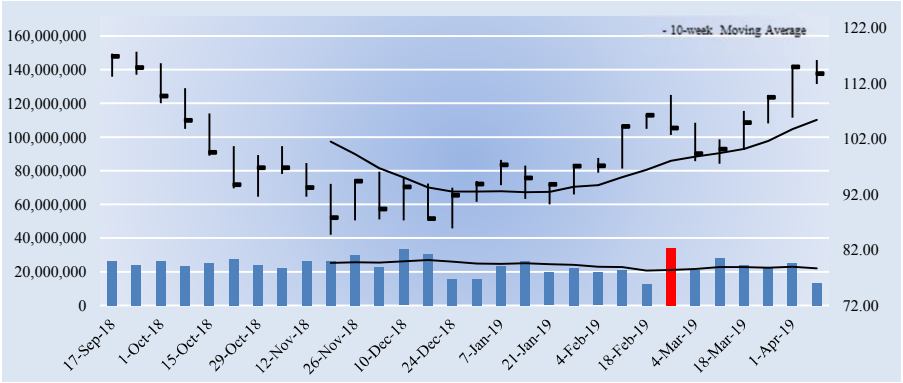
Lowe's LOW FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$96.00	$74.00 - $118.00	LARGE-CAP CORE	Consumer Discretionary	Specialty Retailers

We've raised our fair value estimate for Lowe's after lowering our cost of capital assumption. The company expects to continue reaping the benefits of a fundamentally solid operating environment.

Stock Chart (weekly)



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Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**105.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$92,373
Avg Weekly Vol (30 wks)	23,815
30-week Range (USD)	84.75 - 117.7
Valuentum Sector	Consumer Discretionary
5-week Return	14.0%
13-week Return	18.1%
30-week Return	0.1%
Dividend Yield %	1.7%
Dividends per Share	1.92
Forward Dividend Payout Ratio	31.4%
Est. Normal Diluted EPS	7.75
P/E on Est. Normal Diluted EPS	14.7
Est. Normal EBITDA	9,994
Forward EV/EBITDA	12.6
EV/Est. Normal EBITDA	10.8
Forward Revenue Growth (5-yr)	2.9%
Forward EPS Growth (5-yr)	26.7%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Lowe's is the world's second largest home improvement retailer. It operates over 1,800 stores in the US, roughly 300 in Canada, and ~10 in Mexico. The company strives to be customers' first choice for home improvement, and it serves approximately 16 million customers a week. Its Canadian stores include RONA. It was founded in 1946 and is headquartered in North Carolina.

• Lowe's is a fantastic company, and one that continues to benefit from the housing recovery. We're expecting the home improvement retail group to continue outperforming the broader retail space, which continues to struggle, thanks in part to the lack of a meaningful online threat at this point in time.

• Lowe's expects to continue reaping the benefits of a fundamentally solid operating environment in the near term. It expects US home improvement to benefit from income growth, lower federal tax rates, gains in household formations, and continued home price appreciation. An aging housing stock is also adding to its positive outlook as consumers stay in homes longer and invest in their homes.

• Lowe's plans to continue to grow sales through improving its customer experience as it continues to develop omni-channel capabilities. It has additional opportunity in improving its product and service offering for the Pro customer. Pros are relatively underrepresented in Lowe's customer base, but Pro comps have outperformed company averages of late.

• Aside from return on invested capital, one of the key metrics we look at in the retail space is 'sales per selling square foot.' For Lowe's, this metric has steadily advanced since 2009. Lowe's is customer-focused with an emphasis on simplicity as it helps consumers tackle large projects.

Relative Valuation

	Forward P/E	PEG	Price / FV
Bed Bath & Beyond	7.6	NMF	69.2%
Best Buy	10.8	1.7	84.3%
Home Depot	19.6	2.3	114.0%
Office Depot	8.6	1.2	73.5%
Peer Median	9.7	1.7	78.9%
Lowe's	**18.6**	**1.5**	**118.5%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	49.5%
Return on Assets	8.6%
ROIC, with goodwill	23.7%
ROIC, without goodwill	24.7%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Jan-18	Jan-19	Jan-20
Revenue	68,619	71,309	72,521
Revenue, YoY%	5.5%	3.9%	1.7%
Operating Income	6,586	4,018	7,033
Operating Margin %	9.6%	5.6%	9.7%
Net Income	3,447	2,314	4,871
Net Income Margin %	5.0%	3.2%	6.7%
Diluted EPS	4.10	2.85	6.12
Diluted EPS, YoY %	16.9%	-30.6%	114.8%
Free Cash Flow (CFO-capex)	3,942	5,019	4,917
Free Cash Flow Margin %	5.7%	7.0%	6.8%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	16,223
Net Debt	15,494
Total Debt/EBITDA	3.0
Net Debt/EBITDA	2.8
EBITDA/Interest	8.8
Current Ratio	1.0
Quick Ratio	0.1

NMF = Not Meaningful

Structure of the Specialty Retailers Industry — NEUTRAL

The specialty retail segment is fragmented, highly competitive, and economically-sensitive. The group covers a broad array of businesses and is dominated by retailers with large brick-and-mortar store footprints. Though some constituents may be insulated from e-commerce competition, others risk obsolescence as product distribution moves to digital means, and online retailers offer lower prices for identical goods and services. We're fairly neutral on the structure of the industry, though some constituents will inevitably face secular and permanent declines.

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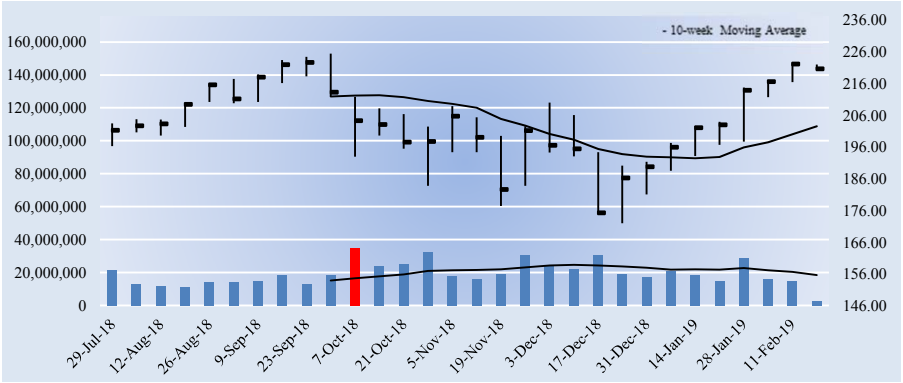
Mastercard MA FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$220.00	$176.00 - $264.00	MEGA-CAP GROWTH	Information Technology	Financial Tech Services

MasterCard benefits from one of the strongest competitive advantages out there – the network effect.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$230,958
Avg Weekly Vol (30 wks)	19,416
30-week Range (USD)	171.89 - 225.35
Valuentum Sector	Information Technology
5-week Return	10.4%
13-week Return	18.9%
30-week Return	8.7%
Dividend Yield %	0.6%
Dividends per Share	1.32
Forward Dividend Payout Ratio	17.3%
Est. Normal Diluted EPS	10.38
P/E on Est. Normal Diluted EPS	21.3
Est. Normal EBITDA	13,444
Forward EV/EBITDA	22.0
EV/Est. Normal EBITDA	17.0
Forward Revenue Growth (5-yr)	11.9%
Forward EPS Growth (5-yr)	18.8%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	82.6%
Return on Assets	22.7%
ROIC, with goodwill	101.1%
ROIC, without goodwill	153.3%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	6,334
Net Debt	-2,597
Total Debt/EBITDA	0.7
Net Debt/EBITDA	NMF
EBITDA/Interest	47.7
Current Ratio	1.4
Quick Ratio	1.2

NMF = Not Meaningful

Investment Highlights

• MasterCard is a payments industry leader. Every day, the firm's network makes payments happen. It doesn't issue cards, set interest rates or establish annual fees. MasterCard generates revenue by charging fees to issuers and acquirers for providing transaction processing and other payment-related services based on the gross dollar volume of activity.

• Though uncertainty persists in the global economy, the fundamentals of MasterCard's business and its approach remains unchanged. The firm has strong performance objectives for 2019-2021: a low-teens net revenue CAGR, annual operating margin of at least 50%, and a high-teens earnings per share CAGR.

• The payments industry is a rapidly evolving one. The larger secular trend moving society towards electronic payments remains very much intact, and technological advances and demand for adjacent services will continue to drive growth opportunities. However, risks for the industry include cybersecurity and privacy concerns, increased regulatory presence and nationalism, and new competitive entrants.

• MasterCard benefits from one of the strongest competitive advantages out there – the network effect. As more consumers use credit/debit cards, more merchants accept them, thereby creating a virtuous cycle. Concerns around rising interest rates and a potential easing of liquidity impacting growth appear to be waning, and consumer spending remains robust.

• When it comes to the credit-card processing space, we generally prefer Visa and MasterCard, which do not take on credit risk like Discover or American Express. This shields it from credit quality concerns. MasterCard's free cash flow generation is a sight to behold.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**HIGH**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**203.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				■
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Bottomline Tech	NMF	3.6	106.1%
Fiserv	29.8	NMF	129.7%
Visa	26.9	2.1	94.4%
Western Union	9.5	NMF	81.1%
Peer Median	26.9	2.8	100.3%
Mastercard	**28.9**	**2.1**	**100.3%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	12,497	14,950	16,908
Revenue, YoY%	16.0%	19.6%	13.1%
Operating Income	6,637	8,410	9,844
Operating Margin %	53.1%	56.3%	58.2%
Net Income	3,915	5,859	7,824
Net Income Margin %	31.3%	39.2%	46.3%
Diluted EPS	3.65	5.60	7.63
Diluted EPS, YoY %	-0.9%	53.2%	36.3%
Free Cash Flow (CFO-capex)	5,132	5,719	8,259
Free Cash Flow Margin %	41.1%	38.3%	48.8%

In Millions of USD (except for per share items)

Structure of the Financial Tech Services Industry — EXCELLENT

The financial tech services industry is primarily composed of firms that generate revenue by charging fees to customers for providing transaction processing and other payment-related services. Constituents operate in a rapidly-evolving legal/regulatory environment, particularly with respect to interchange fees, data protection, and information security. Several participants benefit from a significant competitive advantage – the network effect. As more consumers use credit/debit cards, more merchants accept them, thereby creating a virtuous cycle. The industry is one of the most attractive in our coverage.

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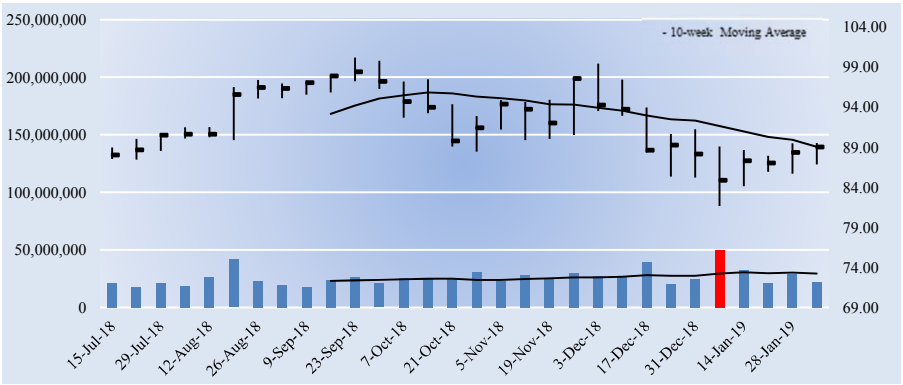
Medtronic MDT FAIRLY VALUED

Buying Index™ 4 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$97.00	$78.00 - $116.00	LARGE-CAP VALUE	Health Care	Medical Devices

Medtronic identifies three diversified growth vectors it expects to help it achieve its mid-single digit revenue growth target, and we think its baseline expectations are achievable.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$121,783
Avg Weekly Vol (30 wks)	26,193
30-week Range (USD)	81.66 - 100.15
Valuentum Sector	Health Care
5-week Return	0.7%
13-week Return	-5.8%
30-week Return	0.9%
Dividend Yield %	2.2%
Dividends per Share	2.00
Forward Dividend Payout Ratio	38.6%
Est. Normal Diluted EPS	6.01
P/E on Est. Normal Diluted EPS	14.8
Est. Normal EBITDA	12,821
Forward EV/EBITDA	11.7
EV/Est. Normal EBITDA	10.6
Forward Revenue Growth (5-yr)	3.3%
Forward EPS Growth (5-yr)	24.9%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	6.9%
Return on Assets	3.6%
ROIC, with goodwill	10.3%
ROIC, without goodwill	22.5%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	25,757
Net Debt	14,530
Total Debt/EBITDA	2.7
Net Debt/EBITDA	1.5
EBITDA/Interest	8.3
Current Ratio	2.3
Quick Ratio	1.7

NMF = Not Meaningful

Investment Highlights

• Medtronic is a global leader in medical technology. The company currently functions in four operating segments: Cardiac & Vascular, Minimally Invasive Therapies, Restorative Therapies, and Diabetes. Medtronic bought Covidien in a tax-inversion deal in 2015 and recently sold its Patient Care, Deep Vein Thrombosis, and Nutritional Insufficiency businesses. It traces its roots back to the late 1940s.

• Medtronic expects fiscal 2019 organic revenue growth to be 5%-5.5%, up from initial guidance of 4%-4.5%. Earnings per share leverage is expected as a result of ongoing operating margin improvement. Foreign exchange rates can have a material impact on results.

• Medtronic's baseline, organic expectations are achievable. Over the long haul, the company expects consistent mid-single-digit currency neutral revenue growth, ~8% adjusted EPS growth on a constant currency basis, and to return 50% of free cash flow to shareholders. Its 'Diabetes' segment has turned in double-digit growth of late, thanks in part to robust demand for its MiniMed 670G insulin pump system.

• Medtronic identifies three diversified growth vectors it expects to help it achieve its mid-single digit revenue growth target: a full pipeline of new therapies (expected annual growth of 2%-3.5%), penetration of existing therapies into emerging markets (1.5%-2%), and driving annuity revenue in services and solutions (0.4%-0.6%).

• Medtronic is a Dividend Aristocrat, and it has grown its per share dividend at an 18% CAGR over its 40-year history. Management remains committed to returning at least 50% of free cash flow per year to shareholders via dividends and share repurchases, which have been relatively balanced of late.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**BEARISH**
Relative Strength	**WEAK**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BEARISH**
Near-term Technical Resistance, 10-wk MA	**89.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				■
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Intuitive Surgical	54.5	3.1	132.6%
Varian Medical Systems	27.5	2.2	141.2%
Waters	30.2	8.0	135.9%
Zimmer Biomet	NMF	NMF	104.9%
Peer Median	30.2	3.1	134.2%
Medtronic	**17.2**	**1.6**	**91.8%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Apr-17	Apr-18	Apr-19
Revenue	29,710	29,953	30,552
Revenue, YoY%	3.0%	0.8%	2.0%
Operating Income	6,535	6,848	8,995
Operating Margin %	22.0%	22.9%	29.4%
Net Income	4,024	3,104	7,018
Net Income Margin %	13.5%	10.4%	23.0%
Diluted EPS	2.89	2.27	5.18
Diluted EPS, YoY %	16.6%	-21.6%	128.4%
Free Cash Flow (CFO-capex)	5,626	3,616	6,578
Free Cash Flow Margin %	18.9%	12.1%	21.5%

In Millions of USD (except for per share items)

Structure of the Medical Devices Industry — GOOD

The medical devices industry is heavily regulated and characterized by rapid technological change. Firms have been forced to compete on price due to economically-motivated buyers, consolidation among healthcare providers, and declining reimbursement rates. Healthcare reform measures have put additional pressure on procedure rates and market sizes. Still, firms can gain advantages by developing products with differentiated clinical outcomes or by creating patent-protected technology. Since most constituents hold important patents or trade secrets, we tend to like the group.

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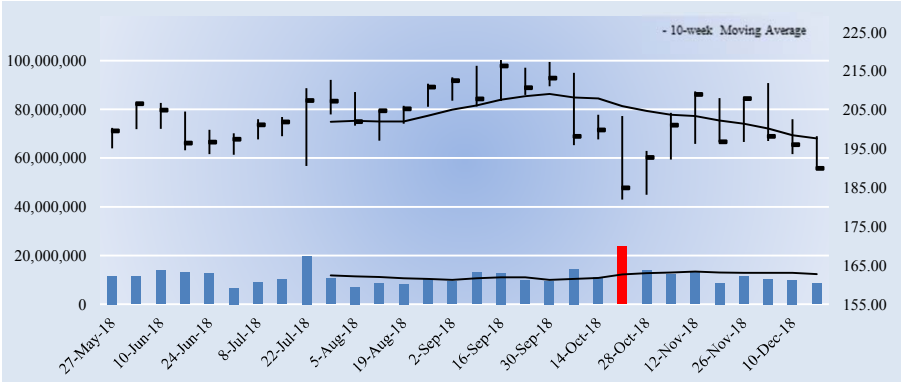
3M MMM FAIRLY VALUED

Buying Index™ 3 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$177.00	$133.00 - $221.00	LARGE-CAP CORE	Industrials	Conglomerates

3M has some solid targets for 2019-2023, and we like its capital allocation plan, which prioritizes innovation and organic growth.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$116,388
Avg Weekly Vol (30 wks)	11,518
30-week Range (USD)	181.98 - 217.87
Valuentum Sector	Industrials
5-week Return	-8.6%
13-week Return	-11.8%
30-week Return	-4.1%
Dividend Yield %	2.9%
Dividends per Share	5.44
Forward Dividend Payout Ratio	54.1%
Est. Normal Diluted EPS	12.34
P/E on Est. Normal Diluted EPS	15.4
Est. Normal EBITDA	11,278
Forward EV/EBITDA	13.1
EV/Est. Normal EBITDA	11.2
Forward Revenue Growth (5-yr)	3.7%
Forward EPS Growth (5-yr)	13.7%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	43.2%
Return on Assets	14.8%
ROIC, with goodwill	23.6%
ROIC, without goodwill	37.5%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	14,009
Net Debt	9,880
Total Debt/EBITDA	1.5
Net Debt/EBITDA	1.1
EBITDA/Interest	29.1
Current Ratio	1.9
Quick Ratio	1.2

NMF = Not Meaningful

Investment Highlights

• 3M is fundamentally a science-based company and holds over 100,000 patents. The company makes imaginative products, and it is a leader in many markets--from health care and highway safety to office products and abrasives and adhesives. 3M is perhaps among the most innovative firms in our coverage universe. Believe it or not, 3M started as a small mining venture in 1902.

• 3M has been scooping up assets to help it take advantage of the rapidly growing, regulatory driven market of workplace safety. Its top priorities for growth include connected safety, automotive electrification, advanced wound care, and data centers, among others.

• 3M has ambitious goals for the period 2019-2023. The conglomerate expects annual organic local-currency sales growth of 3-5%, annual earnings per share expansion of 8-11%, 20% return on invested capital, and 100% free cash flow conversion of net income. Its 'Healthcare' business is expected to lead top-line growth at 4%-6% per year, followed by 'Safety & Graphics' at 3%-6%.

• 3M continues to be well-positioned for ongoing success, in our view, and we like its balanced capital allocation plan. In 2019-2023 it plans to allocate ~30% of capital to growth investments with R&D spending at ~6% of sales and capex at 5%-5.5% of sales. ~30% will be allocated to the dividend with the remaining ~40% going towards M&A and buybacks.

• 3M has accelerated its dividend growth in recent periods. Though we like its dividend health quite a bit, dividend growth investors may have bid shares too high. We don't think investors should lose sight of its valuation. It has raised the annual payout in 60 consecutive years as of 2018.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**BEARISH**
Relative Strength	**NEUTRAL**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BEARISH**
Near-term Technical Resistance, 10-wk MA	**198.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueRisk™ \ ValueCreation™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Danaher	22.1	2.8	119.8%
General Electric	10.7	NMF	63.8%
Honeywell	16.5	1.8	95.9%
United Technologies	15.7	1.4	95.6%
Peer Median	16.1	1.8	95.8%
3M	**18.9**	**1.7**	**107.3%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-16	Dec-17	Dec-18
Revenue	30,109	31,657	33,050
Revenue, YoY%	-0.5%	5.1%	4.4%
Operating Income	7,223	7,820	8,010
Operating Margin %	24.0%	24.7%	24.2%
Net Income	5,050	4,858	6,102
Net Income Margin %	16.8%	15.3%	18.5%
Diluted EPS	8.16	7.93	10.06
Diluted EPS, YoY %	7.6%	-2.9%	26.9%
Free Cash Flow (CFO-capex)	5,242	4,820	6,029
Free Cash Flow Margin %	17.4%	15.2%	18.2%

In Millions of USD (except for per share items)

Structure of the Conglomerates Industry — GOOD

The industrial conglomerate industry is characterized by firms that operate various business lines on a global scale. Demand for industrial products tends to be cyclical in nature, and most firms couple their manufacturing operations with generally more stable services businesses to mitigate fundamental volatility. Firms tend to have bargaining power over suppliers due to industry dominance and boast substantial resources to adapt to changing conditions or competitive threats. Most sell products under powerful and recognizable brand names and look to emerging markets for future growth. We like the group.

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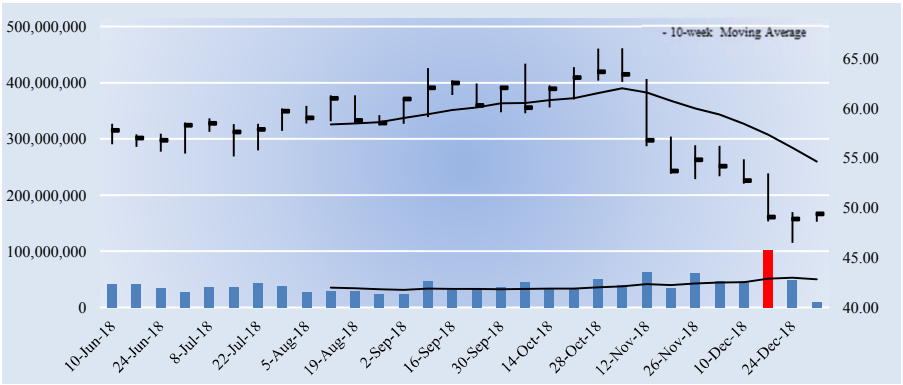
Altria Group MO FAIRLY VALUED

Buying Index™ 3 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$54.00	$43.00 - $65.00	LARGE-CAP VALUE	Consumer Staples	Tobacco

Altria has agreed to spend $14.6 billion in investments in long-term growth potential via material stakes in Cronos Group and JUUL Labs. We've lowered our fair value estimate after adjusting our model for debt to fund the deals.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$94,878
Avg Weekly Vol (30 wks)	39,855
30-week Range (USD)	46.49 - 66.04
Valuentum Sector	Consumer Staples
5-week Return	-9.7%
13-week Return	-20.8%
30-week Return	-14.5%
Dividend Yield %	6.5%
Dividends per Share	3.20
Forward Dividend Payout Ratio	79.2%
Est. Normal Diluted EPS	4.41
P/E on Est. Normal Diluted EPS	11.2
Est. Normal EBITDA	10,804
Forward EV/EBITDA	12.1
EV/Est. Normal EBITDA	11.3
Forward Revenue Growth (5-yr)	2.1%
Forward EPS Growth (5-yr)	-2.4%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	144.2%
Return on Assets	25.0%
ROIC, with goodwill	13.6%
ROIC, without goodwill	20.0%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	28,494
Net Debt	27,241
Total Debt/EBITDA	2.9
Net Debt/EBITDA	2.8
EBITDA/Interest	13.9
Current Ratio	0.6
Quick Ratio	0.2

NMF = Not Meaningful

Investment Highlights

• Altria makes and sells cigarettes and smokeless products in the US. It owns the Marlboro brand, which holds ~43% retail cigarette share, and the Copenhagen and Skoal brands, which together own more than 50% retail smokeless share. The company was founded in 1919 and is headquartered in Richmond, Virginia.

• Altria now has an approximate 10.2% equity interest in the new AB InBev, and it received ~$5.3 billion in pre-tax cash from the combination of AB InBev and SABMiller that has created a global beer giant. Altria supported the deal, and we think it will be a long-term positive.

• Altria acquired a 45% stake in Cronos Group, a leading cannabinoid company based in Toronto, for ~$1.8 billion with a warrant to add up to 10% to its ownership. It followed that deal with a $12.8 billion investment, for a 35% stake, in dominant US e-cigarette maker JUUL Labs. The two investments significantly enhance the company's long-term growth potential outside of the declining cigarette market.

• We're fans of Altria's long-term goals: grow adjusted diluted EPS at an average annual rate of 7%-9% and maintain a dividend payout ratio of approximately 80% of adjusted diluted EPS. Material pricing gains have helped offset cigarette volume declines in the US, but Altria appears to be switching its focus to next generation smoking products.

• Recent initiatives from the FDA in cracking down on nicotine levels and menthol in tobacco products should be monitored, and the FDA is also working to regulate and reduce teen use of e-cigarettes. Altria expects near-term EPS growth to come up short of long-term goals due to acquisition-related costs.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**HIGH**
Growth	**MODEST**
Technical Evaluation	**BEARISH**
Relative Strength	**NEUTRAL**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BEARISH**
Near-term Technical Resistance, 10-wk MA	**55.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				■
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
British American	8.5	NMF	79.6%
Philip Morris	14.2	1.8	98.7%
Schweitzer-Mauduit	8.1	0.9	70.9%
Vector Group	18.0	1.3	63.1%
Peer Median	11.3	1.3	75.2%
Altria Group	**12.2**	**NMF**	**91.5%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-16	Dec-17	Dec-18
Revenue	19,337	19,494	19,864
Revenue, YoY%	2.6%	0.8%	1.9%
Operating Income	8,941	9,589	9,877
Operating Margin %	46.2%	49.2%	49.7%
Net Income	14,239	10,222	7,683
Net Income Margin %	73.6%	52.4%	38.7%
Diluted EPS	7.29	5.32	4.04
Diluted EPS, YoY %	172.9%	-27.1%	-24.1%
Free Cash Flow (CFO-capex)	3,632	4,723	8,443
Free Cash Flow Margin %	18.8%	24.2%	42.5%

In Millions of USD (except for per share items)

Structure of the Tobacco Industry — GOOD

The oligopolistic tobacco industry is attractive in a number of ways. Firms sell an "addictive" product (cigarettes and/or smokeless tobacco), have significant pricing power, generate high margins, and strong returns on invested capital. Still, declining trends in smoking in the US, threats of tobacco-related litigation, new tobacco regulation (labeling) that discourages tobacco use, and excise tax price shocks that may impact demand will always be concerns. In any case, we tend to like the structural characteristics of the tobacco industry and the shareholder-friendly policies of constituents.

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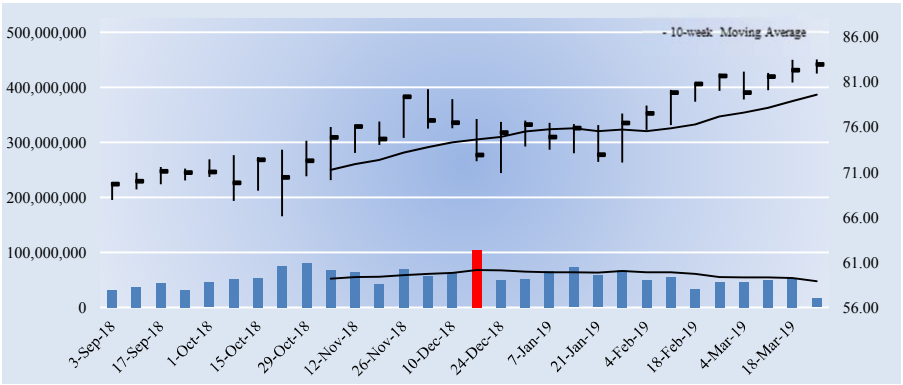
Merck MRK FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$73.00	$58.00 - $88.00	MEGA-CAP CORE	Health Care	Pharmaceuticals - Big

Merck's Keytruda is a key driver of sales growth, and the company continues to advance its late-stage pipeline.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$222,143
Avg Weekly Vol (30 wks)	54,663
30-week Range (USD)	66.1 - 83.47
Valuentum Sector	Health Care
5-week Return	2.5%
13-week Return	9.4%
30-week Return	21.3%
Dividend Yield %	2.7%
Dividends per Share	2.20
Forward Dividend Payout Ratio	53.8%
Est. Normal Diluted EPS	4.51
P/E on Est. Normal Diluted EPS	18.4
Est. Normal EBITDA	19,290
Forward EV/EBITDA	13.2
EV/Est. Normal EBITDA	12.4
Forward Revenue Growth (5-yr)	4.5%
Forward EPS Growth (5-yr)	14.1%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	12.0%
Return on Assets	4.6%
ROIC, with goodwill	29.7%
ROIC, without goodwill	48.6%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	25,114
Net Debt	16,250
Total Debt/EBITDA	1.9
Net Debt/EBITDA	1.2
EBITDA/Interest	17.4
Current Ratio	1.2
Quick Ratio	0.7

NMF = Not Meaningful

Investment Highlights

• Merck is a global health care company that delivers innovative health solutions through its prescription medicines, vaccines, and biologic therapies. Januvia/Janumet for type 2 diabetes and Keytruda for advanced Melanoma are its two largest revenue drivers within its pharma business. The company was founded in 1891 and is headquartered in New Jersey.

• Merck's Keytruda is the #1 treatment for advanced Melanoma in the US. The drug will be key for the in a return to top-line expansion after a period of suppressed growth due to the loss of exclusivity of multiple drugs. 2018 Keytruda sales were more than 5 times that of 2016 at ~$7.2 billion.

• Merck's recent results reveal in many ways the company has turned the corner with respect to the "patent cliff" and the expiration of exclusivity on its blockbuster Singulair and Nasonex. Keytruda's performance after four years on the market is unprecedented in terms of product sales growth post launch. The firm plans to increase capital spending to expand its manufacturing capacity in coming years.

• Merck continues to advance its late-stage pipeline, and we think it has promising potential therapies in cancer, antibiotic resistance, cardiometabolic disease, and Alzheimer's disease. The firm is facing challenges in diabetes but expects growth opportunities to be present in international markets, which should help stabilize the business segment.

• Merck expects to be active on the M&A front in the near term as a number of its peers have scooped up attractively priced biopharma entities. Management has not shut the door on the potential for a major purchase, but it is focused on identifying impactful treatments over size.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**NEUTRAL**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**80.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueRisk™ \ ValueCreation™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Abbott	24.4	2.5	116.2%
AbbVie	9.3	1.3	90.7%
Eli Lilly	22.9	2.1	123.6%
Pfizer	14.5	1.7	94.3%
Peer Median	18.7	1.9	105.2%
Merck	**20.3**	**2.5**	**113.6%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	40,122	42,294	44,662
Revenue, YoY%	0.8%	5.4%	5.6%
Non-GAAP Operating Income	7,309	8,931	13,465
Non-GAAP EBIT %	18.2%	21.1%	30.1%
Non-GAAP Net Income	2,394	6,220	10,849
Non-GAAP NI Margin %	6.0%	14.7%	24.3%
Non-GAAP Diluted EPS	0.87	2.32	4.09
Non-GAAP Dil EPS, YoY %	-38.1%	166.5%	76.2%
Non-GAAP Free Cash Flow	4,559	8,307	13,876
Non-GAAP FCF Margin %	11.4%	19.6%	31.1%

In Millions of USD (except for per share items)

Structure of the Big Pharma Industry — GOOD

The big pharma industry is primarily composed of makers of branded drugs. Intellectual property protection is vital to the successful commercialization of medicines and offers makers of branded drugs a unique competitive advantage via patents, which can extend for decades. When branded drugs lose market exclusivity, however, makers of generic pharmaceuticals can generate intense price competition, causing drastic revenue losses on unprotected therapies. Long-term success for branded pharma companies depends on a strong and diverse drug pipeline, which can be augmented by M&A activity. We generally like the group and expect continued industry consolidation.

