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

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

Square, Inc. Class A (SQ-US)

Data Processing & Outsourced Services

- We are initiating research coverage on SQ with a Buy rating.
- SQ's comprehensive commerce ecosystem will continue to drive growth.
- Since its inception, SQ has achieved impressive growth, built tremendous brand equity and market presence.
- SQ's Gross Payment Volume (GPV) continues to grow at an impressive rate.
- SQ's ability to innovate and integrate new products on an increasingly automated platform will be the key driver of future shareholder value creation.

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

Company Note

Square, Inc. Class A (SQ-US)

Data Processing & Outsourced Services

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

Research Action:	
Initiation of Coverage	
Rating:	**Buy**
Prior Rating:	**None**
Price 05/18/2017:	**$19.68**
52 Week High / Low:	**$20.69 $8.42**
Key Data: (TTM as of Mar-17)	
Excess Cash per Share:	**$2.46**
Annual Dividend:	**$0.00**
Dividend Yield:	**0.00%**
Ave. Volume (30 Day):	**7.6M**
Shares Outstanding:	**373.8M**
Float:	**352.7M**
Equity MV:	**$7,357.0M**
Sales TTM:	**$1,791.0M**
Beta:	**1.14**
EBITDAR:	**$285.6M**
NOPAT:	**($32.6)M**
Total Invested Capital:	**$1,093.8M**
Return on Capital:	**-3.97%**
Cost of Capital:	**6.94%**
Economic Profit:	**($89.6)M**
Market Value Added:	**$4,013.3M**
Current Operations Value:	**-$470.2M**
Future Growth Value:	**$5,577.3M**

- **We are initiating research coverage on SQ with a Buy rating.** SQ's leading market position driven by its innovative technologies and comprehensive commerce ecosystem will continue to drive significant growth and accelerating Business Performance. SQ is driving growth through its on-going process of automation and integration of payment, business process, and ordering services on a technologically advanced platform, capable of scaling up significantly. SQ's ongoing investment in new technology will drive increasing market share penetration and future revenue growth. SQ's ability to generate greater Economic Profit will come over time as its capital investment drives future increasing Return on Capital. While SQ currently trading at a premium valuation to our intrinsic value measures, its ability to innovate and integrate new products on an increasingly automated platform will be the key driver of future shareholder value creation.
- **SQ's comprehensive commerce ecosystem will continue to drive growth.** SQ's advanced point-of-sale (POS) software and services platform enables sellers to process payments, manage orders, inventory, employees, payroll, scheduling and reservations at multiple locations efficiently and cost-effectively on an integrated platform. Square Capital provides its payment customers financing based on a user's level of payment flow. This is extremely profitable to SQ and especially helpful to its customers as small business owners are usually cash constrained and have difficulty obtaining working capital. SQ's ability to offer financing to some of the smallest merchants is also another driver of new customer acquisitions. SQ's food ordering service, Caviar, helps restaurants grow revenue by gaining access to new customers and offering a convenient electronic ordering process. SQ's managed payment solutions enables sellers to accept all types of electronic payments in all forms including credit cards with magnetic strips, EMV (Europay, MasterCard, and Visa) security chips, mobile applications that incorporate Near Field Communication (NFC) and online through Square Invoices, Square Virtual Terminal, or the seller's website. SQ's technology focused approach will continue to enable the development of new products that empower its customers' business growth and operating efficiency. SQ's innovative ability will continue to be the driver of new customer acquisitions and further growth of revenue and profitability.

- **Since its inception, SQ has achieved impressive growth, built tremendous brand equity and market presence.** From its launch in 2009, SQ has pioneered micro-merchant electronic payment acceptance. SQ enables individually operated business to accept credit cards and other electronic form of payments and today continues to service larger numbers of sellers accepting larger size transactions across many industry groups. SQ services all types of industries including food and retail along with all types of personal and professional services. SQ will also drive growth through expansion outside of the US as it now services sellers in Australia, Canada and Japan and will expand further internationally as it starts to offer its services in Asia, Europe and Latin America. In March 2017, SQ launched its mobile payment service in the U.K. the U.K. market represents a significant opportunity as it has an extremely high concentration of small to medium-size businesses. International expansion will be a key to further growth as the US market is highly competitive and saturated with competition from payment processors like First Data (FDC-US, Buy rated) which also sells payment terminals and software to merchants of all sizes, VeriFone (PAY-US, Buy rated) which has a very competitive product line of POS and mobile payment terminals as well as PayPal (PYPL-US, Non-rated) which offers peer to peer payment services.
- **SQ's Gross Payment Volume (GPV) continues to grow at an impressive rate.** In 2014, SQ's GPV was $23.8 billion. It increased 50% to $35.6 billion in 2015 and further increased 40% in 2016 to $49.7 billion. The estimate for SQ's 2017 GPV is an increase of 20% to $60 billion. Further, SQ's transaction size has been increasing significantly as well. In Q4 2016 large seller transactions represented 42% of total GPV versus 39% in Q4 2015. The adoption of larger transactions from sellers will continue to increase as SQ has successfully positioned itself as a main stream payment process provider with its tablet-based POS system, not only for processing payments but for managing order flow as well. SQ's key value proposition to its customers are tools that help them grow and better manage their businesses. This will be the key driver of SQ's sustainable growth.