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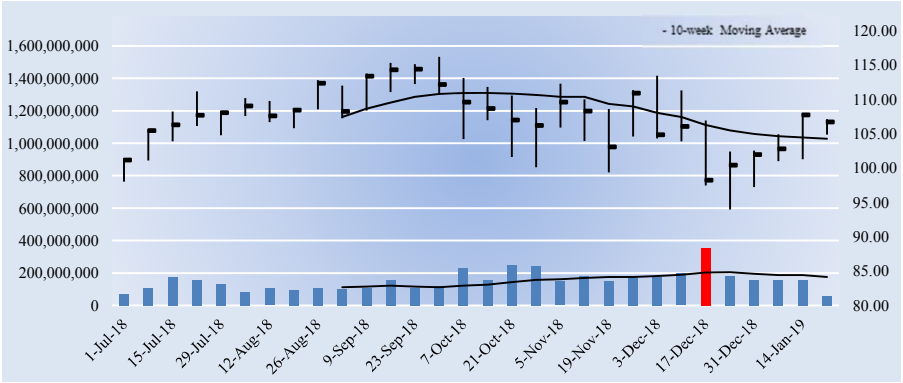
Microsoft MSFT FAIRLY VALUED

Buying Index™ 7 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$114.00	$91.00 - $137.00	MEGA-CAP BLEND	Information Technology	Software

Microsoft is not a tech dinosaur, as it is helping drive the transition to cloud-based software products. It is one of two companies with an AAA credit rating.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**HIGH**
Technical Evaluation	**VERY BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BEARISH**
Near-term Technical Support, 10-week MA	**104.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$831,698
Avg Weekly Vol (30 wks)	153,068
30-week Range (USD)	93.96 - 116.18
Valuentum Sector	Information Technology
5-week Return	9.2%
13-week Return	-1.3%
30-week Return	8.8%
Dividend Yield %	1.7%
Dividends per Share	1.84
Forward Dividend Payout Ratio	41.0%
Est. Normal Diluted EPS	5.70
P/E on Est. Normal Diluted EPS	18.7
Est. Normal EBITDA	65,396
Forward EV/EBITDA	14.5
EV/Est. Normal EBITDA	11.8
Forward Revenue Growth (5-yr)	9.2%
Forward EPS Growth (5-yr)	26.6%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	24.3%
Return on Assets	8.5%
ROIC, with goodwill	45.3%
ROIC, without goodwill	71.8%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	76,240
Net Debt	-57,528
Total Debt/EBITDA	1.7
Net Debt/EBITDA	NMF
EBITDA/Interest	16.6
Current Ratio	2.9
Quick Ratio	2.7

NMF = Not Meaningful

Investment Highlights

• Microsoft's products include operating systems, cloud services, server applications, desktop and server management tools, software development tools, video games, and online advertising. It also designs, manufactures and sells hardware, including PCs, tablets, gaming consoles, and other smart accessories that integrate with its cloud offerings.

• Microsoft can't scoop up its own shares fast enough through its massive buyback program. The firm floats debt with the best credit quality (Aaa), and we can't think of another firm with a better financial profile. Financial discipline and strong execution remain hallmarks of its business.

• Microsoft is not a tech dinosaur, and momentum behind new devices and platforms, Windows 10, Office 365 and Azure continues to build. Its cloud-based product suite, Office 365 and Azure, continues to build among consumers and enterprises at impressive rates. This momentum allowed the firm to achieve its goal of $20 billion in commercial cloud annual recurring revenue well ahead of schedule.

• Microsoft acquired LinkedIn for over $26 billion in cash, and management believes the deal will expand its addressable market, while helping drive engagement across Office 365. The firm's impressive financial profile gives us confidence in it moving forward, and its tremendous free cash flow generating capacity has not wavered.

• Microsoft's Windows business has been the bread-and-butter of the company for such a long time, but investor focus has shifted to the company's other segments as its business model moves towards the cloud. Microsoft is helping drive the transition to cloud-based software products.

Relative Valuation

	Forward P/E	PEG	Price / FV
Adobe Systems	47.1	2.3	108.5%
F5 Networks	14.9	1.7	92.3%
Oracle	14.3	1.5	83.5%
Salesforce.com	57.5	9.4	124.8%
Peer Median	31.0	2.0	100.4%
Microsoft	**23.8**	**1.9**	**93.6%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Jun-17	Jun-18	Jun-19
Revenue	89,950	110,360	124,376
Revenue, YoY%	5.4%	22.7%	12.7%
Non-GAAP Operating Income	22,632	35,058	41,997
Non-GAAP EBIT %	25.2%	31.8%	33.8%
Non-GAAP Net Income	21,204	16,571	34,427
Non-GAAP NI Margin %	23.6%	15.0%	27.7%
Non-GAAP Diluted EPS	2.71	2.13	4.48
Non-GAAP Dil EPS, YoY %	29.1%	-21.5%	110.9%
Non-GAAP FCF (CFO-capex)	31,378	32,252	34,623
Non-GAAP FCF Margin %	34.9%	29.2%	27.8%

In Millions of USD (except for per share items)

Structure of the Software Industry — VERY GOOD

Firms that serve the mature software markets—or those consisting of basic business applications—have powerful distribution channels, large installed bases, and fortress balance sheets. These entrenched competitors benefit from significant customer switching costs, which make it nearly impossible for new entrants to gain a foothold. Participants generally benefit from high-margin license revenue and generate significant returns on investment. Still, the shift to cloud computing has created both opportunities and challenges, and the enterprise software landscape continues to evolve. We like the group.

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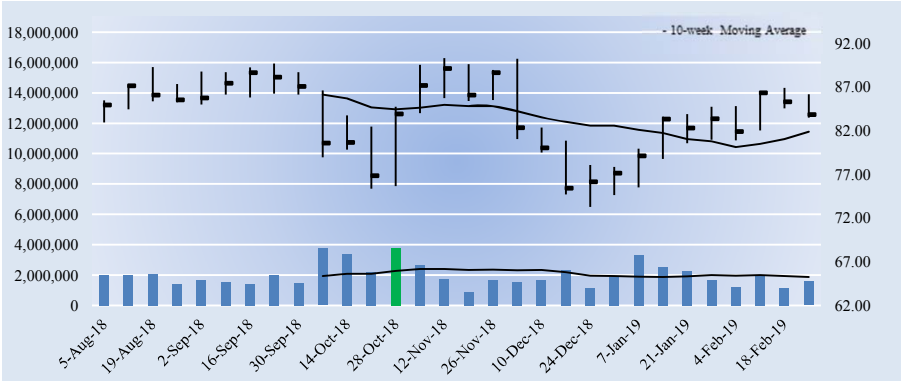
MSC Industrial MSM FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$86.00	$69.00 - $103.00	MID-CAP VALUE	Industrials	Distributors

We generally like MSC Industrial's business strategy that focuses on being an integrated, low-cost solution to its customers' MRO requirements.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$4,754
Avg Weekly Vol (30 wks)	1,999
30-week Range (USD)	73.28 - 90.25
Valuentum Sector	Industrials
5-week Return	2.8%
13-week Return	-6.9%
30-week Return	0.7%
Dividend Yield %	3.0%
Dividends per Share	2.52
Forward Dividend Payout Ratio	43.0%
Est. Normal Diluted EPS	7.12
P/E on Est. Normal Diluted EPS	11.8
Est. Normal EBITDA	595
Forward EV/EBITDA	10.2
EV/Est. Normal EBITDA	8.8
Forward Revenue Growth (5-yr)	5.6%
Forward EPS Growth (5-yr)	7.7%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	21.4%
Return on Assets	12.4%
ROIC, with goodwill	17.3%
ROIC, without goodwill	26.6%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	535
Net Debt	489
Total Debt/EBITDA	1.1
Net Debt/EBITDA	1.0
EBITDA/Interest	33.4
Current Ratio	2.3
Quick Ratio	1.2

NMF = Not Meaningful

Investment Highlights

• MSC Industrial is one of the largest direct marketers of a broad range of industrial products to industrial customers in the United States, satisfying their maintenance, repair and operations (MRO) supply requirements. It has roughly a dozen customer fulfillment centers. The company was founded in 1941 and is headquartered in New York.

• MSC continues to invest in its e-commerce capabilities and add new products to its portfolio. The firm now has more than 1.6 million product SKUs available through its database. Management is focused on share gains, and growth rates have improved or held steady across customer types in recent quarters.

• We generally like MSC Industrial's business strategy that focuses on being an integrated, low-cost solution to its customers' MRO requirements. The firm is shifting its focus from reduction in product costs to improving its entire cost structure. The company boasts high marks for customer satisfaction, which it has tagged as a leading indicator of customer retention and growth.

• The MRO industry continues to consolidate and remains very large and fragmented. There are 145,000 distributors in North America chasing roughly $160 billion in spending. MSC is observing a firm manufacturing environment, positive customer outlook, and an improving pricing environment, all of which are helping drive top-line performance.

• MSC Industrial has identified a correlation between its customers' activity and the Metalworking Business Index (MBI) as nearly 70% of its revenue is generated in the manufacturing sector (including more than half from heavy manufacturing).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**WEAK**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**DETERIORATING**
Near-term Technical Support, 10-week MA	**82.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueRisk™ \ ValueCreation™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Anixter	9.4	1.5	82.4%
Fastenal	21.7	2.6	119.7%
W.W. Grainger	16.6	1.6	104.3%
WESCO	10.1	1.6	81.6%
Peer Median	13.4	1.6	93.4%
MSC Industrial	**14.3**	**1.9**	**97.5%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Aug-17	Aug-18	Aug-19
Revenue	2,888	3,204	3,473
Revenue, YoY%	0.8%	10.9%	8.4%
Operating Income	379	421	448
Operating Margin %	13.1%	13.1%	12.9%
Net Income	231	329	326
Net Income Margin %	8.0%	10.3%	9.4%
Diluted EPS	4.06	5.81	5.86
Diluted EPS, YoY %	7.3%	42.9%	0.9%
Free Cash Flow (CFO-capex)	201	295	282
Free Cash Flow Margin %	6.9%	9.2%	8.1%

In Millions of USD (except for per share items)

Structure of the Industrial Distributors Industry — GOOD

Though consolidating, the industrial distributors industry remains fragmented and highly competitive. Delivering cost savings, convenience, and product availability are the major competitive factors. Some rivals use vans to sell products in markets away from their warehouses, while others rely on mail order, websites or telemarketing sales. Still, others operate stores and use centralized distribution centers to supply their networks. The industry is economically-sensitive and exposed to the threat of aggressive pricing strategies, but we generally like the group's massive distribution platforms that are difficult to replicate.

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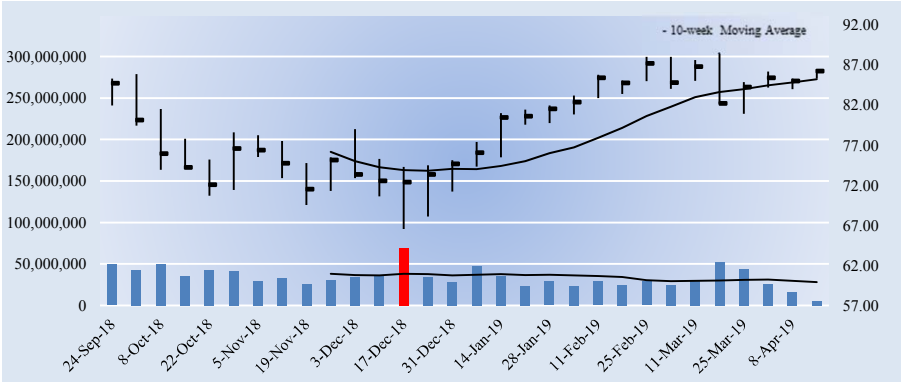
Nike NKE FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$73.00	$58.00 - $88.00	LARGE-CAP CORE	Consumer Discretionary	Luxury - Established Brands

Nike's push to grow its direct-to-consumer business is helping accelerate digital sales, and the pricing power afforded by its brand strength is material.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$143,081
Avg Weekly Vol (30 wks)	34,140
30-week Range (USD)	66.53 - 88.59
Valuentum Sector	Consumer Discretionary
5-week Return	-1.2%
13-week Return	7.4%
30-week Return	1.3%
Dividend Yield %	1.0%
Dividends per Share	0.88
Forward Dividend Payout Ratio	34.3%
Est. Normal Diluted EPS	3.65
P/E on Est. Normal Diluted EPS	23.6
Est. Normal EBITDA	7,918
Forward EV/EBITDA	24.2
EV/Est. Normal EBITDA	17.9
Forward Revenue Growth (5-yr)	7.2%
Forward EPS Growth (5-yr)	32.9%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	27.3%
Return on Assets	15.0%
ROIC, with goodwill	38.0%
ROIC, without goodwill	38.5%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	3,810
Net Debt	-1,435
Total Debt/EBITDA	0.7
Net Debt/EBITDA	NMF
EBITDA/Interest	96.6
Current Ratio	2.5
Quick Ratio	1.4

NMF = Not Meaningful

Investment Highlights

• Nike focuses its 'Nike Brand' product offerings in the following categories: Running, Basketball, Football (Soccer), Men's Training, Women's Training, Nike Sportswear (sports-inspired lifestyle products), Action Sports, Gold, and the Jordan Brand. The breadth and depth of its product portfolio have translated into consistently strong results. Its long-term deal with Lebron James could spell upside.

• Nike is targeting revenue of $50 billion by fiscal year 2020. The company's internal long-term financial model indicates high single-digit to low double-digit revenue growth, mid-teens earnings per share growth and expanding returns on capital. Fiscal 2019 revenue growth is expected in the high-single-digit range.

• Nike might not have the 'freshness' of a 'Lululemon' or 'Under Armour,' but we think Nike has the best business model and the most valuable brand among the three. Fiscal 2019 will be its first full year of the Nike Consumer Direct Offense, and it has helped digital become its fastest growing channel in every geography of late. Digital is improving revenue growth and has a favorable impact on gross margins.

• Nike expects its international operations (now accounts for more than 55% of total revenue) to provide 75% of incremental growth over the next five years. The company is expected to be well-insulated from the threat of tariffs thanks to its broad manufacturing footprint and significant pricing power afforded by its brand strength.

• Though we do not expect any material damages to the Nike or Jordan brands in the foreseeable future, Adidas has done well in taking market share in US athletic footwear. The gains have not come fully at the expense of Nike, but the strengthening competitor is worth keeping an eye on.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**WEAK**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**85.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Estee Lauder	32.7	2.6	143.6%
Philips	24.1	2.1	122.4%
Sony	NMF	NMF	120.0%
VF Corp	21.7	1.8	112.9%
Peer Median	24.1	2.1	121.2%
Nike	**33.6**	**2.3**	**118.1%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	May-17	May-18	May-19
Revenue	34,350	36,397	39,090
Revenue, YoY%	6.1%	6.0%	7.4%
Operating Income	4,749	4,445	5,011
Operating Margin %	13.8%	12.2%	12.8%
Net Income	4,240	1,933	4,214
Net Income Margin %	12.3%	5.3%	10.8%
Diluted EPS	2.51	1.17	2.57
Diluted EPS, YoY %	16.1%	-53.5%	120.2%
Free Cash Flow (CFO-capex)	2,741	3,927	4,352
Free Cash Flow Margin %	8.0%	10.8%	11.1%

In Millions of USD (except for per share items)

Structure of the Luxury Goods Industry — GOOD

Luxury goods firms differentiate themselves based on brand name, perception, and quality in order to generate excess returns on invested capital through the economic cycle. Building a large, successful luxury brand is difficult, leaving those that possess them with intangible competitive advantages that are not easily overcome by new entrants. Growth in emerging middle classes and China will be the key demand drivers going forward, though the strongest brands will also grow successfully via market share gains. Though changes in consumer preferences should be watched closely, we like the structure of the group.

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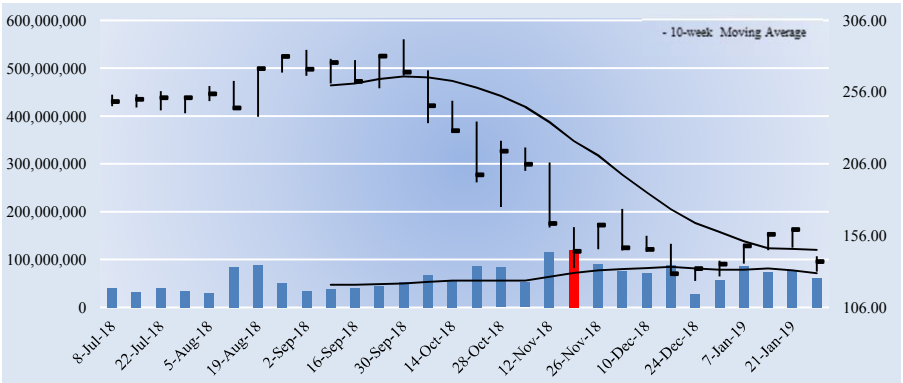
Nvidia NVDA FAIRLY VALUED

Buying Index™ 3 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$170.00	$126.00 - $214.00	LARGE-CAP BLEND	Information Technology	Integrated Circuits

Nvidia has identified multiple near-term headwinds that are weighing on expectations, but it remains optimistic regarding long-term fundamentals.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$87,222
Avg Weekly Vol (30 wks)	63,818
30-week Range (USD)	124.46 - 292.76
Valuentum Sector	Information Technology
5-week Return	1.9%
13-week Return	-35.6%
30-week Return	-44.9%
Dividend Yield %	0.5%
Dividends per Share	0.64
Forward Dividend Payout Ratio	9.4%
Est. Normal Diluted EPS	7.88
P/E on Est. Normal Diluted EPS	17.5
Est. Normal EBITDA	6,098
Forward EV/EBITDA	15.5
EV/Est. Normal EBITDA	13.5
Forward Revenue Growth (5-yr)	10.0%
Forward EPS Growth (5-yr)	14.0%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	30.8%
Return on Assets	18.9%
ROIC, with goodwill	102.3%
ROIC, without goodwill	146.0%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	2,000
Net Debt	-5,108
Total Debt/EBITDA	0.6
Net Debt/EBITDA	NMF
EBITDA/Interest	59.1
Current Ratio	8.0
Quick Ratio	7.3

NMF = Not Meaningful

Investment Highlights

• Nvidia is a computer graphics company. Its business is based on two technologies: the GPU and the Tegra processor. GPUs are the engine of visual computing. Tegra processors incorporate multi-core GPUs and CPUs together with audio and video capabilities. The company was founded in 1993 and is headquartered in Santa Clara, California.

• We're big fans of Nvidia's balance sheet health. Cash, cash equivalents and marketable securities were just over $7.1 billion as of the end of fiscal 2018. Though it does have ~$2 billion in total debt, a strong balance sheet supports dividend potential and provides a cushion in a rapidly developing market.

• Though it does not expect its long-term fundamentals to be materially impacted, Nvidia is anticipating near-term headwinds due in part to excess inventory in gaming related to the sharp decline in cryptocurrency mining. Gaming card prices declined materially and have stabilized, and data center revenue has disappointed more recently as customers adopt more cautious policies amid geopolitical uncertainty.

• Nvidia expects to be a significant player in autonomous driving. As of the end of fiscal 2018, 320 companies were using its Nvidia Drive platform, a 50% increase from a year earlier, and the list includes many of the top names in next-gen car and truck manufacturing. Nvidia tabs autonomous vehicles as a $60 billion opportunity by 2035.

• Gaming had been a strong point for Nvidia as, and rapid demand growth in deep learning was pushing GPU revenue higher. Softening macroeconomic conditions, particularly in China, however, have impacted demand for gaming GPUs, and sales of its new Turing architecture have disappointed.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**HIGH**
Technical Evaluation	**BEARISH**
Relative Strength	**WEAK**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**IMPROVING**
Near-term Technical Resistance, 10-wk MA	**146.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Analog Devices	17.6	2.3	112.3%
Semtech Corp	21.5	2.3	118.9%
Skyworks	10.4	1.2	73.4%
Taiwan Semiconductor	16.7	4.4	98.5%
Peer Median	17.2	2.3	105.4%
Nvidia	**20.2**	**2.1**	**81.2%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Jan-17	Jan-18	Jan-19
Revenue	6,910	9,714	11,715
Revenue, YoY%	37.9%	40.6%	20.6%
Operating Income	1,937	3,210	4,888
Operating Margin %	28.0%	33.0%	41.7%
Net Income	1,666	3,047	4,309
Net Income Margin %	24.1%	31.4%	36.8%
Diluted EPS	2.57	4.82	6.82
Diluted EPS, YoY %	137.9%	87.8%	41.4%
Free Cash Flow (CFO-capex)	1,496	2,909	3,950
Free Cash Flow Margin %	21.6%	29.9%	33.7%

In Millions of USD (except for per share items)

Structure of the Integrated Circuits Industry — VERY POOR

Firms in the integrated circuits industry make components that form the electronic building blocks used in electronic systems and equipment. The industry is notoriously cyclical and subject to significant economic upturns and downturns, as well as rapid technological changes. Firms must innovate to survive, and products stocked in inventory can sometimes become obsolete before they are even shipped. Severe pricing competition and lengthy manufacturing cycles only add uncertainty to the mix. We're not fans of the structure of the integrated circuits space.

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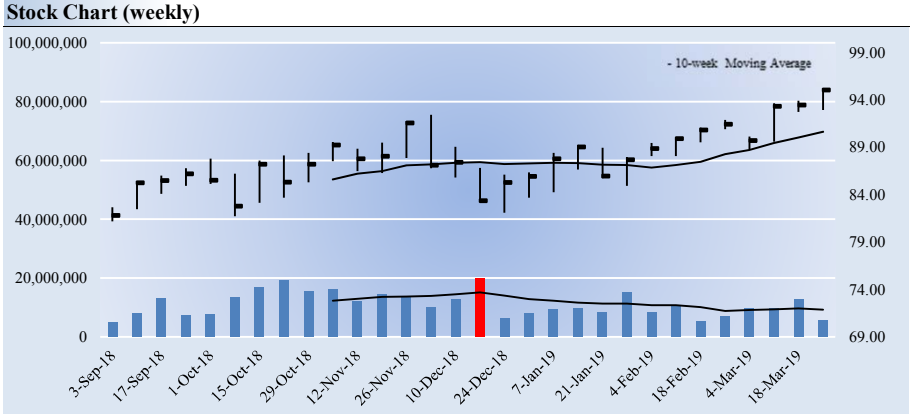
Novartis NVS FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$80.00	$64.00 - $96.00	MEGA-CAP CORE	Health Care	Pharmaceuticals - Big

Novartis is spinning-off Alcon, its eye care business, into a standalone entity in the second quarter of 2019.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**GOOD**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**HIGH**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**91.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueRisk™ \ ValueCreation™	Very Poor	Poor	Good	Excellent
Low			■	
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$222,727
Avg Weekly Vol (30 wks)	11,008
30-week Range (USD)	81.17 - 95.13
Valuentum Sector	Health Care
5-week Return	4.5%
13-week Return	11.0%
30-week Return	15.5%
Dividend Yield %	3.0%
Dividends per Share	2.83
Forward Dividend Payout Ratio	51.4%
Est. Normal Diluted EPS	6.47
P/E on Est. Normal Diluted EPS	14.7
Est. Normal EBITDA	15,974
Forward EV/EBITDA	18.3
EV/Est. Normal EBITDA	15.0
Forward Revenue Growth (5-yr)	3.7%
Forward EPS Growth (5-yr)	6.6%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Novartis provides innovative healthcare solutions. It offers a diversified portfolio to meet the needs of patients and societies via innovative medicines, eye care, cost-saving generic pharmaceuticals, preventive vaccines, and over-the-counter products. The firm was founded in 1895 and is headquartered in Basel, Switzerland.

• We continue to be impressed with the depth of Novartis' clinical pipeline, which should aid in the company's acceleration from the revenue cliff experienced as a result of the patent loss of top-selling product Gleevec. Cosentyx has been a core driver of top-line performance of late.

• Novartis is engaged in a transformation and will focus on businesses with innovation power and global scale--pharma and generics. It bought AveXis, owner of a gene replacement therapy for spinal muscular atrophy, for $8.7 billion in May 2018. The firm divested its animal health operations to Eli Lilly and sold its stake in its Consumer Health JV with GlaxoSmithKline for ~$13 billion.

• The transformation should result in significantly improved profitability on modestly lower sales. We like the strengthening of Novartis' oncology business, as GSK's oncology products have immediately complemented its portfolio. The transformation appears to be on track, and total oncology sales grew 9%% in constant currency in 2018.

• After an overhaul of Alcon, its eye care division, management announced plans to spin-off the business into a standalone company, which should enable the business to focus on its own growth initiatives. The spin-off is expected to be completed by the end of 2019.

Relative Valuation

	Forward P/E	PEG	Price / FV
Abbott	24.4	2.5	116.2%
Eli Lilly	22.9	2.1	123.6%
Merck	20.3	2.5	113.6%
Pfizer	14.5	1.7	94.3%
Peer Median	21.6	2.3	114.9%
Novartis	**17.3**	**2.7**	**118.8%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	11.9%
Return on Assets	6.7%
ROIC, with goodwill	8.5%
ROIC, without goodwill	13.1%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	50,135	53,166	54,814
Revenue, YoY%	1.4%	6.0%	3.1%
Non-GAAP Operating Income	6,660	9,214	9,686
Non-GAAP EBIT %	13.3%	17.3%	17.7%
Non-GAAP Net Income	7,703	12,611	12,893
Non-GAAP NI Margin %	15.4%	23.7%	23.5%
Non-GAAP Diluted EPS	3.28	5.38	5.50
Non-GAAP Dil EPS, YoY %	17.4%	63.8%	2.3%
Non-GAAP Free Cash Flow	9,515	10,917	15,276
Non-GAAP FCF Margin %	19.0%	20.5%	27.9%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	32,148
Net Debt	16,184
Total Debt/EBITDA	2.6
Net Debt/EBITDA	1.3
EBITDA/Interest	13.0
Current Ratio	1.2
Quick Ratio	0.8

NMF = Not Meaningful

Structure of the Big Pharma Industry — GOOD

The big pharma industry is primarily composed of makers of branded drugs. Intellectual property protection is vital to the successful commercialization of medicines and offers makers of branded drugs a unique competitive advantage via patents, which can extend for decades. When branded drugs lose market exclusivity, however, makers of generic pharmaceuticals can generate intense price competition, causing drastic revenue losses on unprotected therapies. Long-term success for branded pharma companies depends on a strong and diverse drug pipeline, which can be augmented by M&A activity. We generally like the group and expect continued industry consolidation.

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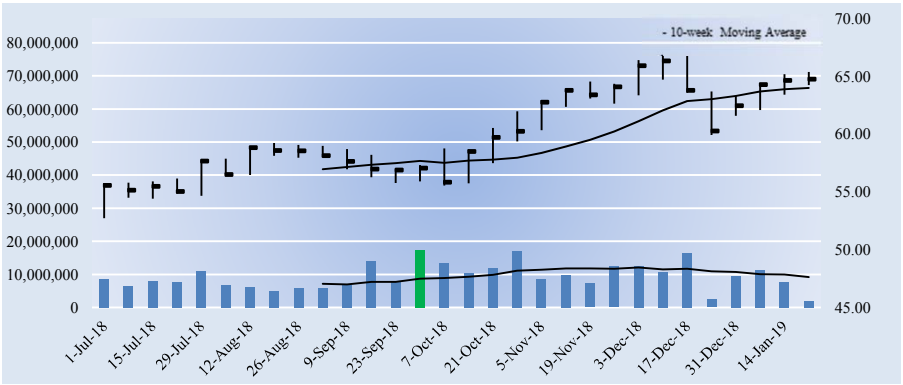
Realty Income Corp O FAIRLY VALUED

Buying Index™ 5 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Neutral	$56.00	$45.00 - $67.00	LARGE-CAP CORE	Financials	REIT - Retail

Realty Income's stated goals are simple: generate dependable monthly cash dividends from a consistent and predictable level of cash flow from operations.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$17,743
Avg Weekly Vol (30 wks)	9,377
30-week Range (USD)	52.74 - 66.91
Valuentum Sector	Financials
5-week Return	1.8%
13-week Return	8.1%
30-week Return	20.5%
Dividend Yield %	4.2%
Dividends per Share	2.71
Forward Dividend Payout Ratio	84.8%
Est. Normal Diluted EPS	1.60
P/E on Est. Normal Diluted EPS	40.6
Est. Normal EBITDA	1,458
Forward EV/EBITDA	19.9
EV/Est. Normal EBITDA	16.4
Forward Revenue Growth (5-yr)	8.6%
Forward EPS Growth (5-yr)	10.3%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	4.7%
Return on Assets	2.3%
ROIC, with goodwill	4.4%
ROIC, without goodwill	4.4%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	6,111
Net Debt	6,105
Total Debt/EBITDA	5.7
Net Debt/EBITDA	5.7
EBITDA/Interest	4.3
Current Ratio	1.2
Quick Ratio	1.2

NMF = Not Meaningful

Investment Highlights

• Realty Income is a REIT that has 5,400+ properties across the US and Puerto Rico. It is an integrated real estate company with in-house finance/accounting, tenant research, portfolio management, and capital markets expertise. Its property portfolio amounts to over 90 million square feet of leasable space. Occupancy rates are north of 98%.

• Realty Income's stated goals are simple: generate dependable monthly cash dividends from a consistent and predictable level of cash flow from operations. We think management is laser-focused on achieving these goals, and its conservative capital structure helps it withstand economic volatility.

• We like Realty Income's diversification. The REIT generates rental revenue in 49 states and Puerto Rico, and Texas and California account for the most (at 10.5% and 9%, respectively). No one industry accounts for 11% of total rent (c-stores ~10.8%). Its largest tenant, Walgreens, accounts for less than 7% of total rent, and it believes its top 20 tenants are insulated from changing consumer behavior.

• Realty Income's dividend track record is fantastic. The REIT has had more than 95 dividend increases since 1994, more than 80 consecutive quarterly increases, and more than 580 consecutive monthly dividends declared. It seems as though it increases its dividend every few months or so, and its payout has grown at a 4.6% CAGR since its IPO.

• We like the REIT's conservative credit profile, which allows it to be one of the few A-rated REITs on the market today. As of the end of the third quarter of 2018, its weighted average remaining lease term was 9.3 years. 51% of rent comes from investment grade rated tenants

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**POOR**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**WEAK**
Financial Leverage	**HIGH**
Growth	**MODEST**
Technical Evaluation	**NEUTRAL**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**OVERBOUGHT**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**64.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/FFO	P / FFO / G	Price / FV
Federal Realty	20.3	1.8	123.8%
Kimco Realty	11.2	1.8	102.8%
Simon Property	14.3	2.3	101.3%
SL Green	13.3	NMF	109.1%
Peer Median	13.8	1.8	105.9%
Realty Income Corp	**20.3**	**2.2**	**115.7%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		
Fiscal Year End:	Dec-16	Dec-17	Dec-18
Revenue	1,103	1,216	1,315
Revenue, YoY%	7.8%	10.2%	8.2%
Adjusted Operating Income	518	574	658
Adj. Operating Margin %	46.9%	47.2%	50.0%
Funds from Operations	737	774	944
FFO Margin %	66.8%	63.6%	71.8%
Diluted FFO per share	2.88	2.82	3.20
Diluted FFO, YoY %	4.4%	-2.0%	13.2%
Free Cash Flow (CFO-capex)	-1,012	-553	-354
Free Cash Flow Margin %	-91.8%	-45.5%	-26.9%

In Millions of USD (except for per share items)

Structure of the REIT - Retail Industry — NEUTRAL

The retail REIT space is competitive, and incremental supply from failing retailers could complicate the return profile of many constituents. That said, however, strip center supply additions are near the lowest levels on a historical basis, offering potential opportunities for income expansion via higher rents and lease rollovers. Access to the capital markets will remain critical for participants, and the issuance of additional common/preferred stock should be expected. Geographic and industry diversity, tenant credit strength, and occupancy rates should be monitored closely. We're generally neutral on the group.