- **SQ's ability to innovate and integrate new products on an increasingly automated platform will be the key driver of future shareholder value creation.** SQ continues to develop new applications that incorporate more APIs (Application Program Interface) and SDKs (Software Development Kit) for use by both its internal product development team as well as external developers and business partners. SQ continues to integrate payment software and hardware with customer information and purchase histories to create an advanced marketing database for its customers. SQ helps its customers build customer profiles from its point-of-sale applications to enable better target marketing for its sellers. SQ continues to increase its functionality by creating more self-serve features. SQ is starting to incorporate artificial intelligence (AI) by using machine learning to automate internal and customer facing experiences. SQ is also launching industry specific POS platforms for retail and food service. SQ has made several acquisitions to expand its platform beyond just payment processing. These include scheduling, food ordering and delivery services, application development and photo sharing. SQ's competitive advantage is based on its ongoing integration of services onto its platform along with investment in new technology which will continue to drive new customer acquisitions and increasing revenue.

Acquisition History

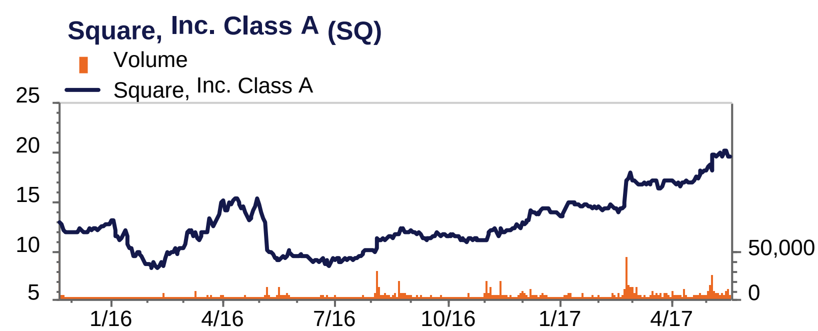
SQ has made several acquisitions to expand its platform beyond just payment processing. These include scheduling, food ordering and delivery services, application development and photo sharing.

Date	Company	Service Provided
Dec-2016	Main Line Delivery.com LLC	A restaurant ordering and delivery platform offering fast delivery with real time customer GPS tracking ability.
Mar-2015	Kili Technology Corp.	A developer of chips for secure payment processing and authentication enabling access and control for linked devices i.e. the Internet of things (IoT).
Feb-2015	FastBite Inc.	A developer of mobile applications for restaurants and food delivery applications.
Aug-2014	Caviar Inc.	A provider of online platforms enabling users to order food from local restaurants.
Feb-2014	Bookfresh LLC	A developer of appointment management and's applications and scheduling platforms.
Dec-2013	Evenly Inc.	A developer of electronic payment solutions allowing people to split bills and adjust payments to desired proportions.
Dec-2013	Viewfinder	A photo sharing application enabling users to organize share and relive your memories with people in an interactive group.

Investment Thesis

SQ continues to evolve from the pioneer of micro-merchant electronic transaction processing to a full-service technologically advanced POS platform. Before Square offered services, micro and cattle 20 merchants were unable to accept electronic based payments as merchant card services and traditional POS technology were too expensive and banks were unwilling to underwrite the cost of electronic payment systems because of low volumes. SQ unlocked and developed a large, underserved market. Since inception in 2009, Square has grown its annual transaction volume to almost $50 billion as of the end of 2016. Our buy rating is based on SQ's ability to drive growth through ongoing innovation within its advanced comprehensive commerce ecosystem and gain further market share as a mainstream merchant card service and business as a payment facilitation platform provider.

Price Chart



Source: FactSet Prices

Square, Inc. Class A (SQ-US)

Data Processing & Outsourced Services

Financial Data

Report Basis Reported Period Ending	LTM 0	LTM 0	LTM 03/31/2014	LTM 03/31/2015	LTM 03/31/2016	LTM 03/31/2017	NTM 03/31/2018	5 Yr Average	3 Yr Average	Current Trend
Net Sales Revenue	$0.0	$0.0	$0.0	$935.7	$1,395.8	$1,791.0	$975.2	$824.5	$1,374.2	$1,383.1
Sales Growth	0.00%	0.00%	0.00%	0.00%	49.18%	28.31%	-45.55%	15.50%	25.83%	-8.62%
Sales Growth Trend	0.00%	0.00%	0.00%	0.00%	29.51%	36.66%	-16.01%	13.23%	22.06%	10.33%
Operating Cash Flow (EBITDAR)	$0.0	$1.6	$6.1	$77.4	$140.3	$285.6	$111.4	$102.2	$167.8	$198.5
EBITDAR Margin	0.00%	0.00%	0.00%	8.28%	10.05%	15.95%	11.43%	6.86%	11.43%	13.69%
EBITDAR Growth	0.00%	0.00%	282.00%	1166.86%	81.23%	103.56%	-60.99%	326.73%	450.55%	21.28%
Net Operating Profit Before Tax (NOPBT)	$0.0	$0.0	$0.0	($107.6)	($123.0)	($32.6)	($71.9)	($52.6)	($87.7)	($52.3)
NOPBT Margin	0.00%	0.00%	0.00%	-11.50%	-8.81%	-1.82%	-7.38%	-4.43%	-7.38%	-4.60%
NOPBT Growth	0.00%	0.00%	0.00%	NA	-14.37%	73.49%	-120.59%	NA	Na	-23.55%
Cash Operating Income Tax	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Economic Tax Effective Rate	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Net Operating Profit After Tax (NOPAT)	$0.0	$0.0	$0.0	($107.6)	($123.0)	($32.6)	($71.9)	($52.6)	($87.7)	($52.3)
NOPAT Margin	0.00%	0.00%	0.00%	-11.50%	-8.81%	-1.82%	-7.38%	-4.43%	-7.38%	-4.60%
NOPAT Growth	0.00%	0.00%	0.00%	NA	-14.37%	73.49%	-120.59%	NA	NA	-23.55%
Cash & Equivalents	$0.0	$0.0	$0.0	$227.3	$472.3	$990.5	$831.9	$338.0	$563.4	$911.2
Total Assets	$0.0	$0.0	$0.0	$584.5	$945.1	$1,591.1	$1,336.4	$624.1	$1,040.2	$1,463.8
Non - Interest Bearing Liabilities (NIBLs)	$0.0	$0.0	$0.0	$286.4	$493.7	$602.3	$505.9	$276.5	$460.8	$554.1
Net Assets	$0.0	$0.0	$0.0	$298.1	$451.4	$988.8	$830.6	$347.7	$579.4	$909.7
Economic Asset Adjustments	$0.0	$0.0	$0.0	$118.3	$118.7	$105.0	$88.2	$68.4	$114.0	$96.6
Net Operating Assets	$0.0	$0.0	$0.0	$416.4	$570.0	$1,093.8	$918.7	$416.1	$693.4	$1,006.3
Debt & Debt Equivalents	$0.0	$0.0	$0.0	$149.1	$110.7	$444.9	$373.7	$140.9	$234.9	$409.3
Equity & Equivalents	$0.0	$0.0	$0.0	$268.1	$444.9	$627.9	$527.4	$268.2	$447.0	$577.7
Total Capital - Financing Sources	$0.0	$0.0	$0.0	$417.2	$555.6	$1,072.9	$901.1	$409.1	$681.9	$987.0
Capital Adjustments	$0.0	$0.0	$0.0	($0.8)	$7.9	$5.8	$4.9	$2.6	$4.3	$5.3
Net Capital Financing Sources	$0.0	$0.0	$0.0	$416.4	$563.5	$1,078.7	$906.0	$411.7	$686.2	$992.3
Net Working Capital	$0.0	$0.0	$0.0	$14.0	($79.5)	($22.8)	($19.1)	($17.7)	($29.4)	($20.9)