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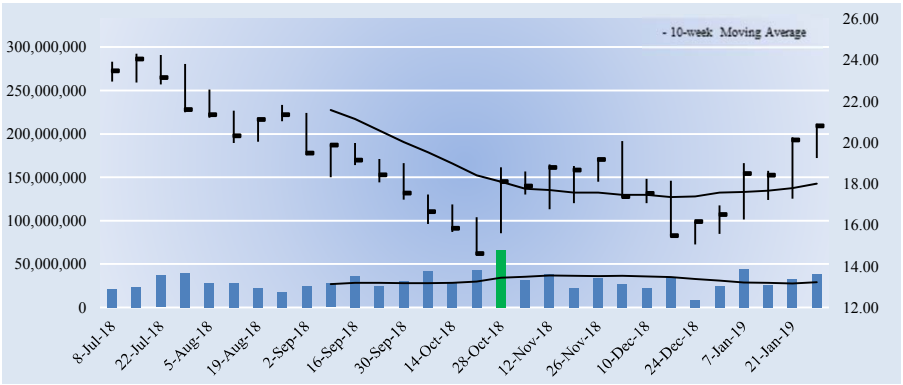
ON Semi ON FAIRLY VALUED

Buying Index™ 5 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$21.00	$15.00 - $27.00	MID-CAP VALUE	Information Technology	Broad Line Semiconductors

ON Semi points to significant content increase in applications in the automotive, industrial, cloud server, and 5G infrastructure end markets as the driver of its business as opposed to unit growth.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**HIGH**
Growth	**MODEST**
Technical Evaluation	**NEUTRAL**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**OVERBOUGHT**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**18.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$8,909
Avg Weekly Vol (30 wks)	30,929
30-week Range (USD)	14.55 - 24.31
Valuentum Sector	Information Technology
5-week Return	27.0%
13-week Return	15.7%
30-week Return	-10.7%
Dividend Yield %	0.0%
Dividends per Share	0.00
Forward Dividend Payout Ratio	0.0%
Est. Normal Diluted EPS	1.81
P/E on Est. Normal Diluted EPS	11.5
Est. Normal EBITDA	1,448
Forward EV/EBITDA	8.7
EV/Est. Normal EBITDA	7.5
Forward Revenue Growth (5-yr)	3.6%
Forward EPS Growth (5-yr)	0.2%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• ON Semi's portfolio of power and signal management, logic, discrete and custom devices helps customers solve design challenges in automotive, communications, computing, industrial, LED lighting, medical, and other applications. The company has ~6,200 patents. It was founded in 1999 and is headquartered in Phoenix, Arizona.

• ON Semi points to significant content increase in applications in the automotive, industrial, cloud server, and 5G infrastructure end markets as the driver of its business as opposed to unit growth. Trade tensions have yet to have a material impact on its operations.

• Investments in segments such as automotive, industrial, and communications have transformed ON Semi's business. Its demand environment remains healthy thanks to secular mega trends in industrial, automotive, and cloud power markets, and its differentiated solutions in power, analog, and sensor semis set it apart. Management remains cautious regarding the potential for rapid market changes, however.

• Demand and order trends should be watched closely, but management believes its strong product pipeline and its manufacturing know-how should allow it to grow faster than the broader semi industry. Recent demand highlights include image sensors for ADAS applications in automotive and other emerging and disruptive applications in industrial end markets.

• ON Semi continues to plow money back into research and development. For example, company-sponsored R&D costs in 2018, 2017, and 2016 were $650.7 million (11.1% of revenue), $594.4 million (10.7% of revenue), and $452.3 million (11.6% of revenue), respectively.

Relative Valuation

	Forward P/E	PEG	Price / FV
Advanced Micro Devices	75.8	6.8	129.0%
Intel	10.7	2.4	87.0%
STMicroelectronics	11.3	1.9	93.7%
Texas Instruments	18.3	2.6	117.2%
Peer Median	14.8	2.5	105.5%
ON Semi	**14.4**	**1.5**	**99.0%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	19.7%
Return on Assets	6.8%
ROIC, with goodwill	17.9%
ROIC, without goodwill	21.2%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-16	Dec-17	Dec-18
Revenue	3,907	5,543	5,878
Revenue, YoY%	11.8%	41.9%	6.1%
Operating Income	272	715	828
Operating Margin %	6.9%	12.9%	14.1%
Net Income	182	811	619
Net Income Margin %	4.7%	14.6%	10.5%
Diluted EPS	0.43	1.89	1.44
Diluted EPS, YoY %	NMF	NMF	-23.7%
Free Cash Flow (CFO-capex)	370	707	758
Free Cash Flow Margin %	9.5%	12.7%	12.9%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	2,952
Net Debt	2,003
Total Debt/EBITDA	2.5
Net Debt/EBITDA	1.7
EBITDA/Interest	8.5
Current Ratio	2.1
Quick Ratio	1.2

NMF = Not Meaningful

Structure of the Broad Line Semiconductor Industry — POOR

The broad line semiconductor industry is characterized by intense competition, rapid technological change, and frequent product introductions. The number and variety of computing devices have expanded rapidly, creating a connected landscape between suppliers and competitors. New market segments have emerged rapidly (smartphones, tablets), and constituents must continuously innovate to maintain share as traditional PC demand faces pressure. Though some firms may gain advantages via the combination of their manufacturing/test facilities with their design teams, we think the structure of the group is poor.

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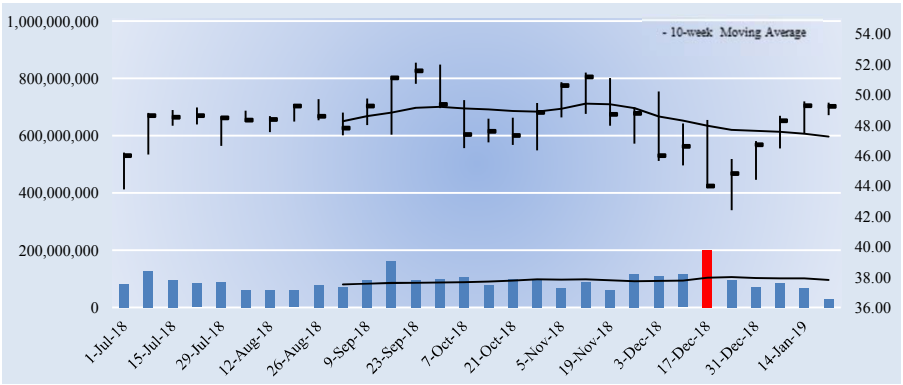
Oracle ORCL FAIRLY VALUED

Buying Index™ 7 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$59.00	$47.00 - $71.00	MEGA-CAP VALUE	Information Technology	Software

We continue to like Oracle's competitive position and free cash flow generation, but its massive share repurchase program has eroded its balance sheet health.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**HIGH**
Growth	**MODEST**
Technical Evaluation	**VERY BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**47.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$208,679
Avg Weekly Vol (30 wks)	91,781
30-week Range (USD)	42.4 - 52.11
Valuentum Sector	Information Technology
5-week Return	12.5%
13-week Return	3.0%
30-week Return	12.0%
Dividend Yield %	1.5%
Dividends per Share	0.76
Forward Dividend Payout Ratio	22.1%
Est. Normal Diluted EPS	3.87
P/E on Est. Normal Diluted EPS	12.7
Est. Normal EBITDA	23,182
Forward EV/EBITDA	9.3
EV/Est. Normal EBITDA	8.7
Forward Revenue Growth (5-yr)	2.0%
Forward EPS Growth (5-yr)	36.5%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	14.9%
Return on Assets	6.1%
ROIC, with goodwill	24.5%
ROIC, without goodwill	76.6%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	60,619
Net Debt	-6,642
Total Debt/EBITDA	3.5
Net Debt/EBITDA	NMF
EBITDA/Interest	8.4
Current Ratio	4.0
Quick Ratio	3.8

NMF = Not Meaningful

Investment Highlights

• Oracle is shifting the complexity from IT, moving it out of the enterprise by engineering hardware and software to work together—in the cloud and in the data center. The company has three businesses, 'Cloud and License,' 'Hardware,' and 'Services,' which accounted for 82%, 10%, and 8% of its total revenue in fiscal 2018. The firm was founded in 1977.

• Oracle has positioned itself nicely against Salesforce.com. Oracle believes it is well on its way to becoming the leading provider in the enterprise SaaS market, and the company has plowed more than 15% of sales back into R&D in fiscal 2016-2018, showcasing its dedication to innovation.

• Oracle will continue to focus on growing its cloud business. Management expects overall top-line growth to accelerate moving forward as its cloud business becomes a larger portion of its total revenue. Competition remains fierce, but the firm is confident in its technology leadership via its Autonomous Database. The company expects fiscal 2019 to be another year of double-digit adjusted EPS growth.

• Oracle's non-GAAP operating margin expanded to 44% in fiscal 2018 from 43% in the prior year, and it expects to surpass its company record of 47% in coming years as revenue growth accelerates and it takes advantage of its growing scale. The firm continues to buyback shares, and it has reduced shares outstanding by 20% since fiscal 2011.

• Oracle's recent large dividend hike speaks to its confidence in the free cash flow generating prowess of its business. However, its massive share buyback program has eroded its balance sheet health. At the end of the second quarter of fiscal 2019 it held a net debt position of ~$8.6 billion.

Relative Valuation

	Forward P/E	PEG	Price / FV
Adobe Systems	47.1	2.3	108.5%
F5 Networks	14.9	1.7	92.3%
Microsoft	23.8	1.9	93.6%
Salesforce.com	57.5	9.4	124.8%
Peer Median	35.5	2.1	101.0%
Oracle	**14.3**	**1.5**	**83.5%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	May-17	May-18	May-19
Revenue	37,728	39,831	39,473
Revenue, YoY%	1.8%	5.6%	-0.9%
Operating Income	13,173	14,319	18,931
Operating Margin %	34.9%	35.9%	48.0%
Net Income	9,335	3,825	14,304
Net Income Margin %	24.7%	9.6%	36.2%
Diluted EPS	2.21	0.90	3.44
Diluted EPS, YoY %	7.1%	-59.2%	281.6%
Free Cash Flow (CFO-capex)	12,105	13,650	15,306
Free Cash Flow Margin %	32.1%	34.3%	38.8%

In Millions of USD (except for per share items)

Structure of the Software Industry — VERY GOOD

Firms that serve the mature software markets—or those consisting of basic business applications—have powerful distribution channels, large installed bases, and fortress balance sheets. These entrenched competitors benefit from significant customer switching costs, which make it nearly impossible for new entrants to gain a foothold. Participants generally benefit from high-margin license revenue and generate significant returns on investment. Still, the shift to cloud computing has created both opportunities and challenges, and the enterprise software landscape continues to evolve. We like the group.

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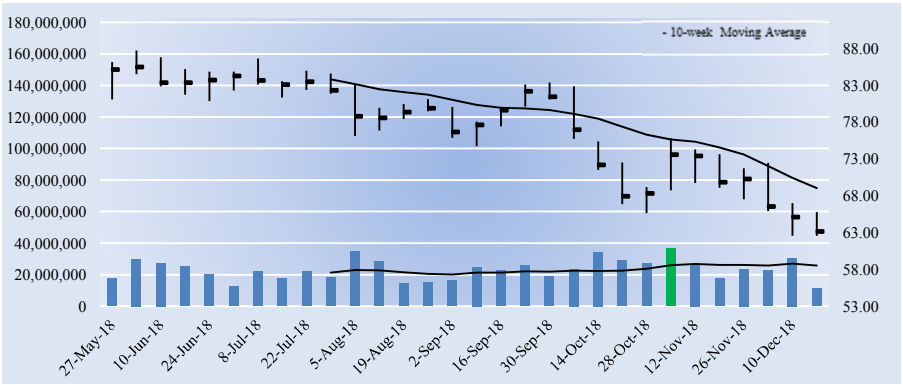
Occidental Petroleum OXY FAIRLY VALUED

Buying Index™ 4 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Neutral	$72.00	$50.00 - $94.00	LARGE-CAP BLEND	Energy	Independent Oil & Gas

Occidental Petroleum has unmatched acreage and infrastructure in the Permian Basin, giving it the largest operated position in the basin, but results remain heavily tied to energy resource pricing.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**GOOD**
ValueRisk™	**MEDIUM**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**WEAK**
Financial Leverage	**MEDIUM**
Growth	**HIGH**
Technical Evaluation	**BEARISH**
Relative Strength	**WEAK**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BEARISH**
Near-term Technical Resistance, 10-wk MA	**69.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium			■	
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$48,302
Avg Weekly Vol (30 wks)	23,200
30-week Range (USD)	62.57 - 87.67
Valuentum Sector	Energy
5-week Return	-13.0%
13-week Return	-21.4%
30-week Return	-23.5%
Dividend Yield %	4.9%
Dividends per Share	3.12
Forward Dividend Payout Ratio	59.8%
Est. Normal Diluted EPS	5.35
P/E on Est. Normal Diluted EPS	11.8
Est. Normal EBITDA	9,285
Forward EV/EBITDA	6.3
EV/Est. Normal EBITDA	6.1
Forward Revenue Growth (5-yr)	11.3%
Forward EPS Growth (5-yr)	26.6%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	-8.5%
Return on Assets	-5.2%
ROIC, with goodwill	11.7%
ROIC, without goodwill	11.7%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	9,828
Net Debt	8,156
Total Debt/EBITDA	1.7
Net Debt/EBITDA	1.4
EBITDA/Interest	17.0
Current Ratio	1.1
Quick Ratio	0.8

NMF = Not Meaningful

Investment Highlights

• Occidental Petroleum is an international oil and gas exploration and production company, and the firm's OxyChem subsidiary is a major North American chemical manufacturer. The company is targeting growing its oil and gas production by 5%-8% per year on average over the long haul. It has spun off its California oil and gas operations.

• For those looking for dividend consistency in the oil and gas space, Occidental is viable option. It has raised its payout for 16 straight years through 2018, a streak that is even more impressive when considering the energy resource pricing environment of recent years. Its debt load should not be ignored, however.

• We think Occidental represents one of the more interesting alternatives to owning an oil major such as Exxon, for example, but the firm remains sensitive to energy resource prices. Management is targeting cash flow from operations of $9-$9.5 billion in 2022 with annual capital spending in the range of $5-$5.3 billion in a $60/bbl oil price environment. Production growth in 2019 is expected to exceed its long-term target.

• Occidental has unmatched acreage and infrastructure in the Permian Basin, giving it the largest operated position in the basin. Technological advances and improving margins will help drive lower-cost production growth in the region, and the company is already a proven leader in maximizing recovery rates. Bottleneck concerns are worth watching.

• Occidental competes with numerous other domestic and foreign private and government entities, and its results are heavily exposed to swings in oil, NGL, and natural-gas prices. For example, a $1 change in the price of oil per barrel is expected to result in a ~$120 million change in annualized cash flow in 2018.

Relative Valuation

	Forward P/E	PEG	Price / FV
Anadarko	17.1	NMF	87.3%
Devon Energy	15.4	1.9	81.4%
EOG Resources	15.9	2.3	95.9%
Southwestern Energy	3.7	NMF	73.2%
Peer Median	15.7	2.1	84.3%
Occidental Petroleum	**12.1**	**1.4**	**87.7%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-16	Dec-17	Dec-18
Revenue	10,398	13,274	18,491
Revenue, YoY%	-18.1%	27.7%	39.3%
Operating Income	-1,036	1,861	4,881
Operating Margin %	-10.0%	14.0%	26.4%
Net Income	-1,002	1,311	3,995
Net Income Margin %	-9.6%	9.9%	21.6%
Diluted EPS	-1.31	1.71	5.22
Diluted EPS, YoY %	NMF	NMF	NMF
Free Cash Flow (CFO-capex)	552	1,397	2,668
Free Cash Flow Margin %	5.3%	10.5%	14.4%

In Millions of USD (except for per share items)

Structure of the Independent Oil & Gas Industry — POOR

The oil and gas business is highly competitive in the exploration, acquisition, and production of reserves. Changes in deepwater drilling laws and other regulatory initiatives can add uncertainty to operations. The trajectory of global economic growth, the actions of OPEC, and political and environmental uncertainty are other key factors. A strong balance sheet to manage through the commodity price cycle is necessary for survival. With the group's profitability largely driven by the volatile prices of oil, natural-gas and NGLs, we're not that excited about the structure of this commodity-producing space.

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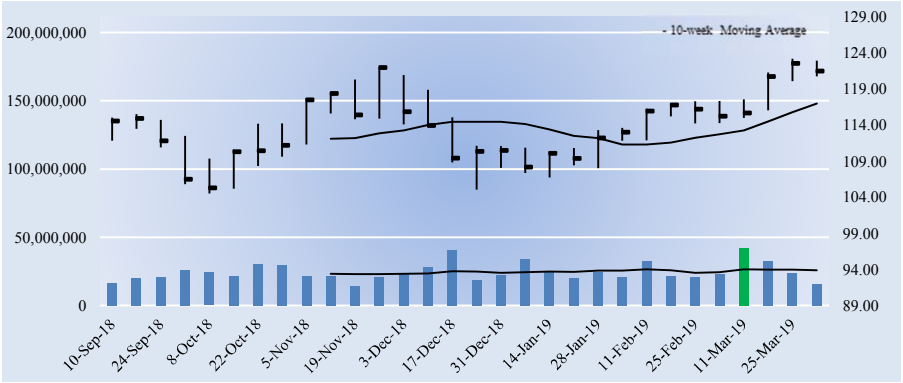
PepsiCo PEP FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$110.00	$88.00 - $132.00	LARGE-CAP CORE	Consumer Staples	Beverages - nonalcoholic

PepsiCo is expecting recently enacted pricing actions to improve margin performance after commodity inflation and transportation costs have eaten into its profitability.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**NEUTRAL**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**117.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$173,095
Avg Weekly Vol (30 wks)	24,548
30-week Range (USD)	104.53 - 123.19
Valuentum Sector	Consumer Staples
5-week Return	4.2%
13-week Return	10.4%
30-week Return	7.6%
Dividend Yield %	3.1%
Dividends per Share	3.71
Forward Dividend Payout Ratio	66.7%
Est. Normal Diluted EPS	6.91
P/E on Est. Normal Diluted EPS	17.6
Est. Normal EBITDA	16,043
Forward EV/EBITDA	14.2
EV/Est. Normal EBITDA	12.1
Forward Revenue Growth (5-yr)	3.7%
Forward EPS Growth (5-yr)	-0.5%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Pepsi is a global food/beverage company with a plethora of respected brands. Its portfolio includes the namesake Pepsi, Mountain Dew, Gatorade, Lay's, Doritos, Cheetos, Tostitos, Ruffles, Quaker oatmeal, and Aunt Jemima, among others. The US accounts for about half of revenue. The company was founded in 1898 and is headquartered in New York.

• Pepsi's long-term goals include 4%-6% annual organic revenue growth, 20-30 basis points of core operating margin expansion per year, high-single-digit core EPS growth in constant currency, and a rising core net ROIC. These goals imply materially improved performance relative to recent years.

• We're huge fans of Pepsi's brand portfolio, but competition remains fierce. Coca-Cola is its primary beverage competitor, while food and beverage rivals include Nestlé, Danone, Kellogg, General Mills, and Mondelēz. Pepsi has a scale advantage in North America, however, and has twenty-two global brands that each bring in $1 billion in sales annually. Social pressures against sugary drinks should not be ignored.

• Pepsi must continue to innovate to remain competitive, especially given the increase in societal pressures and health consciousness. The company recently acquired SodaStream for $3.2 billion, which gives it a significant presence in the at home marketplace with an environmentally friendly approach to personalizing beverages.

• We do not expect Pepsi's dividend to continue to grow as it has in the past, which is in part a function of the pace of its dividend growth in the past, but its debt load and weak near-term free cash flow outlook are worth watching. 2018 marked the 46th consecutive year of annual dividend increases.

Relative Valuation

	Forward P/E	PEG	Price / FV
Coca-Cola	21.9	2.1	119.2%
Keurig Dr Pepper	22.5	1.7	118.5%
Monster Beverage	25.9	2.3	105.7%
National Beverage	17.9	2.2	92.9%
Peer Median	22.2	2.2	112.1%
PepsiCo	**21.8**	**NMF**	**110.4%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	66.2%
Return on Assets	10.4%
ROIC, with goodwill	20.5%
ROIC, without goodwill	31.3%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	63,525	64,661	66,278
Revenue, YoY%	1.2%	1.8%	2.5%
Operating Income	10,509	10,110	11,218
Operating Margin %	16.5%	15.6%	16.9%
Net Income	4,857	12,515	7,855
Net Income Margin %	7.6%	19.4%	11.9%
Diluted EPS	3.38	8.78	5.57
Diluted EPS, YoY %	-22.5%	160.0%	-36.6%
Free Cash Flow (CFO-capex)	7,025	6,133	5,009
Free Cash Flow Margin %	11.1%	9.5%	7.6%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	32,321
Net Debt	21,331
Total Debt/EBITDA	2.6
Net Debt/EBITDA	1.7
EBITDA/Interest	8.2
Current Ratio	1.0
Quick Ratio	0.8

NMF = Not Meaningful

Structure of the Nonalcoholic Beverages Industry — GOOD

The nonalcoholic beverage segment of the commercial beverage industry is highly competitive, consisting of numerous companies that make various sparkling beverages, water products, juices, fruit drinks, energy and other performance-enhancing drinks. Pricing, advertising, product innovation, the availability of in-store private-label beverages, and health concerns about sugar-sweetened beverages are key drivers that impact demand. Leading brands with high levels of consumer acceptance and an expansive distribution network are sources of competitive strengths. We like the structure of the group.

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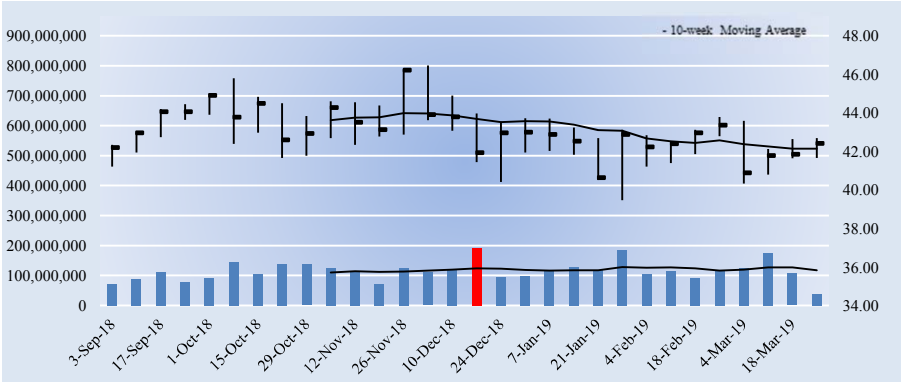
Pfizer PFE FAIRLY VALUED

Buying Index™ 7 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$45.00	$36.00 - $54.00	MEGA-CAP VALUE	Health Care	Pharmaceuticals - Big

Pfizer's focus on oncology and its leading position in emerging markets are expected to be growth drivers. The company has a long track record of approvals.

Stock Chart (weekly)



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Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**VERY BULLISH**
Relative Strength	**WEAK**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**42.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$253,544
Avg Weekly Vol (30 wks)	114,704
30-week Range (USD)	39.47 - 46.47
Valuentum Sector	Health Care
5-week Return	-1.4%
13-week Return	-1.8%
30-week Return	2.3%
Dividend Yield %	3.4%
Dividends per Share	1.44
Forward Dividend Payout Ratio	49.2%
Est. Normal Diluted EPS	3.21
P/E on Est. Normal Diluted EPS	13.2
Est. Normal EBITDA	24,614
Forward EV/EBITDA	11.9
EV/Est. Normal EBITDA	11.2
Forward Revenue Growth (5-yr)	1.7%
Forward EPS Growth (5-yr)	13.5%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Pfizer is a research-based, global biopharmaceutical company. The company has a leading portfolio of products and medicines that support wellness and prevention, as well as treatment and cures for diseases across a broad range of therapeutic areas. The firm was founded in 1849 and is headquartered in New York, New York.

• Pfizer continues to deliver novel and differentiated future potential products, and oncology has become an area of focus. The firm's oncology growth is expected to be fueled by IBRANCE and XTANDI, and it anticipates reaching 28 approved oncology indications by 2020 from 17 in 2017.

• Pfizer has a strong track record of approvals, which has played a key role in the evolution of its business. The firm is now #1 in non-viral anti-infective treatments, #1 in total biosimilar sales, the leading company in global off-patent sterile injectables, and has a leading position in emerging markets, which can be expected to drive growth in the near term.

• Though it is a small fraction of its overall business, Pfizer's biosimilar operations have grown at a robust rate in recent quarters, and 'Innovative Health' has been a source of strength as well. Management anticipates three potential blockbuster approvals in 2019 with a high degree of optimism surrounding tafamidis, a cardiomyopathy treatment.

• Pfizer has agreed to combine its Consumer Healthcare business with GSK's consumer health business in a JV that will be majority owned by GSK. The unit includes products such as Advil and Centrum. Pfizer acquired Ancacor Phrama for $5.2 billion in a deal that targeted its eczema gel product.

Relative Valuation

	Forward P/E	PEG	Price / FV
Abbott	24.4	2.5	116.2%
AbbVie	9.3	1.3	90.7%
Eli Lilly	22.9	2.1	123.6%
Merck	20.3	2.5	113.6%
Peer Median	21.6	2.3	114.9%
Pfizer	**14.5**	**1.7**	**94.3%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	20.3%
Return on Assets	7.8%
ROIC, with goodwill	12.7%
ROIC, without goodwill	23.4%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	41,740
Net Debt	22,907
Total Debt/EBITDA	2.5
Net Debt/EBITDA	1.4
EBITDA/Interest	12.7
Current Ratio	1.6
Quick Ratio	0.8

NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	52,546	53,647	53,325
Revenue, YoY%	-0.5%	2.1%	-0.6%
Operating Income	14,107	15,045	21,551
Operating Margin %	26.8%	28.0%	40.4%
Net Income	21,307	11,143	17,242
Net Income Margin %	40.5%	20.8%	32.3%
Diluted EPS	3.52	1.86	2.93
Diluted EPS, YoY %	200.9%	-47.0%	57.1%
Free Cash Flow (CFO-capex)	14,253	13,631	18,419
Free Cash Flow Margin %	27.1%	25.4%	34.5%

In Millions of USD (except for per share items)

Structure of the Big Pharma Industry — GOOD

The big pharma industry is primarily composed of makers of branded drugs. Intellectual property protection is vital to the successful commercialization of medicines and offers makers of branded drugs a unique competitive advantage via patents, which can extend for decades. When branded drugs lose market exclusivity, however, makers of generic pharmaceuticals can generate intense price competition, causing drastic revenue losses on unprotected therapies. Long-term success for branded pharma companies depends on a strong and diverse drug pipeline, which can be augmented by M&A activity. We generally like the group and expect continued industry consolidation.

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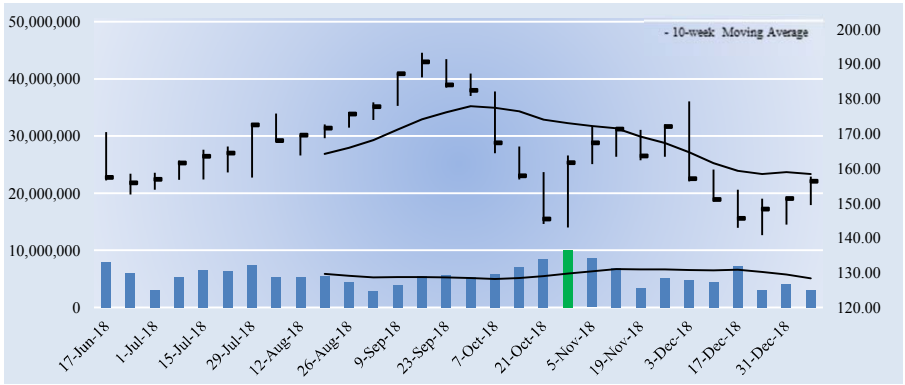
Parker-Hannifin PH FAIRLY VALUED

Buying Index™ 4 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$181.00	$145.00 - $217.00	LARGE-CAP VALUE	Industrials	Electrical Equipment

Parker-Hannifin's free cash flow conversion is consistently fantastic, and it has some ambitious financial targets for the years ahead.

Stock Chart (weekly)



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Company Vitals

Market Cap (USD)	$21,160
Avg Weekly Vol (30 wks)	5,641
30-week Range (USD)	140.82 - 193.19
Valuentum Sector	Industrials
5-week Return	-0.6%
13-week Return	-4.6%
30-week Return	-7.6%
Dividend Yield %	1.9%
Dividends per Share	3.04
Forward Dividend Payout Ratio	26.3%
Est. Normal Diluted EPS	13.14
P/E on Est. Normal Diluted EPS	11.9
Est. Normal EBITDA	2,855
Forward EV/EBITDA	9.4
EV/Est. Normal EBITDA	8.8
Forward Revenue Growth (5-yr)	2.8%
Forward EPS Growth (5-yr)	13.4%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	18.6%
Return on Assets	6.9%
ROIC, with goodwill	15.4%
ROIC, without goodwill	28.4%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	4,957
Net Debt	4,102
Total Debt/EBITDA	2.1
Net Debt/EBITDA	1.7
EBITDA/Interest	11.0
Current Ratio	1.6
Quick Ratio	1.0

NMF = Not Meaningful

Investment Highlights

• Parker-Hannifin is the world's leading diversified manufacturer of motion and control technologies and systems. There remains ample opportunity for growth in this $120+ billion global market. The firm has increased its annual dividends paid to shareholders for more than 60 consecutive fiscal years. It was founded in 1918 and is headquartered in Cleveland, Ohio.

• When it comes to industrial entities, Parker-Hannifin is among the strongest. It boasts top quartile performance in free-cash-flow generation and return on invested capital. Investors should keep a close eye on Parker-Hannifin's operating margins as well, which have expanded nicely as of late.

• Parker-Hannifin acquired Clarcor for ~$4.3 billion, combining Clarcor's solid US presence with Parker-Hannifin's international strength. Annual run-rate cost synergies of $160 million and revenue synergies of $100 million are expected by fiscal 2020. However, after the US DoJ filed an antitrust lawsuit, the firm has agreed to divest its Facet filtration business, which includes Clarcor's aviation fuel filtration assets.

• Parker-Hannifin now expects ~55% of its revenue to be generated via its aftermarket business thanks to its purchase of Clarcor, the integration of which has exceeded expectations thus far. Its free cash flow conversion (free cash flow divided by net income) is consistently fantastic and has been more than 100% of net income each year since fiscal 2006.

• Parker-Hannifin has set the following targets for fiscal 2023: organic sales growth of 150 basis points above the broader industrial markets growth, an operating income margin of 19%, an EPS CAGR of 10%+, and free cash flow conversion at or above 100% of net income.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**BEARISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BEARISH**
Near-term Technical Resistance, 10-wk MA	**158.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Barnes Group	17.7	1.7	101.5%
Emerson Electric	16.5	1.9	96.3%
Pentair	18.1	2.9	98.9%
Roper Technologies	25.1	3.3	125.2%
Peer Median	17.9	2.4	100.2%
Parker-Hannifin	**13.5**	**1.5**	**86.3%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Jun-17	Jun-18	Jun-19
Revenue	12,029	14,302	14,588
Revenue, YoY%	5.9%	18.9%	2.0%
Operating Income	1,386	1,882	2,205
Operating Margin %	11.5%	13.2%	15.1%
Net Income	983	1,061	1,532
Net Income Margin %	8.2%	7.4%	10.5%
Diluted EPS	7.25	7.83	11.57
Diluted EPS, YoY %	23.1%	8.0%	47.8%
Free Cash Flow (CFO-capex)	1,098	1,353	1,731
Free Cash Flow Margin %	9.1%	9.5%	11.9%

In Millions of USD (except for per share items)

Structure of the Electrical Equipment Industry — NEUTRAL

The fragmented electrical equipment industry includes firms that primarily provide flow control and electrical components. Order trends and backlog are largely driven by the overall health of the economy, while all constituents must deal with volatile raw material prices. Most operate high fixed-cost business models, where operating leverage should be monitored closely, and face intense global competition. Still, we like the group's exposure to recurring maintenance, repair, and overhaul (MRO) revenue and its large and growing emerging-market opportunities. We're generally neutral on the industry's structure.

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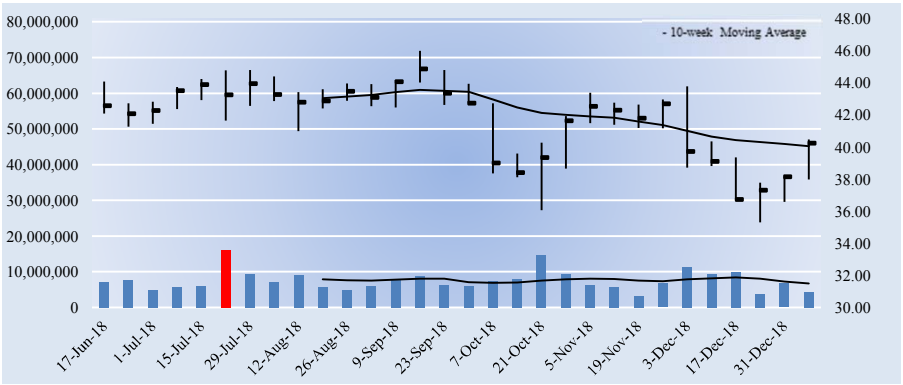
Pentair PNR FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$43.00	$34.00 - $52.00	MID-CAP VALUE	Industrials	Electrical Equipment

Following the spin-off of its Electrical business, Pentair is now a pure play water company, and we like that a higher percentage of its business is now tied to the replacement/aftermarket space.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**DECLINING**
Technical Evaluation	**VERY BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BEARISH**
Near-term Technical Support, 10-week MA	**40.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$7,392
Avg Weekly Vol (30 wks)	7,503
30-week Range (USD)	35.3 - 46
Valuentum Sector	Industrials
5-week Return	1.5%
13-week Return	3.3%
30-week Return	-7.4%
Dividend Yield %	1.8%
Dividends per Share	0.72
Forward Dividend Payout Ratio	30.6%
Est. Normal Diluted EPS	2.66
P/E on Est. Normal Diluted EPS	15.1
Est. Normal EBITDA	835
Forward EV/EBITDA	11.4
EV/Est. Normal EBITDA	10.4
Forward Revenue Growth (5-yr)	-7.2%
Forward EPS Growth (5-yr)	2.2%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Following the spin-off of its Electrical business, Pentair is now a pure play water company focused on smart, sustainable water and fluid processing applications. It provides solutions for residential (~60% of revenue), commercial (20%), and industrial and agriculture (20%) applications. The company has 130 locations in 34 countries around the world. It was founded in 1966 and is based in the UK.

• An enhanced strategic focus, simplified corporate structure, and improved clarity into business performance are key selling points of the spin-off, and geographic expansion remains a growth opportunity. The Electrical business has been named nVent Electric and trades under the ticker 'NVT.'

• Pentair's long-term financial goals include 2%-4% annual core sales growth, 6%-8% segment income growth, and 8%-10% adjusted earnings per share growth as it takes advantage of operating margin and share buyback opportunities. The company also expects to deliver free cash flow equal to adjusted net income, which could lead to $2+ billion in cumulative free cash flow through 2022.

• Pentair is working to transform its business into one that is more predictable via simplification and standardization initiatives, which are expected to help drive net income margins along with pricing initiatives in coming years. Following the spin-off, management estimates that ~70% of Pentair's revenue comes from replacement/aftermarket.

• Pentair targets free cash flow to be ~100% of adjusted net income, which will help in its capital allocation plan that includes a focus on tuck-in and bolt-on M&A activity as it embraces the shift toward 'smart' technologies. The company has grown its dividend for 40+ years, as adjusted for the spin-off.

Relative Valuation

	Forward P/E	PEG	Price / FV
Barnes Group	17.7	1.7	101.5%
Emerson Electric	16.5	1.9	96.3%
Parker-Hannifin	13.5	1.5	86.3%
Roper Technologies	25.1	3.3	125.2%
Peer Median	17.1	1.8	98.9%
Pentair	**17.1**	**2.8**	**93.6%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	6.6%
Return on Assets	2.7%
ROIC, with goodwill	11.1%
ROIC, without goodwill	25.2%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-16	Dec-17	Dec-18
Revenue	4,890	4,937	3,011
Revenue, YoY%	-24.2%	1.0%	-39.0%
Non-GAAP Operating Income	701	681	613
Non-GAAP EBIT %	14.3%	13.8%	20.4%
Non-GAAP Net Income	452	480	432
Non-GAAP NI Margin %	9.2%	9.7%	14.4%
Non-GAAP Diluted EPS	2.47	2.61	2.35
Non-GAAP Dil EPS, YoY %	NMF	NMF	NMF
Non-GAAP Free Cash Flow	744	549	835
Non-GAAP FCF Margin %	15.2%	11.1%	27.7%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	1,441
Net Debt	1,327
Total Debt/EBITDA	1.7
Net Debt/EBITDA	1.5
EBITDA/Interest	8.9
Current Ratio	1.5
Quick Ratio	0.8

NMF = Not Meaningful

Structure of the Electrical Equipment Industry — NEUTRAL

The fragmented electrical equipment industry includes firms that primarily provide flow control and electrical components. Order trends and backlog are largely driven by the overall health of the economy, while all constituents must deal with volatile raw material prices. Most operate high fixed-cost business models, where operating leverage should be monitored closely, and face intense global competition. Still, we like the group's exposure to recurring maintenance, repair, and overhaul (MRO) revenue and its large and growing emerging-market opportunities. We're generally neutral on the industry's structure.

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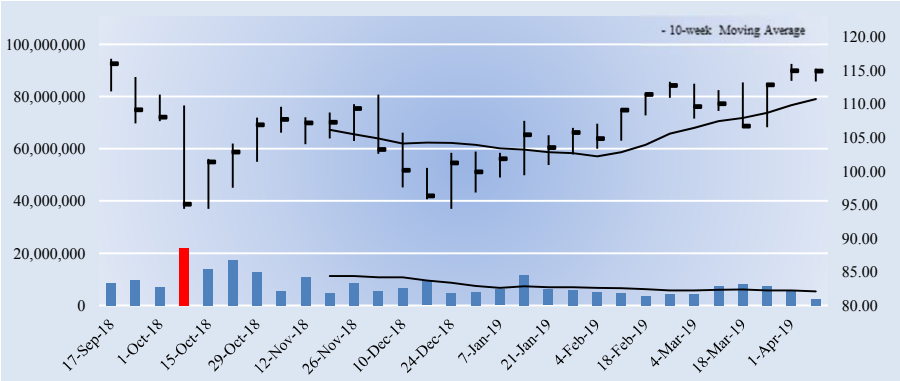
PPG Industries PPG FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$101.00	$81.00 - $121.00	LARGE-CAP CORE	Materials	Chemicals - broad

PPG Industries is facing cost pressures in raw materials, freight, energy, and labor, which it is combatting with price increases, and moderating growth in Asia, Europe, and the automotive OEM space should be monitored.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**NEUTRAL**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**111.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueRisk™ \ ValueCreation™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$28,196
Avg Weekly Vol (30 wks)	7,899
30-week Range (USD)	94.37 - 116.73
Valuentum Sector	Materials
5-week Return	4.4%
13-week Return	13.4%
30-week Return	2.3%
Dividend Yield %	1.7%
Dividends per Share	1.92
Forward Dividend Payout Ratio	30.5%
Est. Normal Diluted EPS	8.01
P/E on Est. Normal Diluted EPS	14.3
Est. Normal EBITDA	3,069
Forward EV/EBITDA	12.3
EV/Est. Normal EBITDA	10.5
Forward Revenue Growth (5-yr)	3.0%
Forward EPS Growth (5-yr)	13.1%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	21.7%
Return on Assets	6.8%
ROIC, with goodwill	16.8%
ROIC, without goodwill	26.4%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	5,016
Net Debt	4,053
Total Debt/EBITDA	2.1
Net Debt/EBITDA	1.7
EBITDA/Interest	20.0
Current Ratio	1.4
Quick Ratio	0.9

NMF = Not Meaningful

Investment Highlights

• PPG Industries is a leading supplier of paints, coatings, specialty materials, flat glass and fiber glass. United States and Canada account for ~45% of the company's business. PPG Industries continues to post excellent financial results, and management is fiscally prudent (albeit acquisitive). The firm was founded in 1883.

• Since 2004, the firm has undergone a significant shift in operational focus. Coatings accounted for ~56% of its business in 2004. Today, coatings account for the entirety of its portfolio. Acquisitions are worth watching, and the company points to Asia as a key global growth opportunity.

• PPG Industries is acquisitive, but we like its organic growth potential via emerging market expansion, increased sales content per airplane, and auto production. In the near term, PPG expects moderating growth rates in Asia, modest and varied growth across Europe, and very modest growth in auto EOM coatings. Raw material inflation will impact margins, but it continues to optimize its cost structure.

• PPG isn't too capital-intensive (capex averages ~2.5% of sales), has pricing power, and its top-market share position in the ~$140 billion consolidating coatings industry is hard not to like and may be vital for it to fight off the impact of recent cost inflation. On a fundamental basis, the firm is one of our favorite ideas within the chemicals industry.

• PPG is a Dividend Aristocrat, having raised its dividend in each of the past 45+ years. We like its dividend growth potential, but its annual yield isn't large. Dividends accounted for ~19% of its cash usage in 2009-2018. Capital deployed in that period was ~45% business growth and 55% shareholder returns.

Relative Valuation

	Forward P/E	PEG	Price / FV
DowDuPont	12.2	1.4	83.7%
Eastman Chemical	9.3	1.7	84.2%
Ecolab	30.6	2.5	153.4%
LyondellBasell	8.5	0.9	88.7%
Peer Median	10.8	1.5	86.4%
PPG Industries	**18.2**	**1.6**	**113.8%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	14,750	15,374	15,666
Revenue, YoY%	0.0%	4.2%	1.9%
Operating Income	2,063	1,862	2,112
Operating Margin %	14.0%	12.1%	13.5%
Net Income	1,371	1,323	1,516
Net Income Margin %	9.3%	8.6%	9.7%
Diluted EPS	5.32	5.39	6.30
Diluted EPS, YoY %	152.1%	1.4%	16.9%
Free Cash Flow (CFO-capex)	1,208	1,056	1,598
Free Cash Flow Margin %	8.2%	6.9%	10.2%

In Millions of USD (except for per share items)

Structure of the Chemicals Industry — POOR

The broad chemicals industry includes firms that make thousands of different chemical substances, ranging from basic raw materials to advanced specialty chemicals. Making chemicals is a cyclical and energy-intensive business, with volatile oil/gas prices influencing feedstock, operation, and transportation costs. Specialty providers can carve out niches, but commodity chemicals producers are largely undifferentiated, making it impossible to gain a sustainable competitive edge. The industry is very capital intensive, and large swings in prices and volume should be expected. We don't like the industry structure.

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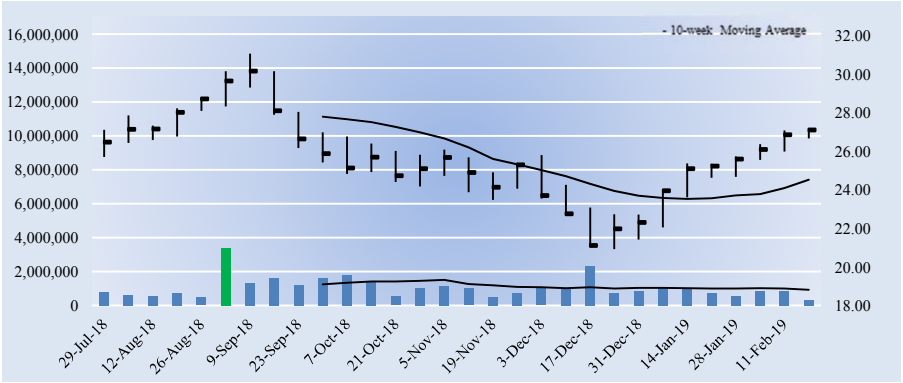
Perficient PRFT FAIRLY VALUED

Buying Index™ 7 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$27.00	$22.00 - $32.00	SMALL-CAP CORE	Information Technology	Business Services

Market forces behind Perficient's business include the ongoing digital transformation, the proliferation of cloud computing, the evolution of the healthcare industry, and a changing financial services regulatory environment.

Stock Chart (weekly)



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Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**25.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$924
Avg Weekly Vol (30 wks)	1,061
30-week Range (USD)	20.92 - 31.09
Valuentum Sector	Information Technology
5-week Return	8.5%
13-week Return	11.6%
30-week Return	1.8%
Dividend Yield %	0.0%
Dividends per Share	0.00
Forward Dividend Payout Ratio	0.0%
Est. Normal Diluted EPS	1.70
P/E on Est. Normal Diluted EPS	15.9
Est. Normal EBITDA	97
Forward EV/EBITDA	10.8
EV/Est. Normal EBITDA	10.0
Forward Revenue Growth (5-yr)	3.4%
Forward EPS Growth (5-yr)	27.3%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Perficient is an IT consulting firm. The company designs, builds, and delivers business-driven technology solutions using third-party software products. Solutions include business integration, CRM, and custom applications, among others. It was founded in 1997 and is based in St. Louis, Missouri.

• Perficient has a number of things going for it over the long haul. The two biggest are a huge addressable market at $200 billion and a ~95% repeat business rate. The firm continues to increase its average bill rate, and we think investors should expect further upside with this metric.

• Market forces behind Perficient's business include the ongoing digital transformation, the proliferation of cloud computing, the evolution of the healthcare industry, and a changing financial services regulatory environment. Its strategic growth drivers include geographic expansion, increased offshore presence, strategic account development, and M&A activity.

• The world's leading enterprises are increasingly turning to Perficient to help them design, develop and implement innovative digital experience business optimization and industry solutions. Client retention has been strong of late, and roughly 90% of revenues in 2017 came from accounts that were clients in either of the previous two years.

• Perficient seems to have the upper hand with respect to competitors. The company seems to win more than 60% of the time and against firms such as Accenture, Infosys, Cognizant, and Sapient. Nevertheless, win rates are worth keeping an eye on.

Relative Valuation

	Forward P/E	PEG	Price / FV
Accenture	21.9	2.5	114.1%
Amdocs	13.3	1.4	80.4%
IHS Markit	20.6	1.9	108.2%
VMware	27.1	2.8	122.0%
Peer Median	21.2	2.2	111.2%
Perficient	**17.5**	**1.8**	**100.4%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	6.0%
Return on Assets	4.5%
ROIC, with goodwill	13.6%
ROIC, without goodwill	43.1%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-16	Dec-17	Dec-18
Revenue	487	485	495
Revenue, YoY%	2.8%	-0.4%	2.0%
Non-GAAP Operating Income	32	34	70
Non-GAAP EBIT %	6.5%	6.9%	14.2%
Non-GAAP Net Income	20	19	53
Non-GAAP NI Margin %	4.2%	3.8%	10.6%
Non-GAAP Diluted EPS	0.58	0.55	1.55
Non-GAAP Dil EPS, YoY %	-12.8%	-6.7%	183.3%
Non-GAAP FCF (CFO-capex)	57	50	66
Non-GAAP FCF Margin %	11.6%	10.4%	13.3%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	55
Net Debt	49
Total Debt/EBITDA	1.0
Net Debt/EBITDA	0.9
EBITDA/Interest	29.0
Current Ratio	2.1
Quick Ratio	1.9

NMF = Not Meaningful

Structure of the Business Services Industry — NEUTRAL

Firms in the business services space primarily focus on management consulting, technology/data-integration services/software and outsourcing solutions. Participants generate high returns on invested capital, but the business services marketplace is very competitive, and firms can often face pressure from off-shore service providers in lower-cost locations (India, Philippines and China). Such competition may inhibit firms' ability to obtain sufficient pricing for services, and economic conditions may hinder the capability of clients to pay for such services. Still, we're generally neutral on the group.

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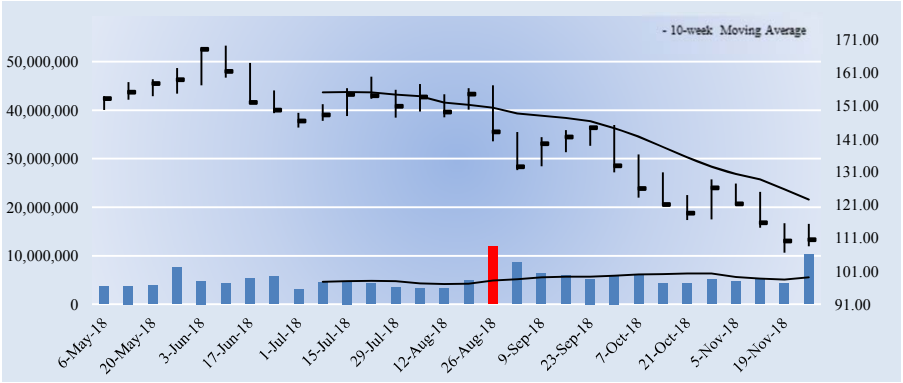
PVH Corp PVH FAIRLY VALUED

Buying Index™ 4 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$121.00	$97.00 - $145.00	MID-CAP VALUE	Consumer Discretionary	Luxury - Established Brands

PVH Corp leverages a diversified portfolio of brands--including Calvin Klein, Tommy Hilfiger, Van Heusen, IZOD, ARROW, and Speedo.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$8,686
Avg Weekly Vol (30 wks)	5,274
30-week Range (USD)	106.63 - 169.22
Valuentum Sector	Consumer Discretionary
5-week Return	-8.1%
13-week Return	-22.4%
30-week Return	-27.4%
Dividend Yield %	0.1%
Dividends per Share	0.15
Forward Dividend Payout Ratio	1.6%
Est. Normal Diluted EPS	11.03
P/E on Est. Normal Diluted EPS	10.0
Est. Normal EBITDA	1,435
Forward EV/EBITDA	8.6
EV/Est. Normal EBITDA	7.9
Forward Revenue Growth (5-yr)	4.2%
Forward EPS Growth (5-yr)	12.7%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	11.6%
Return on Assets	5.0%
ROIC, with goodwill	6.8%
ROIC, without goodwill	9.4%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	3,081
Net Debt	2,587
Total Debt/EBITDA	3.2
Net Debt/EBITDA	2.7
EBITDA/Interest	7.6
Current Ratio	1.6
Quick Ratio	0.6

NMF = Not Meaningful

Investment Highlights

• PVH Corp is one of the world's largest apparel companies. The firm leverages a diversified portfolio of brands--including Calvin Klein, Tommy Hilfiger, Van Heusen, IZOD, ARROW, and Speedo--and markets them globally. The company was founded in 1881 and is based in New York.

• Tommy Hilfiger and Calvin Klein account for about 75% of the firm's revenue and about 85% of its earnings before interest and taxes. The continued success of these two brands remains vital to PVH's long-term health. PVH acquired The Warnaco Group in February 2013.

• Europe, China, and Japan have been key sources of strength for PVH in recent quarters, while its North America operations have improved nicely, thanks in part to strong growth in its digital channel. Investors can expect increased marketing spend in the near term as management invests to drive brand relevance and consumer reach.

• PVH recently acquired True&Co, an e-commerce retailer, for an undisclosed sum. While the deal may not be a blockbuster needle mover in terms of immediate growth potential, we like what the decision to acquire a data and analytics driven entity could bring further down the road. Integration and execution risk are certainly present, however.

• Tracing its roots back to the late 19th century, PVH has come a long way. It has wholesale, retail, e-commerce and licensing channels, and the firm's Asia and Latin American operations account for 20%+ of operating income.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**POOR**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**HIGH**
Growth	**MODEST**
Technical Evaluation	**BEARISH**
Relative Strength	**WEAK**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BEARISH**
Near-term Technical Resistance, 10-wk MA	**123.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Nike	28.1	2.0	105.8%
Philips	24.1	2.1	122.4%
Sony	NMF	NMF	120.0%
VF Corp	21.7	1.8	112.9%
Peer Median	24.1	2.0	116.5%
PVH Corp	**11.7**	**1.3**	**91.3%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Jan-17	Jan-18	Jan-19
Revenue	8,203	8,915	9,583
Revenue, YoY%	2.3%	8.7%	7.5%
Operating Income	734	646	955
Operating Margin %	8.9%	7.2%	10.0%
Net Income	549	538	727
Net Income Margin %	6.7%	6.0%	7.6%
Diluted EPS	6.79	6.84	9.42
Diluted EPS, YoY %	-1.5%	0.8%	37.7%
Free Cash Flow (CFO-capex)	709	342	644
Free Cash Flow Margin %	8.6%	3.8%	6.7%

In Millions of USD (except for per share items)

Structure of the Luxury Goods Industry — GOOD

Luxury goods firms differentiate themselves based on brand name, perception, and quality in order to generate excess returns on invested capital through the economic cycle. Building a large, successful luxury brand is difficult, leaving those that possess them with intangible competitive advantages that are not easily overcome by new entrants. Growth in emerging middle classes and China will be the key demand drivers going forward, though the strongest brands will also grow successfully via market share gains. Though changes in consumer preferences should be watched closely, we like the structure of the group.

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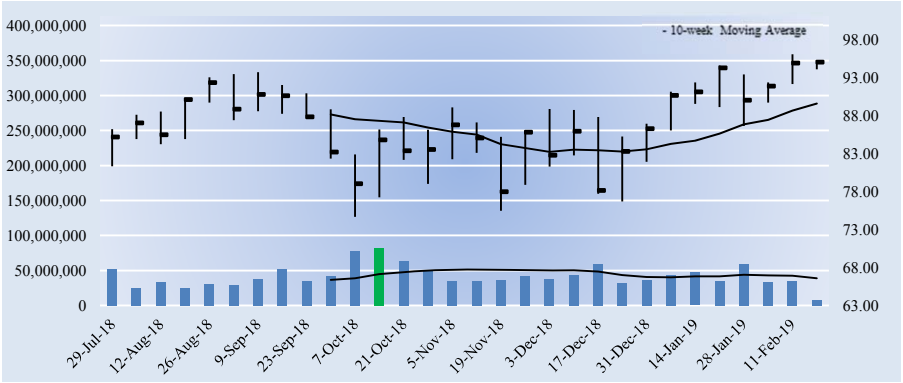
PayPal PYPL FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$116.00	$93.00 - $139.00	LARGE-CAP BLEND	Information Technology	Financial Tech Services

The network effect of PayPal's scale is increasing as digital commerce continues to proliferate, but competition is consistently growing stronger.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**AGGRESSIVE**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**90.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$114,309
Avg Weekly Vol (30 wks)	41,978
30-week Range (USD)	74.66 - 96.04
Valuentum Sector	Information Technology
5-week Return	5.2%
13-week Return	20.3%
30-week Return	11.1%
Dividend Yield %	0.0%
Dividends per Share	0.00
Forward Dividend Payout Ratio	0.0%
Est. Normal Diluted EPS	4.24
P/E on Est. Normal Diluted EPS	22.4
Est. Normal EBITDA	7,220
Forward EV/EBITDA	20.9
EV/Est. Normal EBITDA	14.8
Forward Revenue Growth (5-yr)	15.2%
Forward EPS Growth (5-yr)	27.0%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	11.5%
Return on Assets	4.8%
ROIC, with goodwill	29.8%
ROIC, without goodwill	49.4%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	1,998
Net Debt	-7,111
Total Debt/EBITDA	0.6
Net Debt/EBITDA	NMF
EBITDA/Interest	Excellent
Current Ratio	1.3
Quick Ratio	1.1

NMF = Not Meaningful

Investment Highlights

• PayPal operates as a technology platform company that enables digital and mobile payments on behalf of consumers and merchants worldwide. The company's platform allows customers to pay and get paid, transfer and withdraw funds to their bank accounts, and hold balances in their PayPal accounts in various currencies. PayPal was spun off from eBay in July 2015.

• PayPal will continue to innovate and update its products and platform, which will be necessary to remain effectively competitive. Venmo, its peer-to-peer platform, offers additional growth potential, and management is optimistic regarding its ability to further monetize the platform.

• PayPal's business is subject to extensive government regulation and oversight, as well as complex, overlapping and frequently changing rules, regulations and legal interpretations. Additionally, any factors that increase the costs of cross-border trade or restrict, delay, or make cross-border trade more difficult would lower its revenues and profits and could harm our business, providing additional geopolitical risk.

• PayPal continues to set itself up for long-term success. The firm has announced partnerships with Visa, MasterCard, and Discover that enhance customer service features, particularly in the area of digital payments. In 2019, the company expects revenue growth of 16%-17% in constant currency, and non-GAAP EPS growth is targeted at 17%-20%.

• Competition is growing for PayPal, including the likes of Square, Stripe, and digital initiatives from credit card companies. Amazon is reportedly offering discounts to retailers using Amazon Pay. Shares have been volatile on news around its agreement with eBay, which was ultimately extended through 2023.

Relative Valuation

	Forward P/E	PEG	Price / FV
Bottomline Tech	NMF	3.6	106.1%
Fiserv	29.8	NMF	129.7%
Mastercard	28.9	2.1	100.3%
Visa	26.9	2.1	94.4%
Peer Median	28.9	2.1	103.2%
PayPal	**32.6**	**2.1**	**81.9%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	13,094	15,451	17,985
Revenue, YoY%	20.8%	18.0%	16.4%
Non-GAAP Operating Income	2,259	2,503	4,252
Non-GAAP EBIT %	17.3%	16.2%	23.6%
Non-GAAP Net Income	1,795	2,057	3,487
Non-GAAP NI Margin %	13.7%	13.3%	19.4%
Non-GAAP Diluted EPS	1.47	1.71	2.92
Non-GAAP Dil EPS, YoY %	27.8%	16.3%	70.7%
Non-GAAP FCF (CFO-capex)	1,864	4,660	3,906
Non-GAAP FCF Margin %	14.2%	30.2%	21.7%

In Millions of USD (except for per share items)

Structure of the Financial Tech Services Industry — EXCELLENT

The financial tech services industry is primarily composed of firms that generate revenue by charging fees to customers for providing transaction processing and other payment-related services. Constituents operate in a rapidly-evolving legal/regulatory environment, particularly with respect to interchange fees, data protection, and information security. Several participants benefit from a significant competitive advantage – the network effect. As more consumers use credit/debit cards, more merchants accept them, thereby creating a virtuous cycle. The industry is one of the most attractive in our coverage.

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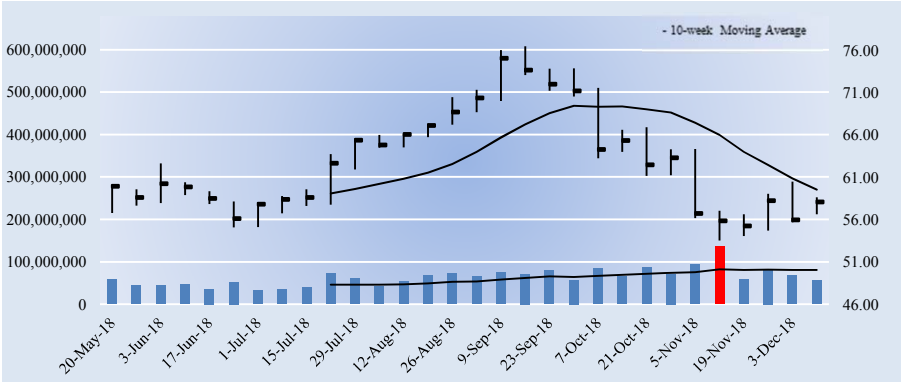
QUALCOMM QCOM FAIRLY VALUED

Buying Index™ 3 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$60.00	$48.00 - $72.00	LARGE-CAP VALUE	Information Technology	Communications Equipment

QUALCOMM has been in a seemingly constant flow of drama from failed merger deals to hostile takeover attempts to legal disputes with other tech giants.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**BEARISH**
Relative Strength	**WEAK**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BEARISH**
Near-term Technical Resistance, 10-wk MA	**60.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueRisk™ \ ValueCreation™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$84,986
Avg Weekly Vol (30 wks)	63,613
30-week Range (USD)	53.53 - 76.5
Valuentum Sector	Information Technology
5-week Return	3.1%
13-week Return	-22.4%
30-week Return	0.7%
Dividend Yield %	4.3%
Dividends per Share	2.48
Forward Dividend Payout Ratio	63.0%
Est. Normal Diluted EPS	4.64
P/E on Est. Normal Diluted EPS	12.5
Est. Normal EBITDA	8,562
Forward EV/EBITDA	11.7
EV/Est. Normal EBITDA	10.4
Forward Revenue Growth (5-yr)	3.1%
Forward EPS Growth (5-yr)	-208.3%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• QUALCOMM has revolutionized the mobile phone industry. Through its own R&D and through partnerships with other firms, the company develops breakthrough technology and then licenses it. The firm has one of the strongest Economic Castles in our coverage. It was founded in 1985 and is headquartered in San Diego, California.

• Broadcom has officially withdrawn its hostile bid for QUALCOMM after President Trump issued an order to block the deal on grounds that the merger could impair US national security. Since then reports have surfaced that its former chairman and CEO is seeking funding to take QUALCOMM private.

• You know a firm's IP is one-of-a-kind when it continues to face antitrust lawsuits. However, serious concerns arose after the FTC and Apple filed charges against QUALCOMM for anticompetitive behavior. The FTC claims the firm disrupted the supply of baseband processors to obtain elevated royalties and other favorable terms. QUALCOMM recently won an iPhone ban in China related to software patents.

• While the $1 billion lawsuit is grabbing headlines, the underlying issue is that Apple is essentially attacking how QUALCOMM runs its licensing business model. These developments come shortly after QUALCOMM was fined $854 million by South Korean regulators for unfair trade practices. Intel has also accused the firm of a 'web of abusive practices.'

• QUALCOMM has terminated its ~$47 billion deal for NXP Semiconductors after a period of heightened uncertainty related to geopolitical factors and regulatory pressures. The company owes NXP Semi a $2 billion termination fee but is eager to put the uncertainty overhang behind it.

Relative Valuation

	Forward P/E	PEG	Price / FV
CIENA	NMF	NMF	107.9%
EchoStar	75.7	NMF	84.8%
Harris Corp	18.6	2.5	105.3%
ViaSat	NMF	NMF	125.8%
Peer Median	47.1	2.5	106.6%
QUALCOMM	**14.7**	**NMF**	**96.8%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	-1.6%
Return on Assets	1.8%
ROIC, with goodwill	34.4%
ROIC, without goodwill	54.0%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Sep-17	Sep-18	Sep-19
Revenue	22,291	22,732	20,732
Revenue, YoY%	-5.4%	2.0%	-8.8%
Operating Income	4,356	3,877	6,105
Operating Margin %	19.5%	17.1%	29.4%
Net Income	2,466	-4,864	5,648
Net Income Margin %	11.1%	-21.4%	27.2%
Diluted EPS	1.66	-3.32	3.94
Diluted EPS, YoY %	-56.5%	-300.9%	-218.5%
Free Cash Flow (CFO-capex)	4,311	3,111	6,470
Free Cash Flow Margin %	19.3%	13.7%	31.2%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	16,370
Net Debt	4,247
Total Debt/EBITDA	3.0
Net Debt/EBITDA	0.8
EBITDA/Interest	7.1
Current Ratio	1.5
Quick Ratio	1.3

NMF = Not Meaningful

Structure of the Communications Equipment Industry — VERY POOR

The communications equipment industry continues to undergo rapid change, as network traffic expands, new service offerings are introduced, and end user demand shifts. Competition among communication network solution vendors remains intense, as securing new opportunities often requires agreeing to less favorable commercial terms and pricing. Rivalry among constituents will only increase in coming years, as Chinese equipment vendors gain entry into the US market and incumbent competitors strive to retain share. We don't think such conditions are favorable to generating long-term economic profit.