Cost of Net Working Capital	$0.0	$0.0	$0.0	$0.0	($2.0)	($3.5)	($3.0)	($1.1)	($1.9)	($3.3)
% of Revenue	0.00%	0.00%	0.00%	0.00%	-0.14%	-0.20%	-0.31%	-0.07%	-0.11%	-0.25%
Operational Capital	$0.0	$0.0	$0.0	$202.1	$120.2	$166.9	$140.2	$97.8	$163.1	$153.6
Cost of Operational Capital	$0.0	$0.0	$0.0	$0.0	$9.9	$10.0	$8.4	$4.0	$6.6	$9.2
% of Revenue	0.00%	0.00%	0.00%	0.00%	0.71%	0.56%	0.86%	0.25%	0.42%	0.71%
Productive Capital	$0.0	$0.0	$0.0	$277.6	$201.3	$243.4	$204.5	$144.5	$240.8	$224.0
Cost of Productive Capital	$0.0	$0.0	$0.0	$0.0	$14.7	$15.4	$13.0	$6.0	$10.0	$14.2
% of Revenue	0.00%	0.00%	0.00%	0.00%	1.05%	0.86%	1.33%	0.38%	0.64%	1.09%
Total Operating Capital	$0.0	$0.0	$0.0	$235.9	$167.5	$192.9	$162.0	$119.3	$198.8	$177.5
Cost of Total Operating Capital	$0.0	$0.0	$0.0	$0.0	$12.4	$12.5	$10.5	$5.0	$8.3	$11.5
% of Revenue	0.00%	0.00%	0.00%	0.00%	0.89%	0.70%	1.08%	0.32%	0.53%	0.89%
Non - Operating Capital	$0.0	$0.0	$0.0	$180.5	$402.6	$900.9	$756.7	$296.8	$494.7	$828.8
Cost of Non - Operating Capital	$0.0	$0.0	$0.0	$0.0	$17.9	$45.2	$38.0	$12.6	$21.0	$41.6
% of Revenue	0.00%	0.00%	0.00%	0.00%	1.28%	2.52%	3.89%	0.76%	1.27%	3.21%
Total Capital	$0.0	$0.0	$0.0	$416.4	$570.0	$1,093.8	$918.7	$416.1	$693.4	$1,006.3
Cost of Total Capital	$0.0	$0.0	$0.0	$0.0	$30.3	$57.7	$48.5	$17.6	$29.3	$53.1
% of Revenue	0.00%	0.00%	0.00%	0.00%	2.17%	3.22%	4.97%	1.08%	1.80%	4.10%
Cost of Capital (WACC)	0.00%	0.00%	0.00%	0.93%	6.15%	6.94%	6.94%	2.80%	4.67%	6.94%
Capital Structure										
Debt & Debt Equivalents	$0.0	$0.0	$0.0	$149.1	$110.7	$444.9	$373.7	$140.9	$234.9	$409.3
Debt & Debt Equivalents % of Market Value	0.00%	0.00%	0.00%	22.45%	18.60%	11.00%	11.00%	13.29%	13.29%	11.00%
Preferred Equity	$0.0	$0.0	$0.0	$514.9	$0.0	$0.0	$0.0	$103.0	$171.6	$0.0
Preferred Equity % of Market Value	0.00%	0.00%	0.00%	77.55%	0.00%	0.00%	0.00%	9.71%	9.71%	0.00%
Market Value of Common Equity	$0.0	$0.0	$0.0	$0.0	$484.6	$3,599.2	$3,023.1	$816.8	$1,361.3	$3,311.2
Common Equity % of Market Value	0.00%	0.00%	0.00%	0.00%	81.40%	89.00%	89.00%	77.00%	77.00%	89.00%
Total Economic Market Value (MV)	$0.0	$0.0	$0.0	$664.0	$595.4	$4,044.1	$3,396.8	$1,060.7	$1,767.8	$3,720.5
Total %	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%	60.00%	100.00%	100.00%
Excess Cash	$0.0	$0.0	$0.0	$180.5	$402.6	$900.9	$756.7	$296.8	$494.7	$828.8
Economic Enterprise Value	$0.0	$0.0	$0.0	$483.5	$192.8	$3,143.2	$2,640.1	$763.9	$1,273.2	$2,891.7
Average Capital	$0.0	$0.0	$0.0	$0.0	$490.0	$821.1	$992.3	$262.2	$437.0	$906.7
Capital Δ	$0.0	$0.0	$0.0	$416.4	$147.1	$515.1	($172.7)	$215.7	$359.6	$171.2