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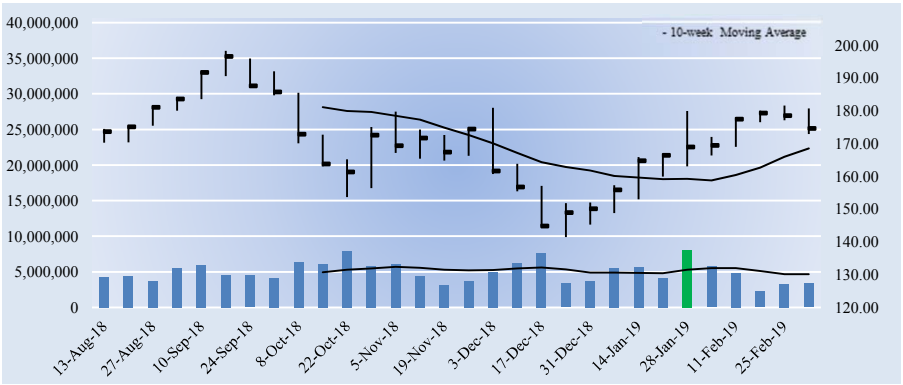
Rockwell Automation ROK FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$152.00	$122.00 - $182.00	LARGE-CAP CORE	Industrials	Electrical Equipment - industrial

Rockwell Automation remains focused on innovation and believes its singular focus on automation gives it a leg up.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**169.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$22,148
Avg Weekly Vol (30 wks)	4,985
30-week Range (USD)	141.46 - 198.23
Valuentum Sector	Industrials
5-week Return	3.7%
13-week Return	8.0%
30-week Return	0.8%
Dividend Yield %	2.2%
Dividends per Share	3.88
Forward Dividend Payout Ratio	42.6%
Est. Normal Diluted EPS	10.30
P/E on Est. Normal Diluted EPS	16.9
Est. Normal EBITDA	1,856
Forward EV/EBITDA	13.9
EV/Est. Normal EBITDA	12.4
Forward Revenue Growth (5-yr)	4.2%
Forward EPS Growth (5-yr)	21.9%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Rockwell Automation is the world's largest company dedicated to industrial automation. It operates in two segments, Architecture & Software (~46% of total sales) and Control Products & Solutions (~54% of total sales). The company operates in more than 80 countries, but the US accounts for ~55% of total sales. It was founded in 1903 and is headquartered in Milwaukee, Wisconsin.

• We agree with Rockwell that automation is a great market. The firm benefits from a number of tailwinds: an aging installed base, the need for productivity, the growing middle class in emerging markets, lower cost of computing and connectivity, and IT-OT convergence.

• Rockwell remains focused on innovation and believes its singular focus on automation gives it a leg up. The firm notes ongoing uncertainty related to geopolitical uncertainty and trade tensions but continues to forecast industrial production growth. Organic revenue growth is expected at 3.7%-6.7% in fiscal 2019, and it expects to offset tariff-related costs with supply chain changes and pricing.

• Rockwell Automation has some noteworthy long-term goals. The firm is targeting above-market revenue growth and earnings per share growth greater than revenue growth. It expects to generate 20%+ annual return on invested capital and convert more than 100% of adjusted net income to free cash flow each year.

• Management expects to deliver above-market revenue growth by gaining share in its core platforms, growing at a double digit rate in information solutions and connected services, and delivering at least one percentage point of annual revenue growth via acquisitions.

Relative Valuation

	Forward P/E	PEG	Price / FV
Ametek	19.2	3.0	121.0%
AO Smith Corp	18.6	2.5	97.8%
Eaton	13.4	1.7	91.2%
Littelfuse	20.0	2.0	107.8%
Peer Median	18.9	2.2	102.8%
Rockwell Automation	**19.2**	**1.9**	**114.8%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	31.6%
Return on Assets	10.1%
ROIC, with goodwill	35.6%
ROIC, without goodwill	59.9%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Sep-17	Sep-18	Sep-19
Revenue	6,311	6,666	6,999
Revenue, YoY%	7.3%	5.6%	5.0%
Operating Income	1,033	1,273	1,485
Operating Margin %	16.4%	19.1%	21.2%
Net Income	826	536	1,156
Net Income Margin %	13.1%	8.0%	16.5%
Diluted EPS	6.36	4.22	9.11
Diluted EPS, YoY %	14.2%	-33.6%	115.9%
Free Cash Flow (CFO-capex)	893	1,175	1,160
Free Cash Flow Margin %	14.1%	17.6%	16.6%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	1,776
Net Debt	867
Total Debt/EBITDA	1.2
Net Debt/EBITDA	0.6
EBITDA/Interest	19.7
Current Ratio	1.3
Quick Ratio	0.9

NMF = Not Meaningful

Structure of the Industrial Electrical Equipment Industry — NEUTRAL

Demand for products in the industrial electrical equipment space is highly cyclical, and industry constituents are exposed to volatile raw-material costs, which at times can be difficult to pass along to customers. Product development and quality initiatives are sources of competitive strengths, but rivals often compete aggressively on price to gain share. The industrial electrical equipment market should grow at a GDP-like pace in the developed world and a multiple of that trajectory in emerging markets. We're neutral on the space.

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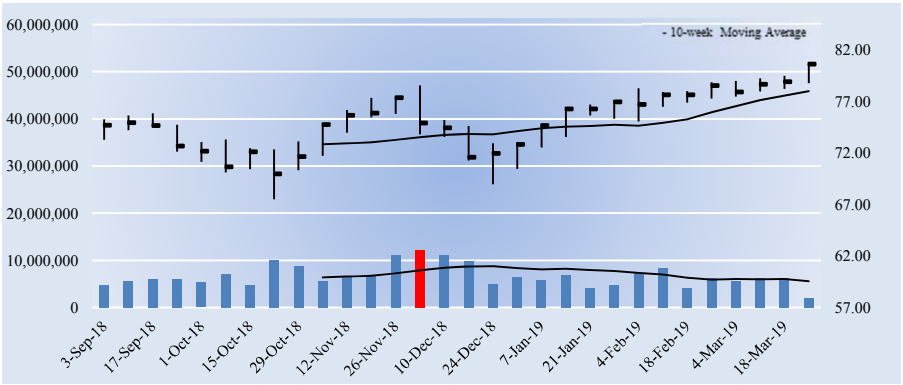
Republic Services RSG FAIRLY VALUED

Buying Index™ 5 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$68.00	$54.00 - $82.00	LARGE-CAP CORE	Industrials	Environmental Services

Republic Services' revenue is roughly evenly split between open market and restricted pricing markets, and it operates in a monopoly in ~30% of its markets.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$26,472
Avg Weekly Vol (30 wks)	6,716
30-week Range (USD)	67.48 - 80.62
Valuentum Sector	Industrials
5-week Return	3.7%
13-week Return	12.3%
30-week Return	9.7%
Dividend Yield %	1.9%
Dividends per Share	1.50
Forward Dividend Payout Ratio	45.6%
Est. Normal Diluted EPS	4.26
P/E on Est. Normal Diluted EPS	18.9
Est. Normal EBITDA	3,386
Forward EV/EBITDA	11.8
EV/Est. Normal EBITDA	10.3
Forward Revenue Growth (5-yr)	3.9%
Forward EPS Growth (5-yr)	11.4%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	12.4%
Return on Assets	4.7%
ROIC, with goodwill	8.3%
ROIC, without goodwill	21.1%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	8,338
Net Debt	8,267
Total Debt/EBITDA	2.9
Net Debt/EBITDA	2.9
EBITDA/Interest	7.4
Current Ratio	0.6
Quick Ratio	0.4

NMF = Not Meaningful

Investment Highlights

• Republic Services is the second largest provider of services in the domestic non-hazardous solid waste industry, as measured by revenue. The firm has ~340 collection operations in ~40 states and Puerto Rico. It owns and operates ~195 active solid waste landfills. The company was founded in 1996 and is based in Phoenix, Arizona. 60%+ of revenue comes from franchise or small & mid-size markets.

• The waste industry is characterized by solid revenue and earnings visibility thanks to the nature of the multi-year contracts utilized. The industry continues to consolidate, and roughly 35% of industry revenue is generated by private entrepreneurs.

• Republic Services is focused on developing the best vertically integrated market position as it works to increase density. The firm's disposal assets represent a long-term strategic benefit that will only become more valuable over time due to an increasingly onerous regulatory environment and continued citizens' group opposition to greenfield sites. Its Apex landfill in Nevada may be the crown jewel in the waste industry.

• Republic Services' strategy of 'Profitable Growth through Differentiation' is based on five pillars: market position, operating model, people and talent agenda, customer zeal, and digital platform. As of early 2019, ~75% of its residential routes have been converted to automated single-driver trucks, reflective of its focus on an efficient operating model.

• Republic's revenue is roughly split 50/50 between open market and restricted pricing markets. In open markets it secures price increases directly with customers and can hold greater pricing power, but contractual pricing markets drive additional operating leverage.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**HIGH**
Growth	**MODEST**
Technical Evaluation	**NEUTRAL**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**OVERBOUGHT**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**78.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Clean Harbors	49.8	1.1	117.7%
Stericycle	10.0	2.1	83.0%
Waste Connections	33.3	3.0	129.9%
Waste Management	22.9	2.3	120.8%
Peer Median	28.1	2.2	119.3%
Republic Services	**24.5**	**2.2**	**118.5%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	10,042	10,041	10,493
Revenue, YoY%	7.0%	0.0%	4.5%
Operating Income	1,652	1,717	1,785
Operating Margin %	16.5%	17.1%	17.0%
Net Income	1,278	1,037	1,065
Net Income Margin %	12.7%	10.3%	10.2%
Diluted EPS	3.77	3.16	3.29
Diluted EPS, YoY %	112.0%	-16.3%	4.3%
Free Cash Flow (CFO-capex)	931	1,171	1,280
Free Cash Flow Margin %	9.3%	11.7%	12.2%

In Millions of USD (except for per share items)

Structure of the Environmental Services Industry — GOOD

The oligopolistic US non-hazardous solid-waste services industry is dominated by Waste Management, Republic Services and Waste Connections, which collectively generate over half of industry revenue and control an equal percentage of valuable disposal capacity. Most operators boast strong returns on capital and predictable cash flow streams, buoyed in part by real pricing expansion. The landfill business has significant barriers to entry, while Stericycle's niche in the medical-waste industry and US Ecology's monopolistic radioactive waste disposal assets are compelling. We like the structure of the group.

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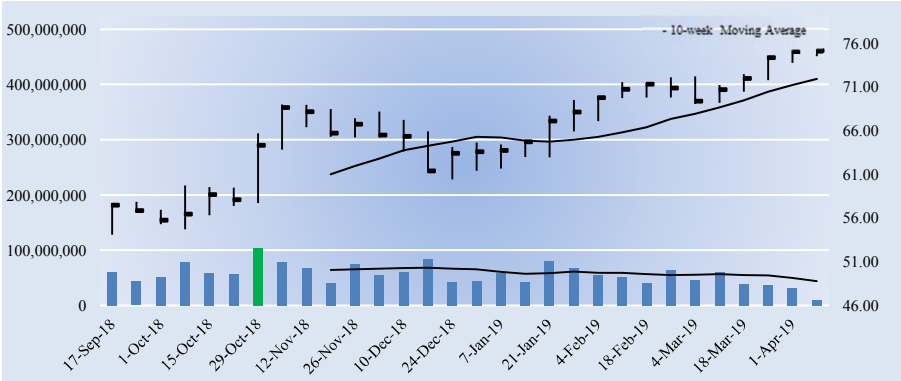
Starbucks SBUX FAIRLY VALUED

Buying Index™ 5 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$61.00	$46.00 - $76.00	LARGE-CAP CORE	Consumer Discretionary	Restaurants - Fast Food & Coffee

Starbucks's brand strength and leadership in digital innovation appear poised to keep it in favor with consumers of all ages and aid in its pricing power.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$104,762
Avg Weekly Vol (30 wks)	56,425
30-week Range (USD)	54.1 - 75.3
Valuentum Sector	Consumer Discretionary
5-week Return	8.3%
13-week Return	18.6%
30-week Return	37.3%
Dividend Yield %	1.9%
Dividends per Share	1.44
Forward Dividend Payout Ratio	52.8%
Est. Normal Diluted EPS	3.71
P/E on Est. Normal Diluted EPS	20.3
Est. Normal EBITDA	7,539
Forward EV/EBITDA	18.2
EV/Est. Normal EBITDA	14.0
Forward Revenue Growth (5-yr)	6.8%
Forward EPS Growth (5-yr)	8.6%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	78.5%
Return on Assets	21.5%
ROIC, with goodwill	47.9%
ROIC, without goodwill	67.6%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	9,440
Net Debt	502
Total Debt/EBITDA	1.9
Net Debt/EBITDA	0.1
EBITDA/Interest	29.7
Current Ratio	2.2
Quick Ratio	1.7

NMF = Not Meaningful

Investment Highlights

• Starbucks purchases and roasts high-quality coffees that it sells, along with handcrafted coffee, tea and other beverages and a variety of fresh food items, through its company-operated stores. Global comparable sales growth has averaged in the mid-to-high single digits per annum during the past few years. The company continues to innovate with ordering and other forms of customer-centric technology.

• Starbucks' China division is growing at a tremendous overall pace, as the firm is opening a store in China almost every day. Management expects its China business will eventually be larger than its US business. Performance in the region has been solid.

• Starbucks is investing in its digital capabilities, which we think may provide it with a unique advantage with younger consumers when coupled with its brand strength. As of the fourth quarter of fiscal 2018, drive-thru, out-the-window, and Mobile Order and Pay combined for more than 50% of orders at US company-owned locations, more than 10% higher than two years prior.

• Starbucks has one of the strongest and most-recognized brands in the world, which we think is largely responsible for it being able to charge lofty prices, despite significant competition in its markets. Annual price increases across the menu appear to have become commonplace. We also like ongoing beverage innovation and recent step-change in food quality.

• Investors should be cognizant that input (coffee) costs can be volatile. A variety of factors can influence the price of coffee, such as the strength of South American currencies relative to the dollar and weather patterns. Wage/labor cost pressures should be monitored as well.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**NEUTRAL**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**OVERBOUGHT**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**72.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueRisk™ \ ValueCreation™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Dunkin' Brands	24.5	2.2	119.1%
McDonald's	23.2	2.8	131.1%
Wendy's Co	28.7	NMF	128.5%
Yum! Brands	25.7	1.9	138.2%
Peer Median	25.1	2.2	129.8%
Starbucks	**27.5**	**1.5**	**123.1%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Sep-17	Sep-18	Sep-19
Revenue	22,387	24,720	26,277
Revenue, YoY%	5.0%	10.4%	6.3%
Operating Income	3,897	3,807	4,443
Operating Margin %	17.4%	15.4%	16.9%
Net Income	2,885	4,518	3,765
Net Income Margin %	12.9%	18.3%	14.3%
Diluted EPS	1.97	3.24	2.73
Diluted EPS, YoY %	4.1%	64.1%	-15.8%
Free Cash Flow (CFO-capex)	2,655	9,962	3,170
Free Cash Flow Margin %	11.9%	40.3%	12.1%

In Millions of USD (except for per share items)

Structure of the Restaurants Industry - Fast Food & Coffee — NEUTRAL

The restaurant industry has benefited from a long-term trend toward eating out, but the space has become increasingly more competitive as new concepts are introduced and successful chains expand. Not only are there pricing pressures and trade-down threats, but rising costs for commodities and labor have pressured profits. Barriers to entry are low, and many constituents have a difficult time differentiating themselves. We tend to like larger chains that benefit from scale advantages and international expansion opportunities, though niche franchises can be appealing. We're neutral on the structure of the group.

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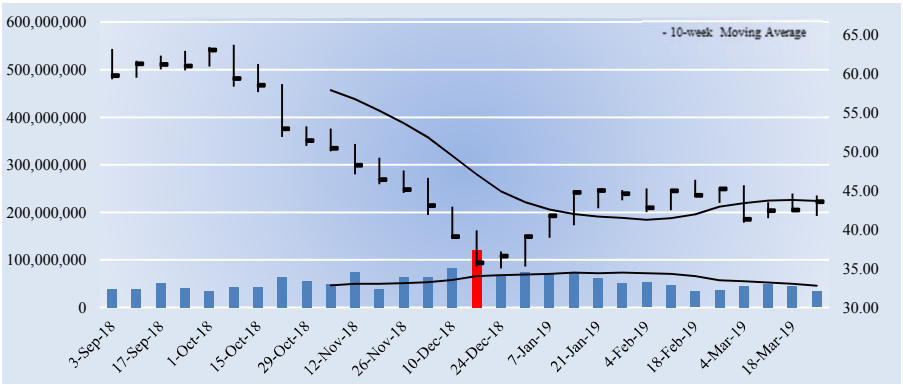
Schlumberger SLB FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$52.00	$42.00 - $62.00	LARGE-CAP VALUE	Energy	Energy Equipment - Large

Uncertainty surrounding capital spending budgets of Schlumberger's North American onshore customers muddies its near-term demand outlook, but international activity levels are expected to help buoy performance.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**VERY BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Resistance, 10-wk MA	**44.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueRisk™ \ ValueCreation™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$60,693
Avg Weekly Vol (30 wks)	55,075
30-week Range (USD)	34.99 - 63.65
Valuentum Sector	Energy
5-week Return	-1.7%
13-week Return	18.8%
30-week Return	-30.9%
Dividend Yield %	4.6%
Dividends per Share	2.00
Forward Dividend Payout Ratio	124.5%
Est. Normal Diluted EPS	2.44
P/E on Est. Normal Diluted EPS	17.9
Est. Normal EBITDA	9,047
Forward EV/EBITDA	10.8
EV/Est. Normal EBITDA	8.2
Forward Revenue Growth (5-yr)	6.3%
Forward EPS Growth (5-yr)	14.2%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Schlumberger is the world's leading supplier of technology, integrated project management and information solutions to the international oil and gas exploration and production industry. By market cap, the firm is bigger than the sum of its three main competitors (HAL, BHGE, WFT) by a wide margin. The company was founded in 1926 and is based in Houston, Texas.

• Schlumberger is maintaining a constructive view of oil markets as supply and demand continue to tighten and expects a gradual recovery in prices in 2019. Third party sources estimate world liquids demand in 2019 to be 101.7 million barrels/day, compared to 98.1 million in 2017 and 96.4 million in 2016.

• Schlumberger has been hurt by greater than expected softness in US hydraulic frac activity and pricing in recent quarters, and some are questioning the viability of the Permian basin to continue to provide its previously expected production growth as unit well productivity has eroded more than anticipated. North American customers are taking a cautious approach to capital spending in 2019.

• Schlumberger believes it is positioned to remain at the foreground of multiple industry-wide trends, including the need for higher global E&P spending, new business models that promote collaboration, and technology platforms that combine software, hardware, and data. Opportunity is present, but the crude oil markets must cooperate.

• Technology remains at Schlumberger's core. The firm's research has shifted to a focus on increasing the rate of innovation, shortening time to market, and improving product performance. It is forming a JV with Rockwell Automation to create the industry's first fully integrated digital automation solutions provider.

Relative Valuation

	Forward P/E	PEG	Price / FV
Baker Hughes	26.9	1.6	75.4%
Halliburton	21.3	1.0	86.2%
National Oilwell Varco	NMF	NMF	80.7%
TechnipFMC	17.1	NMF	84.0%
Peer Median	21.3	NMF	82.4%
Schlumberger	**27.1**	**2.0**	**83.8%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	-0.7%
Return on Assets	-0.4%
ROIC, with goodwill	11.0%
ROIC, without goodwill	21.9%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	16,051
Net Debt	13,274
Total Debt/EBITDA	2.4
Net Debt/EBITDA	2.0
EBITDA/Interest	11.7
Current Ratio	1.2
Quick Ratio	0.8

NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	30,440	32,815	33,307
Revenue, YoY%	8.7%	7.8%	1.5%
Operating Income	2,678	3,191	3,256
Operating Margin %	8.8%	9.7%	9.8%
Net Income	-1,505	2,138	2,282
Net Income Margin %	-4.9%	6.5%	6.9%
Diluted EPS	-1.08	1.53	1.61
Diluted EPS, YoY %	NMF	NMF	NMF
Free Cash Flow (CFO-capex)	1,671	2,472	4,299
Free Cash Flow Margin %	5.5%	7.5%	12.9%

In Millions of USD (except for per share items)

Structure of the Energy Equipment Industry — NEUTRAL

The energy equipment industry is heavily tied to the exploration and production (upstream) expenditures of oil and gas producers across the globe. Many industry constituents participate in a number of different market segments to offer a complete range of products/services to customers. The fortunes of the group are levered to energy prices (crude/natural gas), as higher prices make drilling projects more attractive and increase the demand for oilfield equipment and services. However, falling prices have an opposite effect, creating long boom and bust cycles. We're neutral on the structure of the group.

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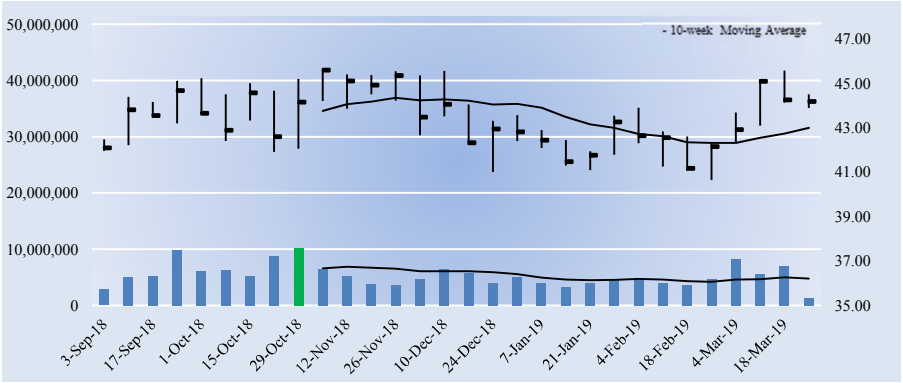
Sanofi SNY FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$42.00	$33.5.00 - $50.5.00	LARGE-CAP CORE	Health Care	Pharmaceuticals - Big

Sanofi has a solid position across much of its portfolio, but it is expecting to face a number of challenges moving forward.

Stock Chart (weekly)



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Company Vitals

Market Cap (USD)	$110,935
Avg Weekly Vol (30 wks)	5,343
30-week Range (USD)	40.65 - 45.62
Valuentum Sector	Health Care
5-week Return	6.8%
13-week Return	2.9%
30-week Return	4.5%
Dividend Yield %	4.2%
Dividends per Share per ADR (in	1.86
Forward Dividend Payout Ratio	63.8%
Est. Normal Diluted EPS (in EUR	3.83
P/E on Est. Normal Diluted EPS	20.4
Est. Normal EBITDA (in EUR)	6,796
Forward EV/EBITDA	21.3
EV/Est. Normal EBITDA	17.1
Forward Revenue Growth (5-yr)	2.3%
Forward EPS Growth (5-yr)	7.6%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	6.9%
Return on Assets	3.9%
ROIC, with goodwill	8.6%
ROIC, without goodwill	19.2%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of EUR

Total Debt	24,640
Net Debt	17,715
Total Debt/EBITDA	3.7
Net Debt/EBITDA	2.6
EBITDA/Interest	15.5
Current Ratio	1.4
Quick Ratio	0.8

NMF = Not Meaningful

Investment Highlights

• Sanofi is a global healthcare leader. The firm has seven growth platforms: diabetes solutions, vaccines, innovative drugs, consumer healthcare, emerging markets, animal health and the new Genzyme. Sanofi is looking to the orphan drug market to make an impact. There are drugs available for only ~300 out of >7,000 orphan diseases. The orphan-only drug market is growing at a high-single-digit pace.

• Sanofi has released a '2020 Roadmap' for long-term growth. Sales are expected to advance at a CAGR between 3%-4% on a constant currency basis, six major launches are expected generate aggregate sales of €12-€14 billion, and targeted cost saving will drive constant currency EPS growth above that of sales.

• Sanofi has a solid position across much of its portfolio. It generates about two thirds of revenue from the United States and emerging markets, about evenly split. Both regions are growing nicely. Sanofi invests billions in R&D each year and has a large number of late-stage projects; it expects to grow annual R&D spending to €6 billion by 2020. Rare disease and multiple sclerosis are key opportunities.

• Sanofi is expecting to face a number of challenges moving forward. Affordability is a key concern around the globe, price pressure from payers in developed markets is expected, biosimilar threats and the risk of interchangeability are increasing, economic growth in emerging markets is slowing, and more focused competitors are emerging in its leadership positions.

• Sanofi recently acquired Bioverativ, a biotech with a leading presence in hemophilia, for $11.6 billion. Management expects the deal to achieve an ROIC greater than Sanofi's cost of capital within three years, and it should be able to preserve its A1/AA/AA credit rating.

Investment Considerations

DCF Valuation	FAIRLY VALUED
Relative Valuation	NEUTRAL
ValueCreation™	EXCELLENT
ValueRisk™	LOW
ValueTrend™	POSITIVE
Cash Flow Generation	STRONG
Financial Leverage	HIGH
Growth	MODEST
Technical Evaluation	BULLISH
Relative Strength	WEAK
Money Flow Index (MFI)	NEUTRAL
Upside/Downside Volume (U/D)	BEARISH
Near-term Technical Support, 10-week MA	43.00

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				■
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Abbott	24.4	2.5	116.2%
Eli Lilly	22.9	2.1	123.6%
Merck	20.3	2.5	113.6%
Pfizer	14.5	1.7	94.3%
Peer Median	21.6	2.3	114.9%
Sanofi	**26.8**	**1.6**	**105.2%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	36,204	35,677	35,463
Revenue, YoY%	4.3%	-1.5%	-0.6%
Non-GAAP Operating Income	7,197	5,601	4,303
Non-GAAP EBIT %	19.9%	15.7%	12.1%
Non-GAAP Net Income	3,791	4,319	3,621
Non-GAAP NI Margin %	10.5%	12.1%	10.2%
Non-GAAP Diluted EPS	2.99	3.44	2.91
Non-GAAP Dil EPS, YoY %	-11.8%	15.0%	-15.3%
Non-GAAP Free Cash Flow	5,423	3,570	6,045
Non-GAAP FCF Margin %	15.0%	10.0%	17.0%

In Millions of EUR (except for per share items)

Structure of the Big Pharma Industry — GOOD

The big pharma industry is primarily composed of makers of branded drugs. Intellectual property protection is vital to the successful commercialization of medicines and offers makers of branded drugs a unique competitive advantage via patents, which can extend for decades. When branded drugs lose market exclusivity, however, makers of generic pharmaceuticals can generate intense price competition, causing drastic revenue losses on unprotected therapies. Long-term success for branded pharma companies depends on a strong and diverse drug pipeline, which can be augmented by M&A activity. We generally like the group and expect continued industry consolidation.

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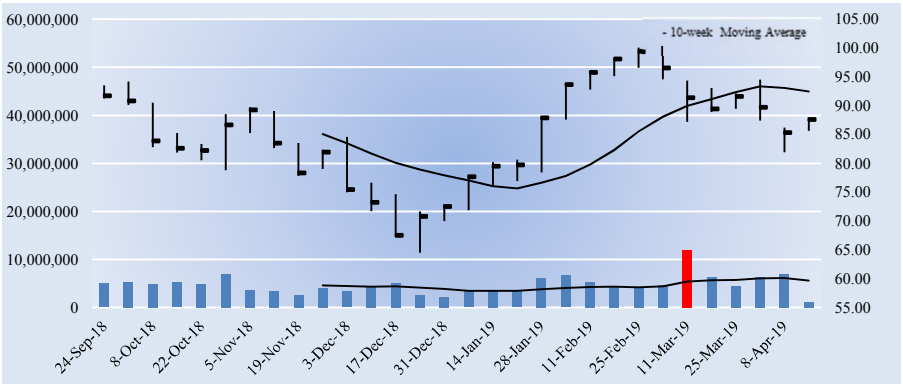
Spirit AeroSystems SPR FAIRLY VALUED

Buying Index™ 3 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$95.00	$76.00 - $114.00	MID-CAP VALUE	Industrials	A&D Suppliers

Spirit AeroSystems's ties with Boeing provide it a degree of long-term visibility, but recent issues related to the 737 MAX have provided some near-term uncertainty.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**BEARISH**
Relative Strength	**NEUTRAL**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**DETERIORATING**
Near-term Technical Resistance, 10-wk MA	**92.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$9,552
Avg Weekly Vol (30 wks)	4,756
30-week Range (USD)	64.48 - 100.34
Valuentum Sector	Industrials
5-week Return	-3.9%
13-week Return	11.2%
30-week Return	-6.2%
Dividend Yield %	0.5%
Dividends per Share	0.48
Forward Dividend Payout Ratio	6.4%
Est. Normal Diluted EPS	8.61
P/E on Est. Normal Diluted EPS	10.2
Est. Normal EBITDA	1,505
Forward EV/EBITDA	7.7
EV/Est. Normal EBITDA	7.1
Forward Revenue Growth (5-yr)	4.5%
Forward EPS Growth (5-yr)	11.0%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	27.6%
Return on Assets	8.8%
ROIC, with goodwill	19.6%
ROIC, without goodwill	19.6%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	1,895
Net Debt	1,122
Total Debt/EBITDA	1.8
Net Debt/EBITDA	1.0
EBITDA/Interest	13.5
Current Ratio	1.8
Quick Ratio	0.8

NMF = Not Meaningful

Investment Highlights

• Spirit AeroSystems is one of the largest independent non-OEM (original equipment manufacturer) aircraft parts designers and manufacturers of commercial aerostructures in the world. It is the largest independent supplier of aerostructures to Boeing. The company was founded in 1927 and is headquartered in Wichita, Kansas.

• The commercial aerospace industry is one of the strongest industries on the market with significant visibility thanks in part to the burgeoning backlogs at the airframe makers. Air traffic is expected to grow at a ~5% CAGR for the next 20 years, providing a long runway for growth.

• The company makes aerostructures for every Boeing commercial aircraft currently in production, including the majority of the airframe content for the Boeing 737, the most popular major commercial aircraft in history. However, Boeing recently slashed its monthly 737 MAX production schedule after two high-profile crashes. Spirit plans to continue its prior production rate and will store excess inventory.

• Spirit is a leading global supplier of tier 1 aerostructures with ~30% market share as of 2018. The company has a balanced portfolio that breaks down as 52% fuselage, 26% propulsion, and 22% wing. The company's backlog has expanded to ~$48.4 billion at the end of 2018 from $19 billion in 2006. It pulled its bid for Asco after facing regulatory pressure.

• We like Spirit's industry leading capability from design using base materials to a fully installed operational flight deck to reliable delivery and support. We don't think the ties between Boeing and Spirit will ever be severed.