Source: Company Data, Financial statements and Tigress Research

Square, Inc. Class A (SQ-US)

Data Processing & Outsourced Services

Report Basis Reported Period Ending	LTM 0	LTM 0	LTM 03/31/2014	LTM 03/31/2015	LTM 03/31/2016	LTM 03/31/2017	NTM 03/31/2018	5 Yr Average	3 Yr Average	Current Trend
Return on Market Value (NOPAT / MV)	**0.00%**	**0.00%**	**0.00%**	**-16.20%**	**-20.66%**	**-0.81%**	**-0.68%**	**-7.53%**	**-12.56%**	**-0.74%**
Return on Enterprise Value (NOPAT / EV)	**0.00%**	**0.00%**	**0.00%**	**-22.25%**	**-63.80%**	**-1.04%**	**-0.87%**	**-17.42%**	**-29.03%**	**-0.95%**
Return on Capital (NOPAT / Average Capital)	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**-25.11%**	**-3.97%**	**-3.34%**	**-5.82%**	**-9.69%**	**-3.65%**
Cost of Capital (WACC)	**0.00%**	**0.00%**	**0.00%**	**0.93%**	**6.15%**	**6.94%**	**6.94%**	**2.80%**	**4.67%**	**6.94%**
Economic Return Spread	**0.00%**	**0.00%**	**0.00%**	**-0.93%**	**-31.25%**	**-10.91%**	**-9.16%**	**-8.62%**	**-14.36%**	**-10.03%**
Capital Charge	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$30.1**	**$56.9**	**$47.8**	**$17.4**	**$29.0**	**$52.4**
Economic Profit (EP)	**$0.0**	**$0.0**	**$0.0**	**($107.6)**	**($153.1)**	**($89.6)**	**($75.2)**	**($70.0)**	**($116.7)**	**($82.4)**
Economic Profit Improvment (EPI)	**$0.0**	**$0.0**	**$0.0**	**($107.6)**	**($45.6)**	**$63.6**	**$14.3**	**($17.9)**	**($29.9)**	**$39.0**
EP Growth	*0.00%*	*0.00%*	*0.00%*	*NA*	*-42.38%*	*41.52%*	*16.01%*	*NA*	*NA*	*28.76%*
Economic Profit Margin on Sales	*0.00%*	*0.00%*	*0.00%*	*-11.50%*	*-10.97%*	*-5.00%*	*-7.71%*	*-5.49%*	*-9.16%*	*-6.36%*
Economic Profit Per Share	**$0.00**	**$0.00**	**$0.00**	**($0.32)**	**($0.90)**	**($0.26)**	**($0.22)**	**($0.30)**	**($0.49)**	**($0.24)**
GAAP Earnings Per Share	**$0.00**	**$0.00**	**$0.00**	**($0.48)**	**($0.59)**	**($0.25)**	**($0.19)**	**($0.26)**	**($0.44)**	**($0.22)**
Excess Cash Per Share	**$0.00**	**$0.00**	**$0.00**	**$0.54**	**$1.21**	**$2.46**	**$2.06**	**$0.84**	**$1.41**	**$2.26**
Performance Drivers										
Sales Growth	0.00%	0.00%	0.00%	0.00%	49.18%	28.31%	-45.55%	15.50%	25.83%	-8.62%
Sales Growth Trend (ROC Sales Growth)	0.00%	0.00%	0.00%	0.00%	29.51%	36.66%	-16.01%	13.23%	22.06%	10.33%
EBITDAR Margin	0.00%	0.00%	0.00%	8.28%	10.05%	15.95%	11.43%	6.86%	11.43%	13.69%
EBITDAR Growth	0.00%	0.00%	282.00%	1166.86%	81.23%	103.56%	-60.99%	326.73%	450.55%	21.28%
NOPBT Margin	0.00%	0.00%	0.00%	-11.50%	-8.81%	-1.82%	-7.38%	-4.43%	-7.38%	-4.60%
NOPBT Growth	0.00%	0.00%	0.00%	NA	-14.37%	73.49%	-120.59%	NA	NA	-23.55%
NOPAT Margin	0.00%	0.00%	0.00%	-11.50%	-8.81%	-1.82%	-7.38%	-4.43%	-7.38%	-4.60%
NOPAT Growth	0.00%	0.00%	0.00%	NA	-14.37%	73.49%	-120.59%	NA	NA	-23.55%
Economic Profit Margin on Sales (EP / Sales)	0.00%	0.00%	0.00%	-11.50%	-10.97%	-5.00%	-7.71%	-5.49%	-9.16%	-6.36%
Economic Profit Growth	0.00%	0.00%	0.00%	NA	-42.38%	41.52%	16.01%	NA	NA	28.76%
Economic Return Spread (ROC-WACC)	0.00%	0.00%	0.00%	-0.93%	-31.25%	-10.91%	-10.27%	-8.62%	-14.36%	-10.59%
Economic Return Ratio (ROC / WACC)	0.00%	0.00%	0.00%	0.00%	-408.40%	-57.26%	-48.10%	-93.13%	-155.22%	-52.68%
Economic Profit Momentum (ΔEP/Capital)	0.00%	0.00%	0.00%	-25.83%	-8.09%	5.89%	1.58%	-5.60%	-9.34%	3.74%
Economic Profit Momentum Margin (ΔEP/Sales)	0.00%	0.00%	0.00%	-11.50%	-3.27%	3.55%	1.47%	-2.24%	-3.74%	2.51%
Capital Growth	0.00%	0.00%	0.00%	0.00%	0.00%	91.40%	-16.01%	18.28%	30.47%	37.70%
Capital Turns	0.00X	0.00X	0.00X	2.25X	2.48X	1.66X	1.08X	1.28X	2.13X	1.37X
EVC Acceleration Margin	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*-4.87%*	*4.56%*	*0.80%*	*-1.84%*	*-3.62%*	*2.84%*
EVC Acceleration Spread	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*12.98%*	*1.75%*	*-1.80%*	*-11.39%*	*8.91%*
Risk Factors										
Free Cash Flow (NOPAT - Δ Capital)	$0.0	$0.0	$0.0	($524.0)	($270.1)	($547.7)	$100.7	($268.4)	($447.3)	($223.5)
Free Cash Flow Rate (FCF / Capital)	0.00%	0.00%	0.00%	-125.83%	-47.93%	-50.78%	11.12%	-44.91%	-74.85%	-19.83%
Free Cash Flow Yield (FCF / MV)	0.00%	0.00%	0.00%	-78.91%	-45.37%	-13.54%	2.97%	-27.57%	-45.94%	-5.29%
Total Debt / Total Capital	0.00%	0.00%	0.00%	35.80%	19.65%	41.25%	41.25%	19.34%	32.23%	41.25%
Total Debt / EBITDAR	0.00%	0.00%	0.00%	192.52%	78.92%	155.76%	335.40%	85.44%	142.40%	245.58%
Excess Cash	$0.0	$0.0	$0.0	$180.5	$402.6	$900.9	$0.0	$296.8	$494.7	$450.5
Financial Leverage ((Total Debt - Excess Cash) /	0.00%	0.00%	0.00%	-4.74%	-49.01%	-11.28%	11.00%	-13.01%	-21.68%	-0.14%
Pension Leverage (Net Pension Liability / MV)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Equity Risk Index (S&P 500 = 1.00)	1.08	1.06	1.06	1.08	1.10	1.09	1.09	1.08	1.09	1.09
Stock Price Volatility	0.00	0.00	0.00	0.00	10.10	6.92	6.92	3.41	5.68	6.92
Sales Index (NL Sales)	0.00	0.00	0.00	6.84	7.24	7.49	6.88	4.31	7.19	7.19
Market Value Index (NL Market Value)	0.00	0.00	0.00	6.50	6.39	8.31	8.13	4.24	7.06	8.22
Size Index (NL Sales: MV)	0.00	0.00	0.00	6.67	6.82	7.90	7.51	4.28	7.13	7.70
Beta	1.12	1.09	1.10	1.12	1.15	1.14	1.14	1.12	1.14	1.14
TFP Adjusted Beta	1.08	1.06	1.06	1.08	1.10	1.09	1.09	1.08	1.09	1.09
Stock Price Volatility	0.00	0.00	0.00	0.00	10.10	6.92	6.92	3.41	5.68	6.92
Valuation Measures										
Total Economic Market Value (MV)	$0.0	$0.0	$0.0	$664.0	$595.4	$4,044.1	$3,396.8	$1,060.7	$1,767.8	$3,720.5
Economic Enterprise Value	$0.0	$0.0	$0.0	$483.5	$192.8	$3,143.2	$2,640.1	$763.9	$1,273.2	$2,891.7
Equity Market Value	$0.0	$0.0	$0.0	$0.0	$484.6	$3,599.2	$3,023.1	$816.8	$1,361.3	$3,311.2
Total Capital	$0.0	$0.0	$0.0	$416.4	$570.0	$1,093.8	$918.7	$416.1	$693.4	$1,006.3
Market Value Created MVC (MV - Capital)	$0.0	$0.0	$0.0	$247.6	$25.3	$2,950.3	$2,478.1	$644.6	$1,074.4	$2,714.2
MVC Margin (MVC / Sales)	0.00%	0.00%	0.00%	26.46%	1.82%	164.73%	254.12%	78.19%	78.19%	196.24%
MVC Spread (MVC / Capital)	0.00%	0.00%	0.00%	59.45%	4.45%	269.73%	269.73%	154.94%	154.94%	269.73%
Current EVC Value (EP / WACC)	$0.0	$0.0	$0.0	($11,572.3)	($2,491.1)	($1,291.3)	($1,084.6)	($2,499.5)	($2,499.6)	($1,187.9)
Current Operations Value COV	$0.0	$0.0	$0.0	($11,572.3)	($2,001.1)	($470.2)	($92.3)	($2,237.3)	($2,062.6)	($281.2)
Current Operations Value Per Share	$0.00	$0.00	$0.00	($34.86)	($11.74)	($1.38)	($0.31)	($7.42)	($7.33)	($0.87)
Future Growth Value (MVC - EVA Value)	$0.0	$0.0	$0.0	$12,236.3	$2,596.5	$4,514.3	$3,489.1	$3,298.0	$3,830.4	$4,001.7
Future Growth Value Reliance (FGV / MV)	0.00%	0.00%	0.00%	1842.78%	436.11%	111.63%	102.72%	310.93%	216.67%	107.56%
Share Price	$0.00	$0.00	$0.00	$0.00	$15.28	$17.28	$17.28	$6.51	$10.85	$17.28
Dividend Yield	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%				
Total Shareholder Return (TTM)	0.00%	0.00%	0.00%	0.00%	0.00%	13.09%	0.00%	-62.31%	66.67%	59.21%
MV to IC Ratio	0.00X	0.00X	0.00X	1.59X	1.04X	3.70X	3.70X	2.55X	2.55X	3.70X
EV / EBITDAR Multiple	0.00X	0.00X	0.00X	6.24X	1.37X	11.00X	23.69X	7.47X	7.59X	14.57X
EV / NOPBIT Multiple	0.00X	0.00X	0.00X	-4.50X	-1.57X	-96.39X	-36.70X	-14.51X	-14.51X	-55.32X
EV / NOPAT Multiple	0.00X	0.00X	0.00X	-4.50X	-1.57X	-96.39X	-36.70X	-14.51X	-14.51X	-55.32X
EV / EP Multiple	0.00X	0.00X	0.00X	-4.50X	-1.26X	-35.10X	-35.10X	-10.91X	-10.91X	-35.10X
Future Growth Value (% of MV)	0.00%	0.00%	0.00%	1842.78%	436.11%	111.63%	102.72%	310.93%	216.67%	107.56%
Current Operations Value (% of MV)	0.00%	0.00%	0.00%	-1742.78%	-336.11%	-11.63%	-2.72%	-210.93%	-116.67%	-7.56%
Market Value (COV + FGV %)	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Basic Shares Outstanding	0.0	332.0	332.0	332.0	170.5	341.6	301.6	301.6	281.3	321.6