Relative Valuation

	Forward P/E	PEG	Price / FV
Astronics	22.3	1.3	87.7%
Hexcel Corp	20.2	1.4	108.2%
Teledyne	23.9	2.1	124.2%
Textron	16.4	1.4	94.7%
Peer Median	21.3	1.4	101.4%
Spirit AeroSystems	**11.7**	**1.4**	**92.2%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	6,983	7,222	8,016
Revenue, YoY%	2.8%	3.4%	11.0%
Operating Income	589	833	1,108
Operating Margin %	8.4%	11.5%	13.8%
Net Income	355	617	802
Net Income Margin %	5.1%	8.5%	10.0%
Diluted EPS	3.01	5.66	7.50
Diluted EPS, YoY %	NMF	NMF	32.7%
Free Cash Flow (CFO-capex)	300	499	663
Free Cash Flow Margin %	4.3%	6.9%	8.3%

In Millions of USD (except for per share items)

Structure of the A&D Supplier Industry — GOOD

The aerospace supply chain will benefit from the multi-year backlogs at the airframe makers, Boeing and Airbus. Though the current upswing looks robust, commercial aerospace has historically been cyclical and remains influenced by airline profits, passenger traffic, credit-market health, and geopolitical conditions. Participants generally operate under contracts with significant long-term price concessions, so cost-containment remains critical. The strongest suppliers are those that have long-standing customer relationships, technical expertise, and state-of-the-art manufacturing facilities. We like the group.

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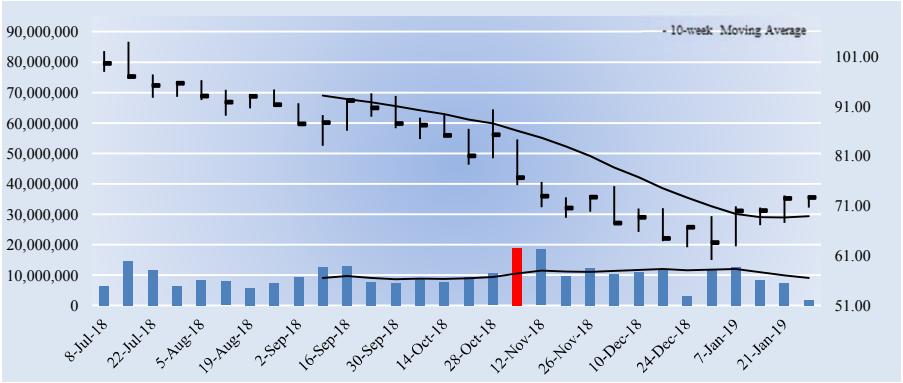
Skyworks SWKS FAIRLY VALUED

Buying Index™ 7 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$99.00	$72.00 - $126.00	LARGE-CAP VALUE	Information Technology	Integrated Circuits

Skyworks' long-term target operating model is attractive, but is working to offset demand weakness in premium smartphones and general softness in China.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**MODEST**
Technical Evaluation	**VERY BULLISH**
Relative Strength	**WEAK**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**IMPROVING**
Near-term Technical Support, 10-week MA	**69.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$13,317
Avg Weekly Vol (30 wks)	9,746
30-week Range (USD)	60.12 - 103.95
Valuentum Sector	Information Technology
5-week Return	7.2%
13-week Return	-13.7%
30-week Return	-27.7%
Dividend Yield %	2.1%
Dividends per Share	1.52
Forward Dividend Payout Ratio	21.7%
Est. Normal Diluted EPS	8.03
P/E on Est. Normal Diluted EPS	9.0
Est. Normal EBITDA	1,884
Forward EV/EBITDA	7.2
EV/Est. Normal EBITDA	6.5
Forward Revenue Growth (5-yr)	2.4%
Forward EPS Growth (5-yr)	12.4%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Skyworks is an innovator of high performance analog semiconductors. The firm supports automotive, broadband, energy management, GPS, industrial, medical, military, wireless networking, and smartphone/tablet applications. Its products run the gamut from amplifiers to voltage regulators. The company was founded in 1962 and is headquartered in Massachusetts.

• Skyworks has a notable degree of customer concentration risk. Apple accounted for 47% and Samsung accounted for 12% of the company's total fiscal 2018 revenue. Such concentration can impact near-term guidance. Smartphone weakness and overall softness in China are weighing on expectations.

• Skyworks' long-term operating model includes target revenue growth above that of its addressable market, a 53% gross margin target, a 40% operating model target, and a 30% free cash flow margin target. Our projections are roughly in line with these targets, and management plans to return 60%-75% of free cash flow to shareholders. It believes it is well positioned across all key growth vectors.

• Skyworks is capitalizing on the strength of mobile and the Internet of Things. Mobile devices are rapidly evolving to address the massive demand for data and speed, and the firm is well-positioned to help resolve such a complex issue. The number of machine-to-machine connections is expected to grow to 12.2 billion in 2020 from 4.9 billion in 2015.

• Power management is a significant growth avenue for Skyworks, and the global trend to connect 'everything' is playing into its hands. The total number of connected devices, for example, could reach an impressive 75+ billion by 2020 as the proliferation of connectivity continues across end markets.

Relative Valuation

	Forward P/E	PEG	Price / FV
Analog Devices	17.6	2.3	112.3%
Nvidia	20.2	2.1	81.2%
Semtech Corp	21.5	2.3	118.9%
Taiwan Semiconductor	16.7	4.4	98.5%
Peer Median	18.9	2.3	105.4%
Skyworks	**10.4**	**1.2**	**73.4%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	26.3%
Return on Assets	23.3%
ROIC, with goodwill	44.2%
ROIC, without goodwill	68.7%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Sep-17	Sep-18	Sep-19
Revenue	3,651	3,868	3,736
Revenue, YoY%	11.0%	5.9%	-3.4%
Operating Income	1,254	1,320	1,427
Operating Margin %	34.4%	34.1%	38.2%
Net Income	1,010	918	1,256
Net Income Margin %	27.7%	23.7%	33.6%
Diluted EPS	5.41	5.01	7.00
Diluted EPS, YoY %	4.4%	-7.4%	39.6%
Free Cash Flow (CFO-capex)	1,140	831	1,146
Free Cash Flow Margin %	31.2%	21.5%	30.7%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	0
Net Debt	-1,027
Total Debt/EBITDA	0.0
Net Debt/EBITDA	NMF
EBITDA/Interest	Excellent
Current Ratio	5.8
Quick Ratio	4.3

NMF = Not Meaningful

Structure of the Integrated Circuits Industry — VERY POOR

Firms in the integrated circuits industry make components that form the electronic building blocks used in electronic systems and equipment. The industry is notoriously cyclical and subject to significant economic upturns and downturns, as well as rapid technological changes. Firms must innovate to survive, and products stocked in inventory can sometimes become obsolete before they are even shipped. Severe pricing competition and lengthy manufacturing cycles only add uncertainty to the mix. We're not fans of the structure of the integrated circuits space.

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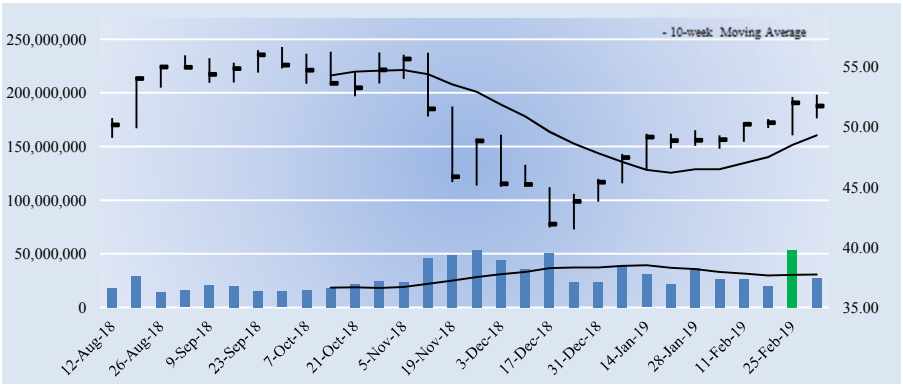
TJX Cos TJX FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$49.00	$37.00 - $61.00	LARGE-CAP CORE	Consumer Discretionary	Retail - Under 30, Off-Price, Sport Apparel

Customer traffic continues to be the primary driver behind strong comps performance at TJX Cos. Margin performance has been impacted by higher freight costs and other expenses related to its supply chain.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**49.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$65,166
Avg Weekly Vol (30 wks)	28,720
30-week Range (USD)	41.49 - 56.64
Valuentum Sector	Consumer Discretionary
5-week Return	5.9%
13-week Return	13.5%
30-week Return	2.2%
Dividend Yield %	1.5%
Dividends per Share	0.78
Forward Dividend Payout Ratio	29.6%
Est. Normal Diluted EPS	3.27
P/E on Est. Normal Diluted EPS	15.8
Est. Normal EBITDA	6,193
Forward EV/EBITDA	12.2
EV/Est. Normal EBITDA	10.4
Forward Revenue Growth (5-yr)	5.6%
Forward EPS Growth (5-yr)	10.5%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	55.4%
Return on Assets	19.9%
ROIC, with goodwill	65.9%
ROIC, without goodwill	68.1%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	2,234
Net Debt	-797
Total Debt/EBITDA	0.4
Net Debt/EBITDA	NMF
EBITDA/Interest	568.4
Current Ratio	1.5
Quick Ratio	0.6

NMF = Not Meaningful

Investment Highlights

• TJX Cos is a leading off-price apparel and home fashions retailer in the US and worldwide. The firm believes its business model is one of the most flexible in the world and that it has one of the broadest demographic reaches in retail. It aims to offer brand name and designer merchandise at 20%-60% discounts to full-price retailers. TJX Cos was founded in 1956 and is based in Massachusetts.

• Over its nearly 40-year history, TJX Cos' annual same-store sales have declined only one time, and it has delivered strong earnings expansion and some of the highest financial returns in the retail sector. We love its ValueCreation rating and Economic Castle.

• Driving traffic and same-store sales growth will be the biggest growth driver for established TJX Cos. The firm believes it has huge opportunity to gain even more market share by attracting younger customers and leveraging its global marketing strategy through an integrated approach that includes growing its e-commerce presence.

• Customer traffic continues to be the primary driver behind strong comps performance at TJX Cos as average tickets have been impacted by the heavily-promotional retail environment. The company's margin performance has been impacted by higher freight costs and other expenses related to its supply chain.

• TJX believes it is gaining share in the challenging retail operating environment, and it continues to invest to support its growth plans. Management believes its global store count has potential to hit 5,600 over the long haul from 4,306 at the end of fiscal 2018.

Relative Valuation

	Forward P/E	PEG	Price / FV
Abercrombie & Fitch	23.8	3.6	112.0%
American Eagle	14.4	1.8	106.2%
Gap	10.7	2.6	81.0%
Ross Stores	20.2	3.1	115.5%
Peer Median	17.3	2.8	109.1%
TJX Cos	**19.6**	**2.0**	**105.6%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Jan-18	Jan-19	Jan-20
Revenue	35,865	38,973	41,311
Revenue, YoY%	8.1%	8.7%	6.0%
Operating Income	3,987	4,218	4,405
Operating Margin %	11.1%	10.8%	10.7%
Net Income	2,608	3,060	3,253
Net Income Margin %	7.3%	7.9%	7.9%
Diluted EPS	2.02	2.43	2.64
Diluted EPS, YoY %	16.7%	20.4%	8.5%
Free Cash Flow (CFO-capex)	1,968	2,964	2,990
Free Cash Flow Margin %	5.5%	7.6%	7.2%

In Millions of USD (except for per share items)

Structure of the Specialty Apparel (Under 30, Off-Price) Industry — NEUTRAL

The specialty apparel industry is highly competitive. Firms compete with various individual and chain specialty stores, as well as casual apparel sections of department stores and discount retailers. Identifying and responding to fashion trends remains key, and business fluctuates with changes in the economy and customer preferences. Fashion missteps can result in lower sales, excess inventories, and higher markdowns, which can severely impact profits. Improving productivity, managing new store growth and developing new brand concepts are critical for long-term success. We're neutral on the group.

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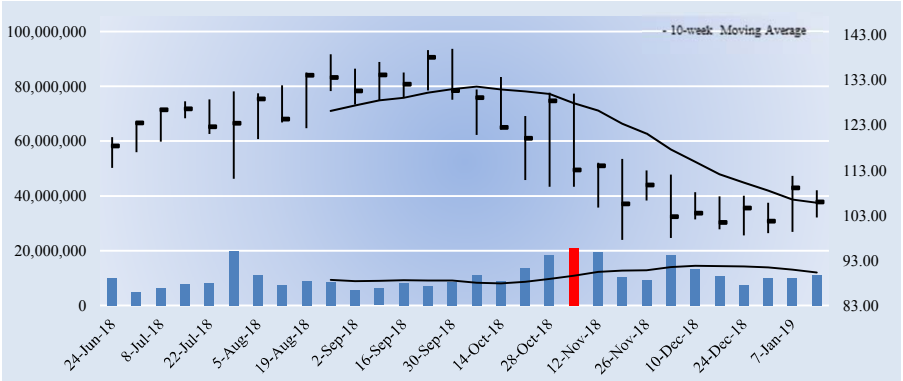
Take-Two TTWO FAIRLY VALUED

Buying Index™ 3 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$100.00	$70.00 - $130.00	LARGE-CAP GROWTH	Information Technology	Software - graphics

According to Take-Two, Red Dead Redemption 2 recorded the 'second-highest grossing entertainment launch of all time,' behind only its Grand Theft Auto V franchise.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$12,195
Avg Weekly Vol (30 wks)	10,749
30-week Range (USD)	97.57 - 139.91
Valuentum Sector	Information Technology
5-week Return	3.3%
13-week Return	-13.7%
30-week Return	-8.4%
Dividend Yield %	0.0%
Dividends per Share	0.00
Forward Dividend Payout Ratio	0.0%
Est. Normal Diluted EPS	4.58
P/E on Est. Normal Diluted EPS	23.1
Est. Normal EBITDA	876
Forward EV/EBITDA	11.3
EV/Est. Normal EBITDA	11.8
Forward Revenue Growth (5-yr)	9.3%
Forward EPS Growth (5-yr)	20.0%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	7.0%
Return on Assets	2.3%
ROIC, with goodwill	26.8%
ROIC, without goodwill	35.2%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	8
Net Debt	-1,854
Total Debt/EBITDA	0.0
Net Debt/EBITDA	NMF
EBITDA/Interest	Excellent
Current Ratio	1.4
Quick Ratio	1.2

NMF = Not Meaningful

Investment Highlights

• Take-Two is a leading developer, publisher and marketer of interactive entertainment for consumers around the globe. The firm develops and publishes products through its two wholly-owned labels Rockstar Games and 2K. The company was founded in 1993 and is headquartered in New York, New York.

• The firm is home to one of the industry's most iconic and critically-acclaimed brands, Grand Theft Auto, and the online version of the game is a key driver of recurring consumer spending. Red Dead Redemption 2's launch in fall 2018 was the 'second-highest grossing entertainment launch of all time.'

• Take-Two's results can be impacted by its product release schedule. Its Grand Theft Auto products account for ~40% of net revenue as of fiscal 2018, and its release schedule for new products can vary materially. Its business also has a degree of customer concentration risk as its top five customers accounted for more than 70% of fiscal 2018 net revenue. Investors should note our large fair value range.

• Take-Two's margins continue to benefit from the transition of video gaming to a fully digital experience. Digital-delivered net revenue accounted for ~63% of net revenue in fiscal 2018, which will benefit margins and free cash flow generation. If margin expansion is sustained upside to our fair value estimate may exist.

• Take-Two continues to grow its digital-delivered revenue at a strong pace (23% growth in fiscal 2018). Making this revenue stream even more attractive is that a large portion of it is recurrent (good for 42% of total revenue), and it is driven by its usual heavy-hitters, such as Grand Theft Auto.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**HIGH**
Technical Evaluation	**BEARISH**
Relative Strength	**NEUTRAL**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BEARISH**
Near-term Technical Support, 10-week MA	**106.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Activision	17.9	2.5	79.9%
Electronic Arts	19.5	2.1	95.7%
Glu Mobile	35.9	NMF	134.6%
Zynga	25.0	3.0	85.8%
Peer Median	22.2	2.5	90.7%
Take-Two	**21.1**	**3.5**	**105.9%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Mar-17	Mar-18	Mar-19
Revenue	1,780	1,793	2,675
Revenue, YoY%	25.9%	0.7%	49.2%
Non-GAAP Operating Income	91	136	723
Non-GAAP EBIT %	5.1%	7.6%	27.0%
Non-GAAP Net Income	67	174	579
Non-GAAP NI Margin %	3.8%	9.7%	21.6%
Non-GAAP Diluted EPS	0.72	1.54	5.03
Non-GAAP Dil EPS, YoY %	NMF	NMF	NMF
Non-GAAP FCF (CFO-capex)	310	333	639
Non-GAAP FCF Margin %	17.4%	18.6%	23.9%

In Millions of USD (except for per share items)

Structure of the Software (graphics) Industry — POOR

The software (graphics) industry is composed of a variety of firms from online gaming entities to technology-based-language learning companies. Industry constituents compete for the leisure time, attention and discretionary spending of consumers. The social gaming space, in particular, is evolving rapidly, and new entrants will inevitably drive down outsize returns over time. Performance of many participants is "hit" driven. If companies don't deliver "hit" products to the market, operating results will suffer. Rapid technological change makes obsolescence a possibility. We don't like the group's structure.

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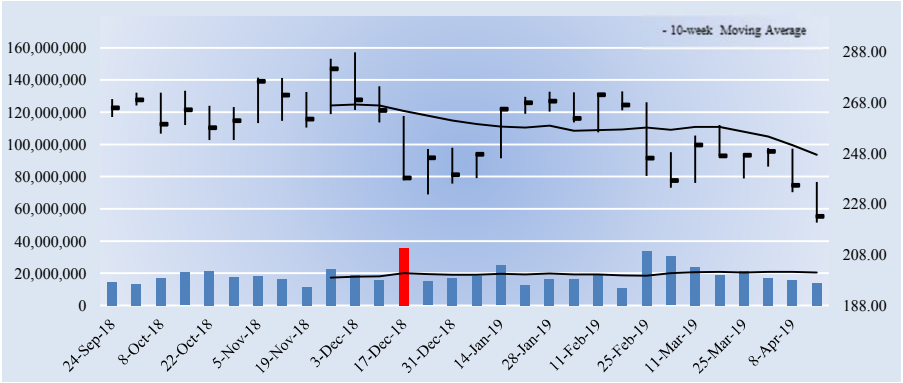
UnitedHealth Group UNH FAIRLY VALUED

Buying Index™ 3 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$248.00	$196.00 - $300.00	MEGA-CAP VALUE	Health Care	Health Care Services

UnitedHealth is the largest health insurance provider in the US, but it is not without its fair share of competition, which in its case comes from a variety of sources.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**BEARISH**
Relative Strength	**WEAK**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Resistance, 10-wk MA	**247.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$219,425
Avg Weekly Vol (30 wks)	19,047
30-week Range (USD)	220.77 - 287.94
Valuentum Sector	Health Care
5-week Return	-11.7%
13-week Return	-15.5%
30-week Return	-16.4%
Dividend Yield %	1.6%
Dividends per Share	3.60
Forward Dividend Payout Ratio	24.6%
Est. Normal Diluted EPS	17.44
P/E on Est. Normal Diluted EPS	12.8
Est. Normal EBITDA	26,953
Forward EV/EBITDA	10.5
EV/Est. Normal EBITDA	9.0
Forward Revenue Growth (5-yr)	6.0%
Forward EPS Growth (5-yr)	9.6%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	23.2%
Return on Assets	7.6%
ROIC, with goodwill	16.2%
ROIC, without goodwill	59.4%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	36,554
Net Debt	22,230
Total Debt/EBITDA	1.8
Net Debt/EBITDA	1.1
EBITDA/Interest	14.1
Current Ratio	0.7
Quick Ratio	0.6

NMF = Not Meaningful

Investment Highlights

• UnitedHealth Group is a diversified healthcare and well-being company, and the firm provides health care benefits to a wide range of customers in an array of markets. Its two business platforms operate through four segments: UnitedHealthcare, OptumHealth, OptumInsight, and OptumRx. The company was founded in 1974 and is headquartered in Minnesota.

• The firm's UnitedHealthcare segment can be broken down into three operating divisions: Employer & Individual, Medicare & Retirement, and Community & State. UnitedHealth is the largest health insurance provider in the US.

• Though UnitedHealth Group is a behemoth, it is not without its fair share of competition, which in its case comes from a variety of sources. Managed health care companies, insurance companies, HMOs, TPAs, PBMs, and business services outsourcing companies all provide similar services to any one of its businesses. The firm's significant scale is an advantage.

• Looking ahead to 2019, UnitedHealth Group expects revenue to be $243-$245 billion, and non-GAAP earnings per share guidance comes in a range of $14.40-$14.70. Cash flow from operations is targeted at $17.3-$17.8 billion for the year. The company is accelerating investment levels to deliver compelling innovations in the next few years.

• The company's Optum businesses, which focus on improving the healthcare system itself, have been performing extremely well of late. The firm has been sued by the US DoJ over alleged Medicare overcharges, a development that may be worth watching.

Relative Valuation

	Forward P/E	PEG	Price / FV
Community Health	NMF	NMF	79.2%
DaVita	18.2	1.3	98.6%
Tenet Healthcare	15.7	NMF	108.6%
Universal Health	14.4	2.0	113.1%
Peer Median	15.7	1.6	103.6%
UnitedHealth Group	**15.2**	**1.9**	**90.0%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	201,159	226,247	244,347
Revenue, YoY%	8.8%	12.5%	8.0%
Operating Income	15,209	17,344	20,460
Operating Margin %	7.6%	7.7%	8.4%
Net Income	10,558	11,986	14,406
Net Income Margin %	5.2%	5.3%	5.9%
Diluted EPS	10.72	12.19	14.66
Diluted EPS, YoY %	47.9%	13.8%	20.2%
Free Cash Flow (CFO-capex)	11,573	13,650	15,244
Free Cash Flow Margin %	5.8%	6.0%	6.2%

In Millions of USD (except for per share items)

Structure of the Healthcare Services Industry — NEUTRAL

The healthcare services industry consists of firms that operate traditional hospitals, inpatient rehabilitation hospitals, and other specialized healthcare facilities. Demand for the group's services continues to increase as the US population ages and life expectancies rise. Inpatient rehabilitation care is growing at a 2-3% annual rate, while the expansion of patients with end stage renal disease continues at a slightly faster pace. Improvement in clinical practices and pharmacology and reimbursement policies of third-party payors have also impacted hospital utilization/occupancy. We're neutral on the group.

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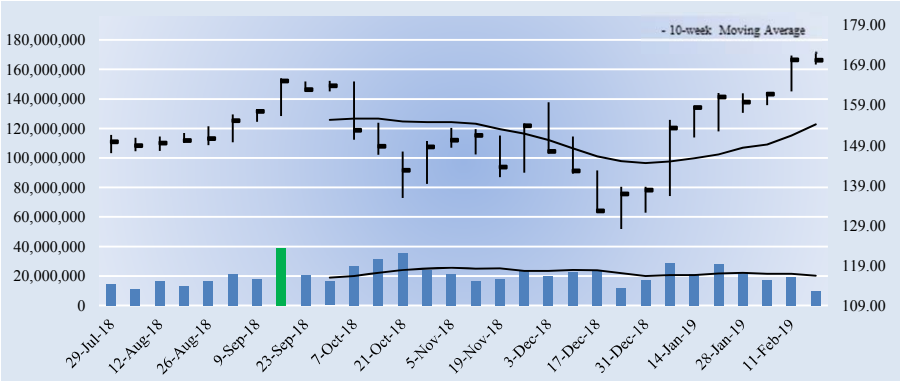
Union Pacific UNP FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$144.00	$115.00 - $173.00	LARGE-CAP CORE	Industrials	Railroads

Union Pacific is targeting an operating ratio below 61% in 2019 and below 60% in 2020 as part of its ultimate quest for an operating ratio of 55%.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$128,359
Avg Weekly Vol (30 wks)	20,981
30-week Range (USD)	128.08 - 172.44
Valuentum Sector	Industrials
5-week Return	8.4%
13-week Return	18.1%
30-week Return	15.0%
Dividend Yield %	2.1%
Dividends per Share	3.52
Forward Dividend Payout Ratio	38.4%
Est. Normal Diluted EPS	11.31
P/E on Est. Normal Diluted EPS	15.0
Est. Normal EBITDA	13,848
Forward EV/EBITDA	12.4
EV/Est. Normal EBITDA	10.8
Forward Revenue Growth (5-yr)	4.1%
Forward EPS Growth (5-yr)	11.1%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	31.7%
Return on Assets	12.2%
ROIC, with goodwill	11.7%
ROIC, without goodwill	11.7%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	22,391
Net Debt	21,058
Total Debt/EBITDA	2.1
Net Debt/EBITDA	2.0
EBITDA/Interest	12.3
Current Ratio	0.9
Quick Ratio	0.7

NMF = Not Meaningful

Investment Highlights

• One of America's most recognized companies, Union Pacific links 23 states in the western two-thirds of the country by rail, providing a critical link in the global supply chain. The railroad's diversified business mix includes agricultural products, automotive, chemicals, coal, industrial products and intermodal.

• Pricing strength has been a lever for Union Pacific, and the company continues to align its resources to current demand levels and expects price growth above inflation in the near term. Total volume growth is expected to be in the low-single-digit range in 2019.

• We expect the firm's operating ratio to be among the best in the railroad group by the end of this decade, and we like its exposure to growth in Mexico and export expansion on the West Coast. The company is targeting an operating ratio below 61% in 2019 and below 60% in 2020 (was 62.6% in 2017) as part of its ultimate quest for an operating ratio of 55%, which would make it tops among peers.

• As with its peers, the firm is levered to coal, though we note its mix is more of the Powder River Basin variety, which should continue to take share from Central Appalachian coal in the domestic market. Global coal oversupply isn't helping matters. The firm also boasts a solid Dividend Cushion ratio and a decent annual yield.

• Our forecasts for Union Pacific include relatively strong top-line performance in the out-years coupled with strong operating earnings performance. If the company comes up short with respect to its efficiency initiatives, there is downside risk to our valuation.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**GOOD**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**154.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low			■	
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Canadian National	17.9	0.6	113.2%
CSX Corp	17.1	2.7	114.5%
Kansas City Southern	16.4	1.7	101.6%
Norfolk Southern	17.3	2.0	122.0%
Peer Median	17.2	1.8	113.8%
Union Pacific	**18.6**	**1.9**	**118.2%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	21,240	22,832	23,722
Revenue, YoY%	6.5%	7.5%	3.9%
Operating Income	8,061	8,517	9,760
Operating Margin %	38.0%	37.3%	41.1%
Net Income	10,712	5,966	6,779
Net Income Margin %	50.4%	26.1%	28.6%
Diluted EPS	13.36	7.91	9.17
Diluted EPS, YoY %	163.7%	-40.8%	15.9%
Free Cash Flow (CFO-capex)	3,992	5,249	5,816
Free Cash Flow Margin %	18.8%	23.0%	24.5%

In Millions of USD (except for per share items)

Structure of the Railroads Industry — GOOD

The railroad industry operates at a significant competitive advantage relative to motor transportation in that it can charge lower rates for long-haul bulk shipments (coal, grain, rock). Still, participants face competition from other railroads that operate parallel routes, from motor carriers that provide similar services, and from barges in routes close to inland and Gulf Coast waterways. Operating a railroad is a capital-intensive proposition, and participants face cost pressures from both union labor and fuel. Pricing and volume trends in commodity categories can be quite volatile from year to year. We like the group.

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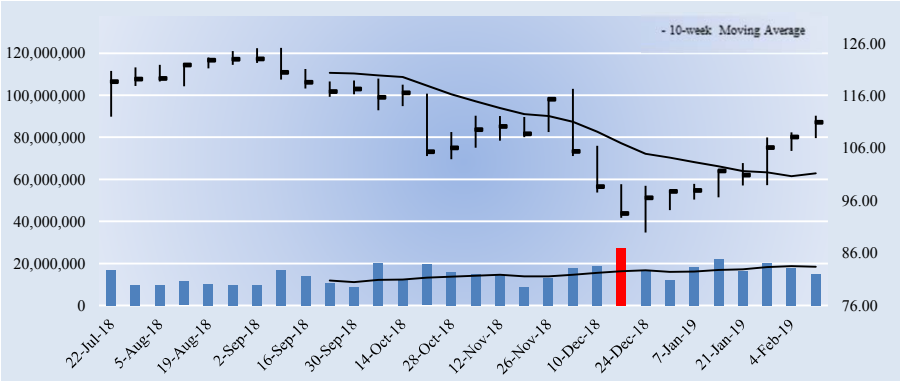
United Parcel Service UPS FAIRLY VALUED

Buying Index™ 7 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$105.00	$84.00 - $126.00	LARGE-CAP CORE	Industrials	Air Freight & Logistics

United Parcel Service expects low-teens growth in operating profit in the near term, but softer export and GDP growth is expected across major economies.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**MEDIUM**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**NEUTRAL**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**101.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$95,266
Avg Weekly Vol (30 wks)	14,957
30-week Range (USD)	89.89 - 125.09
Valuentum Sector	Industrials
5-week Return	13.9%
13-week Return	0.7%
30-week Return	-1.4%
Dividend Yield %	3.5%
Dividends per Share	3.84
Forward Dividend Payout Ratio	69.6%
Est. Normal Diluted EPS	8.60
P/E on Est. Normal Diluted EPS	12.9
Est. Normal EBITDA	12,464
Forward EV/EBITDA	12.6
EV/Est. Normal EBITDA	9.3
Forward Revenue Growth (5-yr)	5.4%
Forward EPS Growth (5-yr)	14.6%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• United Parcel Services 'shrinks the globe.' The firm is the world's largest package delivery company, a leader in the US less-than-truckload industry and the premier provider of global supply chain management solutions. The health of the business is tied in part to the health of the global economy. Its history dates back to 1907, and it is headquartered in Atlanta, Georgia.

• We're huge fans of UPS' worldwide integrated network, respected brand and consistent free cash flow generation. It has superior scale and efficiencies. Emerging markets and e-commerce represent its largest growth opportunities. The impact of new peak time charges may be worth watching.

• UPS will accelerate investments in next-generation smart logistics network capabilities, with the end goal of online B2B and B2C market growth in mind. Management expects the next several years to represent the most sweeping transformation of its network in its history. Investors should note the long-term potential threat that Amazon Air poses to future growth at UPS as notable overlap exists.

• UPS boasts an industry-leading adjusted operating margin in small packages. In the mid-teens, it is well above the average of DHL and FedEx, both of which come at ~11% or less. The company recently raised its US service rates in an attempt to battle the lower margins associated with increased residential deliveries, a result of the rise in e-commerce.

• UPS also boasts an industry-leading ROIC. The firm is targeting ROIC to be in a range of 23%-28% through 2019 as it continues to pursue M&A to expand its network and capabilities and return excess cash to shareholders. Total operating profit is expected to grow at a low-teens rate in 2019.

Relative Valuation

	Forward P/E	PEG	Price / FV
CH Robinson	19.3	1.9	115.8%
Expeditors Intl	21.1	1.7	106.7%
FedEx	11.1	1.2	86.6%
JB Hunt	25.6	0.7	104.2%
Peer Median	20.2	1.5	105.5%
United Parcel Service	**20.1**	**1.0**	**105.6%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	382.6%
Return on Assets	11.1%
ROIC, with goodwill	16.2%
ROIC, without goodwill	18.7%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	24,289
Net Debt	20,220
Total Debt/EBITDA	2.5
Net Debt/EBITDA	2.1
EBITDA/Interest	21.7
Current Ratio	1.2
Quick Ratio	1.0

NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-16	Dec-17	Dec-18
Revenue	60,906	65,872	71,861
Revenue, YoY%	4.4%	8.2%	9.1%
Operating Income	5,467	7,529	6,647
Operating Margin %	9.0%	11.4%	9.2%
Net Income	3,431	4,910	4,738
Net Income Margin %	5.6%	7.5%	6.6%
Diluted EPS	3.87	5.61	5.51
Diluted EPS, YoY %	-27.7%	45.1%	-1.7%
Free Cash Flow (CFO-capex)	3,508	-3,748	6,428
Free Cash Flow Margin %	5.8%	-5.7%	8.9%

In Millions of USD (except for per share items)

Structure of the Air Freight & Logistics Industry — GOOD

The highly competitive air freight and logistics industry is heavily tied to cyclical domestic economic expansion (primarily from retail good shipments). The international freight market remains a critical growth engine for air cargo providers, while all constituents deal with the cost of rising fuel (diesel) prices and potentially price-sensitive demand during periods of economic weakness. Firms with freight-forwarding, asset-light operations and/or large difficult-to-replicate shipping networks can carve out sustainable competitive advantages while generating high returns on investment. We generally like the group.