Source: Company Data, Financial statements and Tigress Research

Tigress Research Methodology Overview

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

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

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

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

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

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

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

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

Glossary of Key Terms and Measures

Excess Cash per Share: Excess Cash per Share is the amount of excess cash divided by basic shares outstanding. Excess Cash consists of all cash and short-term securities less operating cash needed to run the business. Operating Cash is 5% of TTM net sales revenue.

EBITDAR: Earnings Before Interest, Taxes, Depreciation, Amortization, and Restructuring and Rent Costs. This is especially important when comparing companies that use a significant amount of leased assets like restaurants and retailers.

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

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

Return on Capital: Return on Capital equals NOPAT divided by Total Invested Capital. It is a key measure of operating efficiency. ROC quantifies how well a company generates cash flow relative to the capital invested in its business.

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

Economic Profit: Economic Profit is the net operating income after tax less the opportunity cost of the total capital invested. It is the most important driver of shareholder value.

Current Operations Value: Current Operations Value is the portion of market value based on the discounted present value of the current earnings stream assuming it remains constant forever.

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

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

Research: (646) 780-8880 research@tigressfp.com
40 Wall Street New York NY, 10005 (212) 430-8700 www.tigressfinancialpartners.com

Contacts

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

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

Peter Bergen
Institutional Sales and Trading
(646) 780-8915 Direct
pbergen@tigressfp.com

Christofer Dolis
Institutional Sales & Trading
(646) 780-8914 Direct
cdolis@tigressfp.com

Eric Kushner
Institutional Sales & Trading
(646) 780-8886 Direct
ekushner@tigressfp.com

Mario LoGrande
Institutional Sales & Trading
(646) 780-8905
mlogrande@tigressfp.com

Analyst Certification

I, Ivan Feinseth, hereby certify that the views expressed herein accurately reflect my personal views about the subject company and their securities and that I have not been and will not be directly or indirectly compensated for expressing specific recommendations or views in the report.

Research Disclosures

Employees, officers, directors and shareholders of Tigress Financial Partners LLC and of any of Tigress Financial Partners LLC affiliated entities that are not directly involved with the production of any Tigress Research report (s) and / or their family members may buy / sell or hold securities for their own accounts contrary to the current recommendation expressed in any report published by Tigress Research.

Tigress Financial Partners LLC as well as affiliates of Tigress Financial Partners LLC provide or may seek to provide investment banking, consulting and / or other services to the companies and / or the officers, directors, and employees of the companies that are the subject of research reports published by Tigress Research.

Tigress Financial Partners research personnel, including the analyst(s) responsible for the production of this report receive compensation based upon the overall profitability of the entire firm including profits derived from investment banking revenues.

Tigress Research Investment Rating Meanings and Distribution

Tigress Research employs a five-tier rating system for evaluating the investment opportunity and potential return associated with owning the common equity of rated firms within our research universe. The potential return is measured on a relative basis to the general market which is represented by the S&P 500 and to the subject company's industry peer group as indicated.

Rating Distribution (3/21/2017)

Rating:	Meaning:	Companies Under Coverage #	Companies Under Coverage %	Relationship Companies Under Coverage* #	Relationship Companies Under Coverage* %
Strong Buy:	Expect significant price gains in the price of the stock relative to its industry peer group and general market over the next 12 months.	16	13%	0	0
Buy:	Expect out-performance for the price of the stock relative to its industry peer group and general market over the next 12 months.	54	45%	4	80%
Neutral:	Expect little or no outperformance opportunity over the next 12 months.	45	37%	1	20%
Underperform:	Expect underperformance for the price of the stock relative to its industry peer group and general market over the next 12 months.	6	5%	0	0
Sell:	Expect price decline or significant relative market and industry underperformance over the next 12 months.	0	0%	0	0%
Not Rated	No Current Research Rating	NA	NA	62	NA
	Total	121	100%	67	100%

*Relationship Companies under research coverage are companies in which Tigress Financial Partners LLC or one of its affiliates has received compensation for investment banking or non-investment banking services from the company, affiliated entities and / or its employees within the past twelve months or expects to do so within the next three months.

Specific Disclosures for the companies that are the subject of this Report

Company:	Disclosure:

Key	Disclosure:
1.	The Analyst or a household member responsible for the production of this report currently holds a position in securities of the company that is the primary subject of this report in a personal, related or beneficial account.
2.	The Analyst or a household member responsible for the production of this report beneficially owns one percent or more in securities of the company that is the primary subject of this report in a personal, related or beneficial account.
3.	Tigress Financial Partners LLC together with its affiliates beneficially owns one percent or more of the security that is the primary subject of this report.
4.	The Analyst or a household member responsible for the production of this report currently serves as an officer, director or advisory board member of the company that is the primary subject of this report.
5.	An employee of Tigress Financial Partners LLC, its affiliates or subsidiaries currently serves as an officer, director or advisory board member of the company that is the primary subject of this report.
6.	Tigress Financial Partners LLC, its affiliates or subsidiaries is acting as manager/co-manager, underwriter, selling group member, placement or sales agent in regard to an offering of securities of this subject company/entity or one of its affiliates.
7.	Tigress Financial Partners LLC, its affiliates or subsidiaries has acted as manager/co-manager, underwriter, selling group member, placement or sales agent in regard to an offering of securities of this subject company/entity or one of its affiliates within the past 12 months.
8.	Tigress Financial Partners LLC or an affiliated entity currently receives compensation for non-investment banking services from the company and / or employees and / or affiliated persons of the company that is the primary subject of this report.
9.	Within the last 12 months, Tigress Financial Partners LLC, or an affiliated entity has received compensation for investment banking services from the company that is the primary subject of this report.
10.	Within the last 12 months, Tigress Financial Partners LLC, or an affiliated entity has received compensation for non-investment banking services from the company that is the primary subject of this report.
11.	Within the last 12 months, Tigress Financial Partners LLC, or an affiliated entity has received compensation for non-investment banking services from employees and / or affiliated persons of the company that is the primary subject of this report.
12.	In the next 3 months, Tigress Financial Partners LLC, or an affiliated entity, expects to receive compensation for investment banking services from the company that is the primary subject of this report.
13.	In the next 3 months, Tigress Financial Partners LLC, or an affiliated entity, expects to receive compensation for non-investment banking services from the company that is the primary subject of this report.
14.	Accounts managed by Tigress Financial Partners LLC, and / or an employee or an affiliated entity currently hold a position in the security that is the primary subject of this report.
15.	Tigress Financial Partners LLC and /or an affiliated entity currently has contracted the products and / or services of the company that is the primary subject of this report.

Research: (646) 780-8880 research@tigressfp.com
40 Wall Street New York NY, 10005 (212) 430-8700 www.tigressfinancialpartners.com

Research Report Disclaimer

This report is produced for informational purposes only and is not a solicitation to buy or sell any securities or services from any companies or issuers mentioned herein or to participate in any particular trading strategy or in any jurisdiction in which such an offer or solicitation would violate applicable laws or regulations.

Tigress research is distributed in the United States by Tigress Financial Partners LLC a registered broker dealer with the Securities and Exchange Commission (SEC) and a member of the Financial Industry Regulatory Authority (FINRA).

The information contained herein has been obtained or derived from sources believed to be reliable but its accuracy and completeness is not guaranteed and should not be the sole basis of any investment decision but only to be used as a factor in the investment decision process.

This report does not provide individually tailored investment advice and has been prepared without regard to the individual financial circumstances and investment objectives of any person(s) receiving it. The analysis and conclusions herein are not a complete analysis of every material fact respecting any company, industry, or security. The opinions expressed in this report reflect the judgment of the author(s) at this date and are subject to change without further notice. Tigress Financial Partners is under no obligation to provide updates to recipients of any previously issued reports or recommendations.

The market value and expected income from any investment may vary because of changes in interest rates or foreign exchange rates, securities prices or market indexes, operational or financial conditions of the underlying companies or other factors. Past performance is not indicative of future performance. Estimates of future performance, research ratings and target prices are based on assumptions that may not be realized. Unless otherwise stated, the cover page provides the most recently available closing price on the primary exchange for the subject company's securities/instruments.

Securities are offered through Tigress Financial Partners LLC a SEC Registered Broker Dealer and registered investment advisor and a member of FINRA/MSRB/SIPC which clears its securities transactions and provides custody of client accounts on a fully disclosed basis through Pershing LLC, a subsidiary of The Bank of New York Mellon.

Securities in your account are protected up to $500,000 of which $250,000 can be for claims for cash awaiting reinvestment. Please note that SIPC does not protect against loss due to market fluctuation. For additional information please go to www.sipc.org.

In addition to SIPC protection, Pershing provides Tigress Financial Partners LLC client accounts coverage in excess of SIPC limits from Lloyd's of London, in conjunction with other insurance companies. The excess of SIPC coverage provides an aggregate loss limit of $1 billion for eligible securities over all client accounts and a per-client loss limit of $1.9 million for cash awaiting reinvestment within the aggregate loss limit of $1 billion. The excess of SIPC coverage does not protect against loss due to market fluctuation. For additional information please go to www.lloyds.com.

Pershing's excess of SIPC coverage is provided by Lloyd's of London in conjunction with XL Specialty Insurance Co., Axis Specialty Europe Ltd., Great Lakes Reinsurance (UK) PLC and Ironshore Specialty Insurance Co.

About Tigress Financial Partners LLC

Tigress Financial Partners is a specialized financial services firm providing expertise and services in investment banking, investment research, asset management, corporate advisory and trade execution services.

Tigress Financial Partners provides its services to corporate entities, institutional investors, high-net worth individual investors, public and private pensions, federal, state and municipal governments.

Tigress Financial Partners LLC is a registered broker dealer and registered investment advisor with the Securities and Exchange Commission (SEC) and a member of the Financial Industry Regulatory Authority (FINRA), the Municipal Securities Rulemaking Board (MSRB) and a member of the Securities Investor Protection Corporation (SIPC).

Tigress Financial Partners LLC is a Woman-Owned Business Enterprise (WBE) and is nationally certified by WBENC, the Women's Business Enterprise National Council.

Tigress Financial Partners LLC is a wholly-owned subsidiary of Tigress Holdings LLC.

For further information please go to www.tigressfinancialpartners.com.