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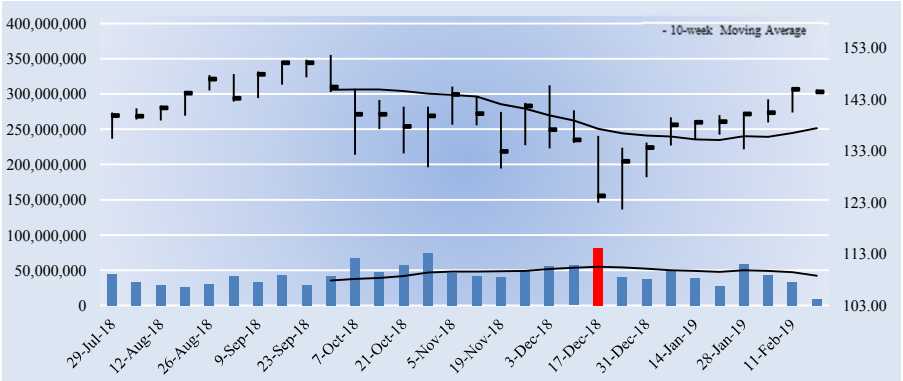
Visa V FAIRLY VALUED

Buying Index™ 7 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$153.00	$122.00 - $184.00	MEGA-CAP BLEND	Information Technology	Financial Tech Services

Visa's fundamentals are rock-solid, in our view, and it continues to have an attractive runway for growth. The company takes on no credit risk.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$336,401
Avg Weekly Vol (30 wks)	43,603
30-week Range (USD)	121.6 - 151.56
Valuentum Sector	Information Technology
5-week Return	4.7%
13-week Return	7.3%
30-week Return	3.1%
Dividend Yield %	0.7%
Dividends per Share	1.00
Forward Dividend Payout Ratio	18.6%
Est. Normal Diluted EPS	7.17
P/E on Est. Normal Diluted EPS	20.1
Est. Normal EBITDA	21,299
Forward EV/EBITDA	20.6
EV/Est. Normal EBITDA	16.2
Forward Revenue Growth (5-yr)	11.0%
Forward EPS Growth (5-yr)	15.5%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	27.5%
Return on Assets	12.2%
ROIC, with goodwill	36.7%
ROIC, without goodwill	59.9%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	16,630
Net Debt	3,430
Total Debt/EBITDA	1.2
Net Debt/EBITDA	0.2
EBITDA/Interest	23.2
Current Ratio	1.6
Quick Ratio	1.4

NMF = Not Meaningful

Investment Highlights

• Visa is the largest retail electronic payments network based on payments volume, total volume and number of transactions. The company benefits from one of the strongest competitive advantages out there – the network effect. As more consumers use credit/debit cards, more merchants accept them, thereby creating a virtuous cycle.

• Visa is not a bank and does not issue credit cards. The firm takes on no credit risk--unlike American Express and Discover Financial--but remains an integral part of the trend toward a cashless society. Sales are primarily generated from payments volume on Visa-branded cards.

• Visa acquired Visa Europe in a deal valued at $23+ billion, which unified the brand globally, and added $15+ billion debt to finance the deal, flipping its balance sheet to a net debt position. It owes another €1.1 billion in June 2019 per the deal terms. We're not worried about the debt given Visa's tremendous cash flow generation capacity. Concerns have cropped up more recently regarding cross-border volume growth.

• Visa, along with other US payment card companies, is reportedly preparing to request licenses to operating in China in the near future. However, it could take up to two years for the requests to clear Chinese regulators. The space, which is expected to grow to 9 billion cards in circulation by 2020, is currently dominated by state-backed China UnionPay.

• Visa is included in the Best Ideas portfolio, and we think the company is one of the best operators in one of the strongest industries, the Financial Tech Services industry. The company's fundamentals are rock-solid, in our view, and it continues to have an attractive runway for growth.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**HIGH**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**137.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				■
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Bottomline Tech	NMF	3.6	106.1%
Fiserv	29.8	NMF	129.7%
Mastercard	28.9	2.1	100.3%
Western Union	9.5	NMF	81.1%
Peer Median	28.9	2.8	103.2%
Visa	**26.9**	**2.1**	**94.4%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Sep-17	Sep-18	Sep-19
Revenue	18,358	20,609	22,979
Revenue, YoY%	21.7%	12.3%	11.5%
Non-GAAP Operating Income	12,163	13,561	16,046
Non-GAAP EBIT %	66.3%	65.8%	69.8%
Net Income	6,699	10,301	12,270
Net Income Margin %	36.5%	50.0%	53.4%
Diluted EPS	2.80	4.42	5.36
Diluted EPS, YoY %	12.7%	58.1%	21.3%
Free Cash Flow (CFO-capex)	8,501	11,995	13,259
Free Cash Flow Margin %	46.3%	58.2%	57.7%

In Millions of USD (except for per share items)

Structure of the Financial Tech Services Industry — EXCELLENT

The financial tech services industry is primarily composed of firms that generate revenue by charging fees to customers for providing transaction processing and other payment-related services. Constituents operate in a rapidly-evolving legal/regulatory environment, particularly with respect to interchange fees, data protection, and information security. Several participants benefit from a significant competitive advantage – the network effect. As more consumers use credit/debit cards, more merchants accept them, thereby creating a virtuous cycle. The industry is one of the most attractive in our coverage.

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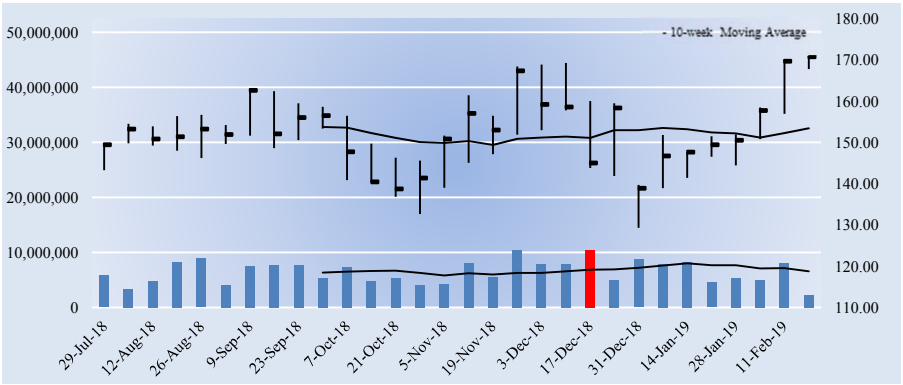
VMware VMW OVERVALUED 1.6%

Buying Index™ 4 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$140.00	$112.00 - $168.00	LARGE-CAP CORE	Information Technology	Business Services

VMware has a diversified set of foundational, market creating, and market disrupting products, and it invests ~55% of its R&D spending into market creating/disrupting products.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**OVERVALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**153.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueRisk™ \ ValueCreation™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$70,587
Avg Weekly Vol (30 wks)	6,494
30-week Range (USD)	129.33 - 171.12
Valuentum Sector	Information Technology
5-week Return	15.9%
13-week Return	10.1%
30-week Return	15.1%
Dividend Yield %	0.0%
Dividends per Share	0.00
Forward Dividend Payout Ratio	0.0%
Est. Normal Diluted EPS	7.50
P/E on Est. Normal Diluted EPS	22.8
Est. Normal EBITDA	3,934
Forward EV/EBITDA	18.7
EV/Est. Normal EBITDA	16.1
Forward Revenue Growth (5-yr)	8.9%
Forward EPS Growth (5-yr)	44.9%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	11.6%
Return on Assets	5.6%
ROIC, with goodwill	25.1%
ROIC, without goodwill	56.3%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	4,234
Net Debt	-7,419
Total Debt/EBITDA	2.0
Net Debt/EBITDA	NMF
EBITDA/Interest	28.6
Current Ratio	2.7
Quick Ratio	2.7

NMF = Not Meaningful

Investment Highlights

• VMware makes virtualization and cloud infrastructure solutions that enable businesses to thrive in the 'Cloud Era'. Customers rely on VMware to help them transform the way they build, deliver and consume IT resources. The company was incorporated in 1998 and is headquartered in Palo Alto, California.

• VMware has a diversified set of foundational, market creating, and market disrupting products. The firm invests ~55% of its R&D spending into market creating/disrupting products, which it believes will transform into fundamental products and grow its revenue substantially over time.

• VMware's revenue is diversified among license, maintenance, PSO and 'subscription and consumption' lines. The firm's partnerships with IBM and Amazon Web Services have the potential to expand its presence among enterprises. Its hybrid cloud and SaaS business continues to make up a growing portion of its business with 8% of total revenue at last check.

• VMware expects recent strength in its business to continue in fiscal 2020. It is projecting roughly 12% revenue growth in the year, including accelerating growth in its hybrid cloud subscription and SaaS revenue. It expects its non-GAAP operating margin to be ~33% in the year as it invests in helping client migrate to its SaaS business and cloud platform.

• Shares of VMware have been impacted by reports surrounding a potential reverse merger with Dell. Dell went public in December 2018 and bought out the stake VMware held in it via tracking stock. This was returned to shareholders via a massive special dividend.

Relative Valuation

	Forward P/E	PEG	Price / FV
Accenture	21.9	2.5	114.1%
Amdocs	13.3	1.4	80.4%
IHS Markit	20.6	1.9	108.2%
Verint	16.1	NMF	86.2%
Peer Median	18.4	1.9	97.2%
VMware	**27.1**	**2.8**	**122.0%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-16	Jan-18	Jan-19
Revenue	7,093	7,922	8,881
Revenue, YoY%	7.9%	11.7%	12.1%
Operating Income	1,491	1,779	3,020
Operating Margin %	21.0%	22.5%	34.0%
Net Income	1,186	570	2,575
Net Income Margin %	16.7%	7.2%	29.0%
Diluted EPS	2.80	1.38	6.29
Diluted EPS, YoY %	19.7%	-50.7%	356.3%
Free Cash Flow (CFO-capex)	2,228	2,948	3,297
Free Cash Flow Margin %	31.4%	37.2%	37.1%

In Millions of USD (except for per share items)

Structure of the Business Services Industry — NEUTRAL

Firms in the business services space primarily focus on management consulting, technology/data-integration services/software and outsourcing solutions. Participants generate high returns on invested capital, but the business services marketplace is very competitive, and firms can often face pressure from off-shore service providers in lower-cost locations (India, Philippines and China). Such competition may inhibit firms' ability to obtain sufficient pricing for services, and economic conditions may hinder the capability of clients to pay for such services. Still, we're generally neutral on the group.

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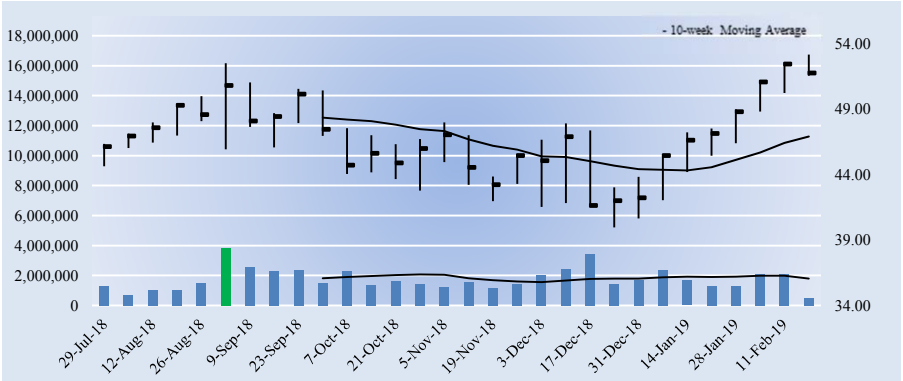
Verint VRNT FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Very Attractive	$60.00	$48.00 - $72.00	MID-CAP VALUE	Information Technology	Business Services

Verint targets double digit earnings per share growth each year, driven by expectations for high-single digit revenue growth and ongoing margin expansion.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**HIGH**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**47.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$3,273
Avg Weekly Vol (30 wks)	1,754
30-week Range (USD)	39.96 - 53.11
Valuentum Sector	Information Technology
5-week Return	11.9%
13-week Return	18.7%
30-week Return	13.4%
Dividend Yield %	0.0%
Dividends per Share	0.00
Forward Dividend Payout Ratio	0.0%
Est. Normal Diluted EPS	3.73
P/E on Est. Normal Diluted EPS	13.8
Est. Normal EBITDA	377
Forward EV/EBITDA	10.8
EV/Est. Normal EBITDA	9.7
Forward Revenue Growth (5-yr)	5.8%
Forward EPS Growth (5-yr)	-308.4%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Verint is a global leader in 'Actionable Intelligence' solutions and value-added services. The firm's solutions enable organizations to extract and analyze information from customer interactions and operational data to make more effective decisions. The company was founded in 1994 and is headquartered in New York.

• Demand for Verint's solutions is being driven by organizations' need for intelligence to create an engaged workforce and smarter customer engagements. Its advanced actionable intelligence platform continues to grow, and its 'Cyber Intelligence' segment has a high level of repeat business.

• Verint has a culture of innovation. The firm has invested more than $1 billion in R&D during the past 10 years and has 850+ patents and applications. The company seeks to address three important challenges: Customer Engagement Optimization; Security Intelligence; and Fraud Risk and Compliance. Its addressable market has grown to ~$8 billion from $3 billion in 2012.

• The company's revenue trends have been very impressive in recent years. Non-GAAP revenue has advanced to more than $1.1 billion from just over $200 million in 2005. The company targets double digit earnings per share growth each year, driven by expectations for high-single digit revenue growth and ongoing margin expansion.

• Verint's large installed base provides stability and recurring revenue. The firm has opportunities for growth as its addressable market continues to expand. Profitability should increase as costs are scaled. Services and support revenue accounts for ~65% of total revenue.

Relative Valuation

	Forward P/E	PEG	Price / FV
Accenture	21.9	2.5	114.1%
Amdocs	13.3	1.4	80.4%
IHS Markit	20.6	1.9	108.2%
VMware	27.1	2.8	122.0%
Peer Median	21.2	2.2	111.2%
Verint	**16.1**	**NMF**	**86.2%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	-0.2%
Return on Assets	-0.1%
ROIC, with goodwill	12.9%
ROIC, without goodwill	65.4%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Jan-17	Jan-18	Jan-19
Revenue	1,062	1,135	1,240
Revenue, YoY%	-6.0%	6.9%	9.2%
Non-GAAP Operating Income	17	49	265
Non-GAAP EBIT %	1.6%	4.3%	21.4%
Non-GAAP Net Income	-29	-7	203
Non-GAAP NI Margin %	-2.8%	-0.6%	16.4%
Non-GAAP Diluted EPS	-0.47	-0.10	3.20
Non-GAAP Dil EPS, YoY %	NMF	NMF	NMF
Non-GAAP FCF (CFO-capex)	142	137	228
Non-GAAP FCF Margin %	13.4%	12.1%	18.4%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	773
Net Debt	395
Total Debt/EBITDA	4.7
Net Debt/EBITDA	2.4
EBITDA/Interest	4.6
Current Ratio	1.5
Quick Ratio	1.3

NMF = Not Meaningful

Structure of the Business Services Industry — NEUTRAL

Firms in the business services space primarily focus on management consulting, technology/data-integration services/software and outsourcing solutions. Participants generate high returns on invested capital, but the business services marketplace is very competitive, and firms can often face pressure from off-shore service providers in lower-cost locations (India, Philippines and China). Such competition may inhibit firms' ability to obtain sufficient pricing for services, and economic conditions may hinder the capability of clients to pay for such services. Still, we're generally neutral on the group.

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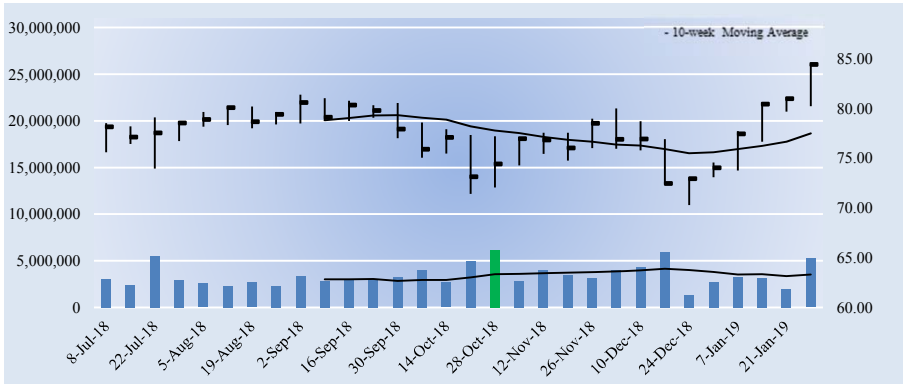
Waste Connections WCN OVERVALUED 7.6%

Buying Index™ 4 **Value Rating** ✕

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$65.00	$52.00 - $78.00	LARGE-CAP CORE	Industrials	Environmental Services

Waste Connections solid price-led organic revenue growth in the near term, but its business is not without potential headwinds.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**OVERVALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**HIGH**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**77.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$22,310
Avg Weekly Vol (30 wks)	3,428
30-week Range (USD)	70.28 - 84.41
Valuentum Sector	Industrials
5-week Return	13.5%
13-week Return	13.3%
30-week Return	11.2%
Dividend Yield %	0.8%
Dividends per Share	0.64
Forward Dividend Payout Ratio	25.2%
Est. Normal Diluted EPS	3.24
P/E on Est. Normal Diluted EPS	26.1
Est. Normal EBITDA	1,987
Forward EV/EBITDA	15.7
EV/Est. Normal EBITDA	13.0
Forward Revenue Growth (5-yr)	7.2%
Forward EPS Growth (5-yr)	12.8%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	3.9%
Return on Assets	2.1%
ROIC, with goodwill	11.9%
ROIC, without goodwill	19.0%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	3,946
Net Debt	3,512
Total Debt/EBITDA	2.8
Net Debt/EBITDA	2.5
EBITDA/Interest	11.3
Current Ratio	1.5
Quick Ratio	1.2

NMF = Not Meaningful

Investment Highlights

• Waste Connections is the third-largest publicly traded solid waste company in the US and focuses on secondary and exclusive markets. We like its strategy as it facilitates vertically-integrated operations that have less competition and better pricing dynamics. The company was founded in 1997 and is now headquartered in Canada. It recently under went a 3-for-2 stock split.

• Waste Connections' current footprint breaks down into 85% US and 15% Canada, and management is quick to note its proven access to low cost growth capital via its investment grade credit rating. It is working to lower customer churn rates via comparably better pricing and volume growth.

• Waste Connections has generated free cash flow margins in the mid-teens while making appropriate investments in recent years. Its EBITDA to free cash flow conversion rate has hovered around 50%, a level management expects to continue achieving on a consistent basis. Capital spending is expected to remain at approximately 10.5% of revenue in the near term.

• In 2019, Waste Connections expects price-led organic revenue growth of 4%-6% as pricing growth is targeted at ~4.5% but recycled commodity values may exhibit little upside and lower crude oil prices could impact E&P waste activity. Revenue growth of 8%-10% and EBITDA margin expansion of 30-50 basis points are expected.

• The waste industry has become more rational in recent years, and price-led growth within the space should drive continued margin expansion and increased free cash flow at Waste Connections. Management is targeting a double-digit annual increase in adjusted free cash flow per share.

Relative Valuation

	Forward P/E	PEG	Price / FV
Clean Harbors	49.8	1.1	117.7%
Republic Services	25.0	1.6	118.4%
Stericycle	10.0	2.1	83.0%
Waste Management	22.9	2.3	120.8%
Peer Median	23.9	1.9	118.0%
Waste Connections	**33.3**	**3.0**	**129.9%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-16	Dec-17	Dec-18
Revenue	3,376	4,630	4,890
Revenue, YoY%	59.4%	37.2%	5.6%
Non-GAAP Operating Income	480	784	985
Non-GAAP EBIT %	14.2%	16.9%	20.2%
Non-GAAP Net Income	247	577	670
Non-GAAP NI Margin %	7.3%	12.5%	13.7%
Non-GAAP Diluted EPS	1.07	2.18	2.54
Non-GAAP Dil EPS, YoY %	NMF	NMF	NMF
Non-GAAP FCF (CFO-capex)	450	708	852
Non-GAAP FCF Margin %	13.3%	15.3%	17.4%

In Millions of USD (except for per share items)

Structure of the Environmental Services Industry — GOOD

The oligopolistic US non-hazardous solid-waste services industry is dominated by Waste Management, Republic Services and Waste Connections, which collectively generate over half of industry revenue and control an equal percentage of valuable disposal capacity. Most operators boast strong returns on capital and predictable cash flow streams, buoyed in part by real pricing expansion. The landfill business has significant barriers to entry, while Stericycle's niche in the medical-waste industry and US Ecology's monopolistic radioactive waste disposal assets are compelling. We like the structure of the group.

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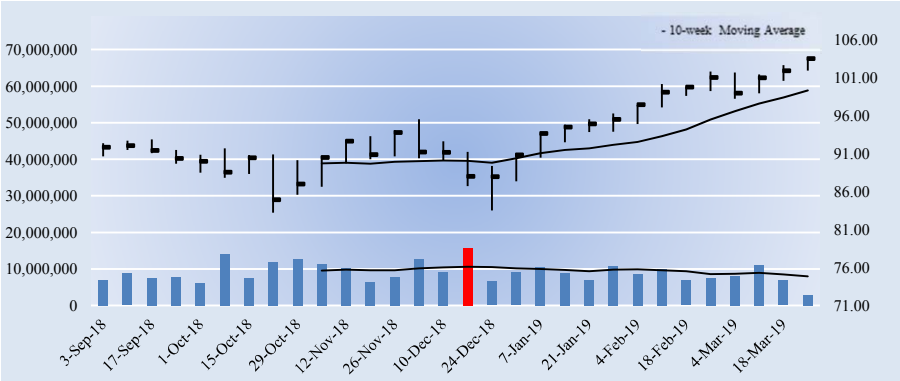
Waste Management WM OVERVALUED 5.3%

Buying Index™ 2 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$80.00	$62.00 - $98.00	LARGE-CAP CORE	Industrials	Environmental Services

Waste Management's asset base is quite diverse, and its best-in-class credit ratings speak to the stability of its business.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$44,728
Avg Weekly Vol (30 wks)	9,052
30-week Range (USD)	83.22 - 103.53
Valuentum Sector	Industrials
5-week Return	3.5%
13-week Return	17.2%
30-week Return	14.0%
Dividend Yield %	2.0%
Dividends per Share	2.05
Forward Dividend Payout Ratio	46.3%
Est. Normal Diluted EPS	5.44
P/E on Est. Normal Diluted EPS	19.0
Est. Normal EBITDA	5,085
Forward EV/EBITDA	12.3
EV/Est. Normal EBITDA	10.8
Forward Revenue Growth (5-yr)	3.9%
Forward EPS Growth (5-yr)	8.1%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	29.3%
Return on Assets	7.8%
ROIC, with goodwill	12.4%
ROIC, without goodwill	19.0%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	10,026
Net Debt	9,965
Total Debt/EBITDA	2.4
Net Debt/EBITDA	2.4
EBITDA/Interest	11.3
Current Ratio	0.9
Quick Ratio	0.8

NMF = Not Meaningful

Investment Highlights

• Waste Management is the largest environmental solutions provider in North America, serving roughly 20 million customers in the US and Canada. The company has the largest network of recycling facilities (176), transfer stations (314) and landfills (247 solid waste landfills) in the industry. It was founded in 1987 and is headquartered in Houston, Texas.

• Waste Management generates the waste industry's best ROIC thanks to the high-quality nature of its earnings and disciplined investment practices. Its pricing and productivity initiatives in recycling and pricing-led growth in its collection and disposal business have helped expand margins of late.

• The firm's asset base is quite diverse. Its landfill operations boast significant barriers to entry due to regulatory requirements and stiff NIMBY opposition. The collection side of its residential business is generally recession-resistant, though volatile commodity prices can cause swings in recycling revenue. Recycled commodity prices have faced pressure of late.

• Its commercial and industrial pick-up operations are somewhat cyclical, however, which come in at ~40% and ~30%, respectively, of collection revenue, which in total is more than half of total revenue. Three-year service agreements in these areas help mitigate some cyclicality, and its best-in-class credit ratings speak to the ultimate stability of its business (A-/Baa1/BBB+).

• Waste Management's adjusted Dividend Cushion ratio is solid, and the firm remains shareholder friendly. Its ~10% increase in the payout in 2019 marked its 16th consecutive year of growth. It has reduced its net debt-to-EBITDA to 2.3x at the end of 2018 from 2.7x at the end of 2015.

Investment Considerations

DCF Valuation	**OVERVALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**NEUTRAL**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**OVERBOUGHT**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**99.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
Clean Harbors	49.8	1.1	117.7%
Republic Services	24.5	2.2	118.5%
Stericycle	10.0	2.1	83.0%
Waste Connections	33.3	3.0	129.9%
Peer Median	28.9	2.2	118.1%
Waste Management	**23.4**	**2.2**	**129.4%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	14,485	14,914	15,660
Revenue, YoY%	6.4%	3.0%	5.0%
Operating Income	2,620	2,735	2,903
Operating Margin %	18.1%	18.3%	18.5%
Net Income	1,949	1,925	1,893
Net Income Margin %	13.5%	12.9%	12.1%
Diluted EPS	4.41	4.45	4.42
Diluted EPS, YoY %	66.6%	1.0%	-0.7%
Free Cash Flow (CFO-capex)	1,671	1,876	2,031
Free Cash Flow Margin %	11.5%	12.6%	13.0%

In Millions of USD (except for per share items)

Structure of the Environmental Services Industry — GOOD

The oligopolistic US non-hazardous solid-waste services industry is dominated by Waste Management, Republic Services and Waste Connections, which collectively generate over half of industry revenue and control an equal percentage of valuable disposal capacity. Most operators boast strong returns on capital and predictable cash flow streams, buoyed in part by real pricing expansion. The landfill business has significant barriers to entry, while Stericycle's niche in the medical-waste industry and US Ecology's monopolistic radioactive waste disposal assets are compelling. We like the structure of the group.

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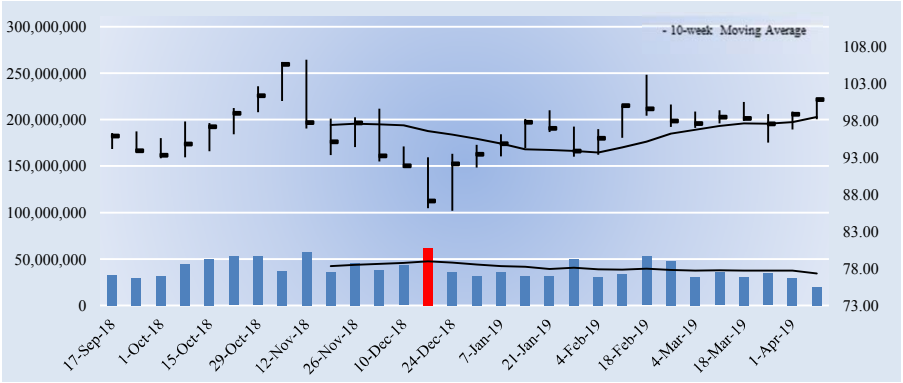
Wal-Mart WMT FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$100.00	$80.00 - $120.00	MEGA-CAP CORE	Consumer Staples	Food Retailers

Wal-Mart's current quest for innovation may be greater than at any other time in its history, but the same can be said for the competitive environment in which it is operating.

Stock Chart (weekly)



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Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**MEDIUM**
Financial Leverage	**MEDIUM**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**WEAK**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BEARISH**
Near-term Technical Support, 10-week MA	**98.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$296,856
Avg Weekly Vol (30 wks)	39,128
30-week Range (USD)	85.78 - 106.21
Valuentum Sector	Consumer Staples
5-week Return	2.8%
13-week Return	6.7%
30-week Return	6.4%
Dividend Yield %	2.1%
Dividends per Share	2.12
Forward Dividend Payout Ratio	44.1%
Est. Normal Diluted EPS	6.10
P/E on Est. Normal Diluted EPS	16.5
Est. Normal EBITDA	38,342
Forward EV/EBITDA	10.5
EV/Est. Normal EBITDA	9.1
Forward Revenue Growth (5-yr)	3.1%
Forward EPS Growth (5-yr)	28.2%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Wal-Mart operates retail stores. Its Wal-Mart US segment includes the company's mass merchant concept in the US. Its Wal-Mart International segment consists of the company's operations outside of the US. The Sam's Club segment includes warehouse membership clubs and samsclub.com. Social pressures will keep the retail giant in the news, and sometimes not in the best of light.

• Wal-Mart is not going away anytime soon. Though it faces pressure from both Amazon and discount dollar stores, consumers continue to flock to its locations. Its everyday-low-prices strategy revolutionized the industry, and e-commerce initiatives look to be paying off as digital sales rocket higher.

• Gross margin pressures such as higher transportation costs, price investments, and mix effects from its growing e-commerce business are likely to persist in the near term, and competition with Amazon will likely only intensify and pressure margins further. The company is shifting its focus from store count growth to remodeling as it works to keep its massive store base relevant and competitive.

• With $115+ billion in sales, Wal-Mart's international business alone would be among the largest retailers in the world. A recent agreement with JD.com could provide the firm with the boost it needs in the Chinese online marketplace, and it recently took a 77% stake in Flipkart, an innovative e-commerce firm in India, for ~$16 billion.

• Wal-Mart expects comparable sales in the US to grow roughly 2.5%-3% in fiscal 2020, while its US e-commerce sales growth is targeted at ~35%. It expects to have 3,100 and 1,600 grocery pickup and delivery locations, respectively, by the end of the fiscal year, up from 2,100 and 800 a year earlier.

Relative Valuation

	Forward P/E	PEG	Price / FV
Costco	30.0	2.1	116.5%
Kroger	13.5	1.6	104.2%
Target	13.6	2.2	103.1%
Walgreens Boots Alliance	8.6	0.9	82.9%
Peer Median	13.6	1.8	103.7%
Wal-Mart	**21.0**	**1.6**	**100.8%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	13.7%
Return on Assets	5.3%
ROIC, with goodwill	16.7%
ROIC, without goodwill	20.1%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Jan-18	Jan-19	Jan-20
Revenue	500,343	514,405	529,323
Revenue, YoY%	3.0%	2.8%	2.9%
Operating Income	20,437	21,957	22,027
Operating Margin %	4.1%	4.3%	4.2%
Net Income	9,862	6,670	14,017
Net Income Margin %	2.0%	1.3%	2.6%
Diluted EPS	3.28	2.26	4.81
Diluted EPS, YoY %	-25.3%	-30.9%	112.3%
Free Cash Flow (CFO-capex)	18,286	17,409	16,044
Free Cash Flow Margin %	3.7%	3.4%	3.0%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	58,033
Net Debt	50,311
Total Debt/EBITDA	1.8
Net Debt/EBITDA	1.5
EBITDA/Interest	13.9
Current Ratio	0.8
Quick Ratio	0.2

NMF = Not Meaningful

Structure of the Food Retailers Industry — NEUTRAL

Firms in the mature food retailers industry generally have slim profit margins and face significant competition from brick-and-mortar locations (discount, department, drug, dollar, warehouse clubs and supermarkets) as well as Internet-based retailers (including Amazon). Though the industry is not terribly cyclical, economic conditions, disposable income, credit availability, fuel prices, and unemployment levels drive ticket size and traffic trends. Offering consumers a compelling value proposition is a must, even as higher-priced organic food offerings proliferate. We're generally neutral on the group.

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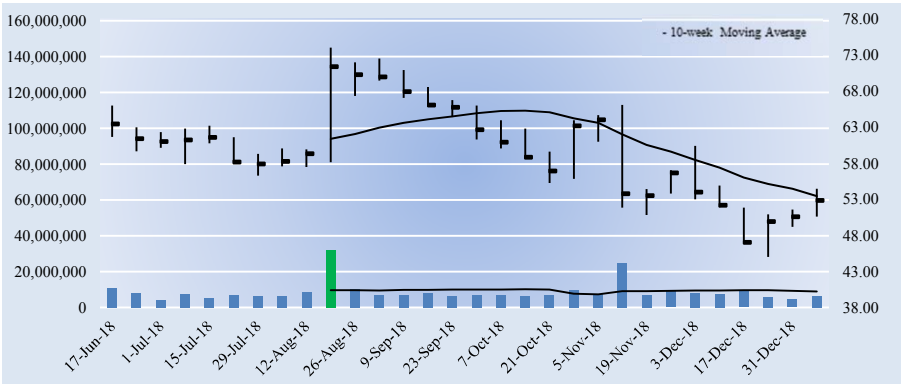
Williams-Sonoma WSM FAIRLY VALUED

Buying Index™ 4 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$55.00	$44.00 - $66.00	MID-CAP VALUE	Consumer Discretionary	Specialty Retailers

Williams-Sonoma is a solid free cash flow generator, but its balance sheet health has waned.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**ATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**LOW**
Growth	**MODEST**
Technical Evaluation	**BEARISH**
Relative Strength	**NEUTRAL**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BEARISH**
Near-term Technical Resistance, 10-wk MA	**53.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$4,546
Avg Weekly Vol (30 wks)	8,784
30-week Range (USD)	45.01 - 73.99
Valuentum Sector	Consumer Discretionary
5-week Return	-2.3%
13-week Return	-13.2%
30-week Return	-15.0%
Dividend Yield %	3.3%
Dividends per Share	1.72
Forward Dividend Payout Ratio	39.7%
Est. Normal Diluted EPS	4.74
P/E on Est. Normal Diluted EPS	11.1
Est. Normal EBITDA	687
Forward EV/EBITDA	6.8
EV/Est. Normal EBITDA	6.5
Forward Revenue Growth (5-yr)	2.7%
Forward EPS Growth (5-yr)	11.7%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	23.9%
Return on Assets	11.8%
ROIC, with goodwill	33.2%
ROIC, without goodwill	33.2%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	299
Net Debt	-91
Total Debt/EBITDA	0.5
Net Debt/EBITDA	NMF
EBITDA/Interest	445.7
Current Ratio	1.6
Quick Ratio	0.5

NMF = Not Meaningful

Investment Highlights

• Williams-Sonoma is a multi-channel specialty retailer of high quality products for the home. Its brands include Williams-Sonoma, Pottery Barn, Pottery Barn Kids, West Elm, PBteen, Rejuvenation, and Mark and Graham. The company was founded in 1956 and is headquartered in San Francisco, California.

• A key factor in Williams-Sonoma's multi-channel success is its exclusive product and lifestyle merchandizing. As of 2017, 95% of the products the firm sells are directly sourced, offering a unique point of view on taste and style in addition to industry leading margins.

• Williams-Sonoma is a solid free cash flow generator, but its balance sheet health has waned. At the end of the third quarter of fiscal 2018 it held a net debt position of ~$195 million compared to a net cash position of ~$91 million at the start of the fiscal year. The firm is buying back stock, but we think there are better uses of cash. It is working to increase brand awareness and expand reach via digital ads.

• The company retains a strong portfolio of brands and highly-profitable operations. We view its global supply chain as a competitive advantage and believe the firm has multiple opportunities to grow through brand extensions. Its vertical integration allows it to generate industry-leading gross margins.

• One of the areas at Williams-Sonoma that we're huge fans of is its e-commerce operations. The company now generates more than half of sales from that channel, a key competitive advantage. Multi-channel customers spend 5 times more than single-channel customers.

Relative Valuation

	Forward P/E	PEG	Price / FV
Best Buy	10.8	1.7	84.3%
Home Depot	18.1	1.8	111.4%
Lowe's	18.8	1.8	117.2%
Office Depot	8.6	1.2	73.5%
Peer Median	14.5	1.8	97.9%
Williams-Sonoma	**12.2**	**1.5**	**96.0%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Jan-17	Jan-18	Jan-19
Revenue	5,084	5,292	5,636
Revenue, YoY%	2.2%	4.1%	6.5%
Operating Income	473	454	489
Operating Margin %	9.3%	8.6%	8.7%
Net Income	305	260	366
Net Income Margin %	6.0%	4.9%	6.5%
Diluted EPS	3.41	3.02	4.33
Diluted EPS, YoY %	1.4%	-11.7%	43.7%
Free Cash Flow (CFO-capex)	327	310	293
Free Cash Flow Margin %	6.4%	5.9%	5.2%

In Millions of USD (except for per share items)

Structure of the Specialty Retailers Industry — NEUTRAL

The specialty retail segment is fragmented, highly competitive, and economically-sensitive. The group covers a broad array of businesses and is dominated by retailers with large brick-and-mortar store footprints. Though some constituents may be insulated from e-commerce competition, others risk obsolescence as product distribution moves to digital means, and online retailers offer lower prices for identical goods and services. We're fairly neutral on the structure of the industry, though some constituents will inevitably face secular and permanent declines.

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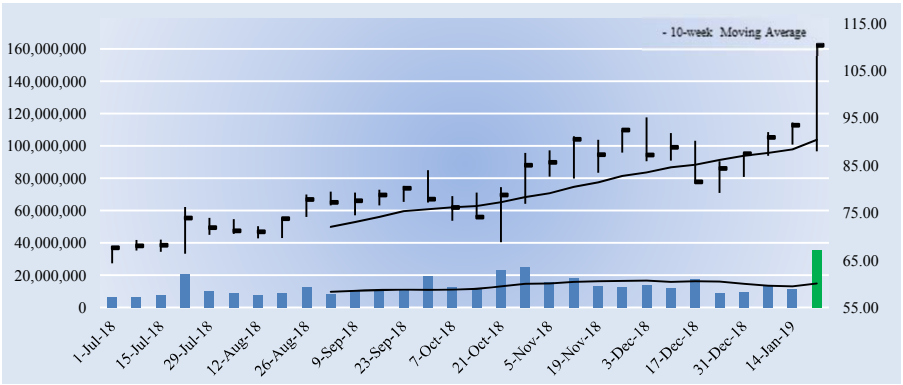
Xilinx XLNX FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Highest Rated	$95.00	$71.00 - $119.00	LARGE-CAP GROWTH	Information Technology	Integrated Circuits

We're raised our fair value estimate for Xilinx after increasing near-term and top-line expectations. The company serves fast-growing end markets and has benefit from early production in 5G and pre-5G deployments.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**MEDIUM**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**MEDIUM**
Growth	**HIGH**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**90.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$28,471
Avg Weekly Vol (30 wks)	13,540
30-week Range (USD)	64.3 - 110.84
Valuentum Sector	Information Technology
5-week Return	36.3%
13-week Return	37.5%
30-week Return	70.4%
Dividend Yield %	1.3%
Dividends per Share	1.44
Forward Dividend Payout Ratio	40.9%
Est. Normal Diluted EPS	4.18
P/E on Est. Normal Diluted EPS	26.4
Est. Normal EBITDA	1,292
Forward EV/EBITDA	23.9
EV/Est. Normal EBITDA	20.7
Forward Revenue Growth (5-yr)	9.3%
Forward EPS Growth (5-yr)	20.0%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Xilinx makes FPGAs, SoCs and 3D ICs. These devices are coupled with a next-generation design environment and IP to serve a broad range of customer needs, from programmable logic to programmable systems integration. The company was founded in 1984 and is headquartered in California.

• As with rival Altera, which was recently acquired by Intel, Xilinx's strategy centers on the displacement of ASICs and ASSPs in the development of next-generation electronic systems. The company strives to drive down cost and power consumption at each manufacturing process node.

• Investors in technology pay close attention to a firm's gross margin to get a read for product pricing pressures. We like Xilinx's focus on growing earnings and its cash-rich balance sheet. The firm's shares have benefited from reports that it may be a takeover candidate, and robust estimates of potential markets including autonomous vehicles and artificial intelligence for chipmakers have been welcome news.

• The company is experiencing solid momentum in the 28nm market. Xilinx's quarterly revenue run-rate is growing, and demand for its 16nm and 28nm products is expanding thanks to end markets such as data center, automotive, test and measurement, wireless communications (early 5G and pre-5G deployments), and even space.

• The company is heavily dependent on distributor Avnet for the majority of sales revenue and order fulfillment. Resale of product through Avnet accounts for 40%+ of worldwide revenue and for roughly 40% of total net accounts receivable as of the first three quarters of fiscal 2019.

Relative Valuation

	Forward P/E	PEG	Price / FV
Analog Devices	17.6	2.3	112.3%
Nvidia	20.2	2.1	81.2%
Semtech Corp	21.5	2.3	118.9%
Taiwan Semiconductor	16.7	4.4	98.5%
Peer Median	18.9	2.3	105.4%
Xilinx	**31.3**	**2.8**	**116.2%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	22.3%
Return on Assets	11.6%
ROIC, with goodwill	93.6%
ROIC, without goodwill	118.6%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Mar-17	Mar-18	Mar-19
Revenue	2,349	2,539	3,014
Revenue, YoY%	6.1%	8.1%	18.7%
Operating Income	699	778	1,010
Operating Margin %	29.8%	30.7%	33.5%
Net Income	623	512	900
Net Income Margin %	26.5%	20.2%	29.9%
Diluted EPS	2.32	1.99	3.52
Diluted EPS, YoY %	12.9%	-14.2%	77.5%
Free Cash Flow (CFO-capex)	862	770	1,054
Free Cash Flow Margin %	36.7%	30.3%	35.0%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	1,714
Net Debt	-1,734
Total Debt/EBITDA	2.0
Net Debt/EBITDA	NMF
EBITDA/Interest	19.1
Current Ratio	4.4
Quick Ratio	4.1

NMF = Not Meaningful

Structure of the Integrated Circuits Industry — VERY POOR

Firms in the integrated circuits industry make components that form the electronic building blocks used in electronic systems and equipment. The industry is notoriously cyclical and subject to significant economic upturns and downturns, as well as rapid technological changes. Firms must innovate to survive, and products stocked in inventory can sometimes become obsolete before they are even shipped. Severe pricing competition and lengthy manufacturing cycles only add uncertainty to the mix. We're not fans of the structure of the integrated circuits space.

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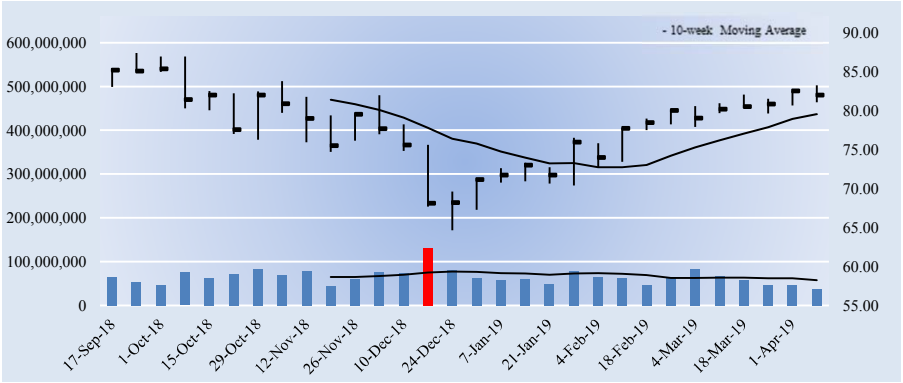
Exxon Mobil XOM FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$75.00	$60.00 - $90.00	MEGA-CAP CORE	Energy	Major Oil & Gas

Exxon Mobil is competitively positioned across the value chain, which helps mitigate sector risk and adds flexibility to capture new opportunities.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Company Vitals

Market Cap (USD)	$349,927
Avg Weekly Vol (30 wks)	65,450
30-week Range (USD)	64.65 - 87.36
Valuentum Sector	Energy
5-week Return	2.5%
13-week Return	15.1%
30-week Return	-1.3%
Dividend Yield %	4.0%
Dividends per Share	3.28
Forward Dividend Payout Ratio	75.3%
Est. Normal Diluted EPS	5.54
P/E on Est. Normal Diluted EPS	14.8
Est. Normal EBITDA	54,037
Forward EV/EBITDA	8.5
EV/Est. Normal EBITDA	7.1
Forward Revenue Growth (5-yr)	3.0%
Forward EPS Growth (5-yr)	4.7%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Returns Summary

	3-year Historical Average
Return on Equity	9.1%
Return on Assets	4.8%
ROIC, with goodwill	4.9%
ROIC, without goodwill	4.9%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	37,796
Net Debt	34,754
Total Debt/EBITDA	0.7
Net Debt/EBITDA	0.7
EBITDA/Interest	65.9
Current Ratio	0.8
Quick Ratio	0.5

NMF = Not Meaningful

Investment Highlights

• Exxon Mobil is involved in the exploration and production of crude oil/natural gas, and the manufacture of petroleum products as well as the transportation and sale of crude oil, natural gas and petroleum products. It also makes commodity petrochemicals. Exxon had more than 24 BOEB of total proved reserves at the end of 2018.

• Though Exxon recently lost its pristine AAA credit rating, its financial health is still solid. The executive team is strengthening its upstream portfolio (Permian Basin in focus) and upgrading its downstream production. It estimates proprietary technology will help downstream margins expand by 20%.

• Exxon Mobil's ROCE performance is consistently better than that of its peers on average from 2008-2017, and its upstream earnings-per-barrel recently surpassed that of Chevron for best in its peer group. The company expects expects earnings could more than double by 2025 assuming 2017 oil prices hold, and it is looking to boost production by 25% to 5 million bbl/day.

• Exxon is competitively positioned across the value chain, which helps mitigate sector risk and adds flexibility to capture new opportunities. Its integrated operations add synergy and optionality potential while maximizing value in dynamic markets. The firm estimates that cash flow from operations could nearly double by 2025 assuming 2017 prices hold.

• Exxon Mobil's dividend is better than that of peers, in our opinion, and we expect growth in it for years to come. The energy giant remains best in class, in our view, and free cash flow coverage of dividends in 2017 and 2018 is a great sign. 2018 marked its 36th consecutive year of annual dividend increases.

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**NEUTRAL**
ValueCreation™	**POOR**
ValueRisk™	**LOW**
ValueTrend™	**POSITIVE**
Cash Flow Generation	**MEDIUM**
Financial Leverage	**LOW**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**NEUTRAL**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**79.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Relative Valuation

	Forward P/E	PEG	Price / FV
BP	13.1	1.7	99.7%
Chevron	16.4	2.3	102.8%
ConocoPhillips	16.1	NMF	99.1%
Royal Dutch Shell	11.8	3.2	94.8%
Peer Median	14.6	2.3	99.4%
Exxon Mobil	**18.8**	**1.9**	**109.3%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-17	Dec-18	Dec-19
Revenue	244,363	290,212	290,502
Revenue, YoY%	8.1%	18.8%	0.1%
Operating Income	19,275	31,719	26,470
Operating Margin %	7.9%	10.9%	9.1%
Net Income	19,710	20,840	18,697
Net Income Margin %	8.1%	7.2%	6.4%
Diluted EPS	4.63	4.88	4.35
Diluted EPS, YoY %	146.7%	5.4%	-10.8%
Free Cash Flow (CFO-capex)	14,664	16,440	8,046
Free Cash Flow Margin %	6.0%	5.7%	2.8%

In Millions of USD (except for per share items)

Structure of the Oil & Gas (majors) Industry — NEUTRAL

The global oil and gas industry is dominated by state-owned firms, including member nations of OPEC, which have a large influence on pricing. Public constituents are not small, however, as firms in this group make up a large portion of the energy sector's market cap. Oil and gas prices are the key profit driver and largely reflect supply/demand dynamics, though it is not uncommon for speculative/geopolitical price premiums to occur. A firm's estimated reserve life and cost for exploration and development should be monitored closely. We're neutral on the structure of the majors, given their commoditized product.

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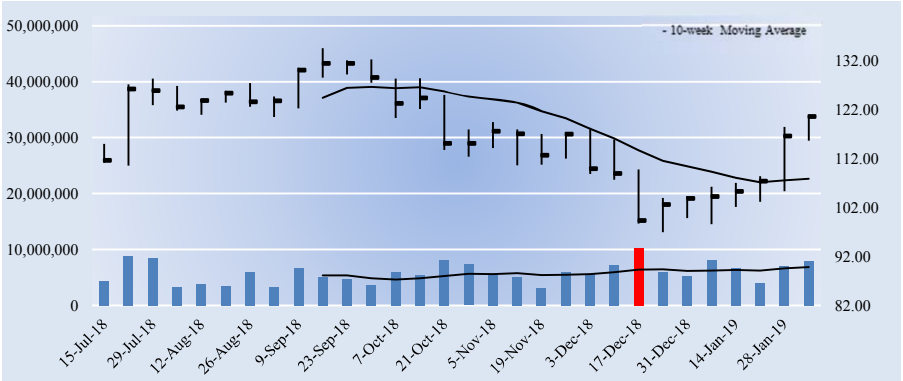
Zimmer Biomet ZBH FAIRLY VALUED

Buying Index™ 6 **Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	$115.00	$92.00 - $138.00	LARGE-CAP CORE	Health Care	Medical Devices

2019 marks the back half of a two-year reshaping process for Zimmer Biomet as it gears up to achieve market average growth in 2020 and beyond.

Stock Chart (weekly)



The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

Investment Considerations

DCF Valuation	**FAIRLY VALUED**
Relative Valuation	**UNATTRACTIVE**
ValueCreation™	**EXCELLENT**
ValueRisk™	**LOW**
ValueTrend™	**NEGATIVE**
Cash Flow Generation	**STRONG**
Financial Leverage	**HIGH**
Growth	**MODEST**
Technical Evaluation	**BULLISH**
Relative Strength	**STRONG**
Money Flow Index (MFI)	**NEUTRAL**
Upside/Downside Volume (U/D)	**BULLISH**
Near-term Technical Support, 10-week MA	**108.00**

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

Business Quality

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

Company Vitals

Market Cap (USD)	$24,562
Avg Weekly Vol (30 wks)	5,901
30-week Range (USD)	96.99 - 134.55
Valuentum Sector	Health Care
5-week Return	16.0%
13-week Return	2.5%
30-week Return	5.0%
Dividend Yield %	0.8%
Dividends per Share	0.96
Forward Dividend Payout Ratio	-51.7%
Est. Normal Diluted EPS	6.51
P/E on Est. Normal Diluted EPS	18.5
Est. Normal EBITDA	2,701
Forward EV/EBITDA	54.0
EV/Est. Normal EBITDA	12.2
Forward Revenue Growth (5-yr)	1.6%
Forward EPS Growth (5-yr)	1.2%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

Investment Highlights

• Zimmer Biomet produces orthopedic reconstructive devices, spinal and trauma devices, biologics, dental implants, and related surgical products in the Americas, Europe, and Asia Pacific. The firm has been around for more than 85 years and is headquartered in northern Indiana. It was formed as a result of the merger of Zimmer and Biomet in 2015.

• There are multiple drivers of sustainable growth present for Zimmer Biomet such as favorable global demographics (65+ age group growing), penetration opportunity in developed markets, expanding access to healthcare in emerging markets, and accelerating innovation.

• Knees, hips, and S.E.T (surgical, sports medicine, foot & ankle, extremities, and trauma) are Zimmer Biomet's three largest markets in terms of revenue generated at 35%, 24%, and 22%, respectively. The company is a market leader in the hip and knees musculoskeletal solutions space with 37% share in knees and 32% share in hips. It also holds 11% share of the S.E.T market.

• Zimmer Biomet has remained acquisitive since the big merger, though the acquisitions have been of the smaller, tuck-in variety. Recent examples include the purchase of a Dutch developer of 3D range of motion technology and a musculoskeletal diagnostics testing firm. The firm has spent $1.5 billion on 8 M&A transactions since the Biomet merger.

• Zimmer Biomet is expecting top-line growth to remain muted in the near term, and adjusted operating profit margin is expected to be roughly 27%-28% in 2019 compared to 27.9% in 2018. Its $1.1-$1.3 billion free cash flow generation target for the year leaves a bit to be desired as well.

Relative Valuation

	Forward P/E	PEG	Price / FV
Intuitive Surgical	54.5	3.1	132.6%
Medtronic	17.2	1.6	91.8%
Varian Medical Systems	27.5	2.2	141.2%
Waters	30.2	8.0	135.9%
Peer Median	28.9	2.6	134.2%
Zimmer Biomet	**NMF**	**NMF**	**104.9%**

Price / FV = Current Stock Price divided by Estimated Fair Value

Returns Summary

	3-year Historical Average
Return on Equity	7.3%
Return on Assets	2.9%
ROIC, with goodwill	11.0%
ROIC, without goodwill	19.6%

ROIC = Return on Invested Capital; NMF = Not Meaningful

Financial Summary

	----- Actual -----		Projected
Fiscal Year End:	Dec-16	Dec-17	Dec-18
Revenue	7,684	7,824	7,933
Revenue, YoY%	28.1%	1.8%	1.4%
Non-GAAP Operating Income	1,438	1,746	-137
Non-GAAP EBIT %	18.7%	22.3%	-1.7%
Non-GAAP Net Income	306	1,814	-379
Non-GAAP NI Margin %	4.0%	23.2%	-4.8%
Non-GAAP Diluted EPS	1.51	8.90	-1.86
Non-GAAP Dil EPS, YoY %	95.1%	489.2%	-120.9%
Non-GAAP FCF (CFO-capex)	1,102	1,089	1,377
Non-GAAP FCF Margin %	14.3%	13.9%	17.4%

In Millions of USD (except for per share items)

Leverage, Coverage, and Liquidity

In Millions of USD

Total Debt	8,918
Net Debt	8,393
Total Debt/EBITDA	3.2
Net Debt/EBITDA	3.0
EBITDA/Interest	8.6
Current Ratio	1.5
Quick Ratio	0.7

NMF = Not Meaningful

Structure of the Medical Devices Industry — GOOD

The medical devices industry is heavily regulated and characterized by rapid technological change. Firms have been forced to compete on price due to economically-motivated buyers, consolidation among healthcare providers, and declining reimbursement rates. Healthcare reform measures have put additional pressure on procedure rates and market sizes. Still, firms can gain advantages by developing products with differentiated clinical outcomes or by creating patent-protected technology. Since most constituents hold important patents or trade secrets, we tend to like the group.

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Glossary of Valuentum Terms

Business Quality Matrix. We compare the firm's ValueCreation and ValueRisk ratings. The box is an easy way for investors to quickly assess the business quality of a company. Firms that generate economic profits with little operating variability score near the top right of the matrix.

Cash Flow Generation. Firms' cash flow generation capacity are measured along the scale of STRONG, MEDIUM, and WEAK. A firm with a 3-year historical free cash flow margin (free cash flow divided by sales) greater than 5% receives a STRONG rating, while firms earning less than 1% of sales as free cash flow receive a WEAK rating.

Company Description. The description section provides a brief company profile and in the top right corner indicates the investment style that Valuentum assigns to the stock. Nano-cap: Less than $50 million; Micro-cap: Between $50 million and $200 million; Small-cap: Between $200 million and $2 billion; Mid-cap: Between $2 billion and $10 billion; Large-cap: Between $10 billion and $200 billion; Mega-cap: Over $200 billion. Blend: Firm's that we think are undervalued and exhibit high growth prospects (growth in excess of three times the rate of assumed inflation). Value: Firm's that we believe are undervalued, but do not exhibit high growth prospects. Growth: Firms that are not undervalued, in our opinion, but exhibit high growth prospects. Core: Firms that are neither undervalued nor exhibit high growth prospects.

Company Vitals. In this section, we list key financial information and the sector and industry that Valuentum assigns to the stock. The P/E-Growth (5-yr), or PEG ratio, divides the current share price by last year's earnings (EPS) and then divides that quotient by our estimate of the firm's 5-year EPS growth rate. The estimated normalized diluted EPS and estimated normalized EBITDA represent the five-year forward average of these measures used in our discounted cash flow model. The P/E on estimated normalized EPS divides the current share price by estimated normalized diluted EPS. The EV/estimated normalized EBITDA considers the current enterprise value of the company and divides it by estimated normalized EBITDA. EV is defined as the firm's market capitalization plus total debt, minority interest, preferred stock less cash and cash equivalents.

DCF Valuation. We opine on the firm's valuation based on our DCF process. Firms that are trading with an appropriate discount to our fair value estimate receive an UNDERVALUED rating. Firms that are trading within our fair value range receive a FAIRLY VALUED rating, while firms that are trading above the upper bound of our fair value range receive an OVERVALUED rating.

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Dividend Growth Potential. We blend our analysis of a firm's Dividend Safety with its historical Track Record, while also considering historical dividend growth trends. We believe such a combination captures a firm's capacity (cash flow) and willingness (track record) to raise its dividend in the future. Scale: EXCELLENT, GOOD, POOR, VERY POOR.

Dividend Safety. We measure the safety of a firm's dividend by adding its net cash to our forecast of its future cash flows and divide that sum by our forecast of its future dividend payments. This process results in a ratio called the Valuentum Dividend Cushion™. Scale: Above 2.75 = EXCELLENT; Between 1.25 and 2.75 = GOOD; Between 0.5 and 1.25 = POOR; Below 0.5 = VERY POOR.

Dividend Strength. Our assessment of the firm's dividend strength is expressed in a matrix. If the safety of a firm's dividend is EXCELLENT and its growth prospects are also EXCELLENT, it scores high on our matrix (top right). If the firm's dividend safety and the potential future growth are VERY POOR, it scores lower on our scale (bottom left).

Dividend Track Record. We assess each firm's dividend track record based on whether the fundamentals of the firm have ever forced it to cut its dividend. If the firm has ever cut its dividend (within the last 10 years), we view its track record as RISKY. If the firm has maintained and/or raised its dividend each year (over the past 10 years), we view its track record as HEALTHY.

Estimated Fair Value. This measure is an output of our DCF valuation model and represents our opinion of the fair equity value per share of the company. If our forecasts prove accurate, which may not always be the case, we would expect a firm's stock price to converge to this value within the next 3 years.

Fair Value Range. The fair value range represents an upper bound and lower bound, between which we would consider the firm to be fairly valued. The range considers our estimate of the firm's fair value and the margin of safety suggested by the volatility of key valuation drivers, including revenue, gross margin, earnings before interest, and enterprise free cash flow (the determinants behind our ValueRisk rating).

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Financial Leverage. Based on the firm's normalized debt-to-EBITDA metric, we rank firms on the following scale: LOW, MEDIUM, and HIGH. Companies with a normalized debt-to-EBITDA ratio below 1.5 receive a LOW score, while those with a measure above 3 receive a HIGH score.

Money Flow Index (MFI). The MFI is a technical indicator that measures buying and selling pressure based on both price and volume. Traders typically use this measure to identify potential reversals with overbought and oversold levels. We use a 14-week measure to rank firms along the following scale: EXTREMELY OVERBOUGHT (>90), OVERBOUGHT (80-90), NEUTRAL (20-80), OVERSOLD (10-20), EXTREMELY OVERSOLD (0-10).

Range of Potential Outcomes. The firm's margin of safety is shown in the graphic of a normal distribution. We consider a firm to be undervalued if its stock price falls along the green line and overvalued if the stock price falls along the red line. We consider the firm to be fairly valued if its stock price falls along the yellow line.

Relative Value. We compare the firm's forward price-to earnings (PE) ratio and its price/earnings-to-growth (PEG) ratio to that of its peers. If both measures fall below the peer median, the firm receives an ATTRACTIVE rating. If both are above the peer median, the firm receives an UNATTRACTIVE rating. Any other combination results in a NEUTRAL rating.

Return on Invested Capital. At Valuentum, we place considerable emphasis on return on invested capital (both with and without goodwill). The measure focuses on the return (earnings) the company is generating on its operating assets and is superior to return on equity and return on assets, which can be skewed by a firm's leverage or excess cash balance, respectively.

Risk of Capital Loss. We think capital preservation is key for the dividend investor. As such, we evalute the risk of capital loss by assessing the intrinsic value of each firm based on our discounted cash-flow process. If a firm is significantly OVERVALUED, we think the risk of capital loss is HIGH. If a firm is FAIRLY VALUED, we think the risk of capital loss is MEDIUM, and if a firm is UNDERVALUED, we think the risk of capital loss is LOW.

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Stock Price Relative Strength. We assess the perfomance of the company's stock during the past quarter, 13 weeks, relative to an ETF that mirrors the aggregate performance of constituents of the stock market. Firms are measured along the scale of STRONG, NEUTRAL, and WEAK. Companies that have outperformed the market index by more than 2.5% during this 13-week period receive a STRONG rating, while firms that trailed the market index by more than 2.5% during this 13-week period receive a WEAK rating.

Technical Evaluation. We evaluate a firm's near-term and medium-term moving averages and money flow index (MFI) to assign each firm a rating along the following scale: VERY BULLISH, BULLISH, NEUTRAL, BEARISH, and VERY BEARISH.

Timeliness Matrix. We compare the company's recent stock performance relative to the market benchmark with our assessment of its valuation. Firms that are experiencing near-term stock price outperformance and are undervalued by our estimate may represent timely buys.

Upside / Downside Volume. Heavy volume on up days and lower volume on down days suggests that institutions are heavily participating in a stock's upward advance. We use the trailing 14-week average of upside and downside volume to calculate an informative ratio. We rank each firm's U/D volume ratio along the following scale: BULLISH, IMPROVING, DETERIORATING, and BEARISH.

ValueCreation. This is a proprietary Valuentum measure. ValueCreation indicates the firm's historical track record in creating economic value for shareholders, taking the average difference between ROIC (without goodwill) and the firm's estimated WACC during the past three years. The firm's performance is measured along the scale of EXCELLENT, GOOD, POOR, and VERY POOR. Those firms with EXCELLENT ratings have a demonstrated track record of creating economic value, while those that register a VERY POOR mark have been destroying economic value.

Valuentum Dividend Cushion™. This is a proprietary Valuentum measure that drives our assessment of the firm's Dividend Safety rating. The forward-

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looking measure assesses dividend coverage via the cash characteristics of the business.

ValueRisk. This is a proprietary Valuentum measure. ValueRisk indicates the historical volatility of key valuation drivers, including revenue, gross margin, earnings before interest, and enterprise free cash flow. The standard deviation of each measure is calculated and scaled against last year's measure to arrive at a percentage deviation for each item. These percentage deviations are weighted equally to arrive at the corresponding fair value range for each stock, measured in percentage terms. The firm's performance is measured along the scale of LOW, MEDIUM, HIGH, and VERY HIGH. The ValueRisk™ rating for each firm also determines the fundamental beta of each firm along the following scale: LOW (0.85), MEDIUM (1), HIGH (1.15), VERY HIGH (1.3).

ValueTrend. This is a proprietary Valuentum measure. ValueTrend indicates the trajectory of the firm's return on invested capital (ROIC). Firms that earned an ROIC last year that was greater than the 3-year average of the measure earn a POSITIVE rating. Firms that earned an ROIC last year that was less than the 3-year average of the measure earn a NEGATIVE rating.

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