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Alphabet Inc. Class A (GOOGL-US)

Internet Software & Services

- We reiterate our Strong Buy rating on GOOGL and believe significant upside in the shares exists.
- Business Performance remains strong driven by significant advertising revenue growth at YouTube, TrueView and DoubleClick.
- YouTube is well positioned to remain the dominate force in video advertising.
- GOOGL will be one of the key companies to benefit from a possible tax holiday and international cash repatriation.
- GOOGL's ongoing CapX and development of new technologies will pay off as it simultaneously enhances the features and integration of its various search, advertising, mobile, and vehicle platforms.
- GOOGL's ongoing development and integration of machine learning will improve of all its product offerings.
- Waymo is Google's now standalone business line within Other Bets, that will be the cornerstone of the future self-driving car.
- GOOGL is currently on our Research Focus List and in our Focus Opportunity Portfolio.

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Company Note
Alphabet Inc. Class A (GOOGL-US)
 Internet Software & Services

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Research Action:

Reiterate Rating

Rating: Strong Buy
Prior Rating: Strong Buy
Price 01/27/2017: \$845.03
52 Week High / Low: \$867.00 / \$672.66
Key Data: (TTM as of Dec-16)
Excess Cash per Share: \$120.57
Annual Dividend: \$0.00
Dividend Yield: 0.00%
Ave. Volume (30 Day): 1.6M
Shares Outstanding: 687.0M
Float: 686.5M
Equity MV: \$580,566.1M
Sales TTM: \$89,920.0M
Beta: 1.11
EBITDAR: \$43,819.7M
NOPAT: \$19,827.3M
Total Invested Capital: \$136,867.9M
Return on Capital: 14.62%
Cost of Capital: 7.42%
Economic Profit: \$10,258.6M
Market Value Added: \$453,906.1M
Current Operations Value: \$275,080.9M
Future Growth Value: \$315,693.1M

- **We reiterate our Strong Buy rating on GOOGL.** GOOGL continues to dominate both desktop and mobile search while exhibiting strong advertising growth especially in video ads, along with growth in revenue from hardware, Play and Cloud. The recent increase in CapX and TAC will pay off in future quarters and years (as evidenced in the past) and believe GOOGL's dominant position in search and advertising together with its ability to innovate and ongoing investment in the development and acquisition of new and complementary technologies will drive future Economic Profit growth and greater shareholder value creation.
- **Business Performance remains strong driven by significant advertising revenue growth.** GOOGL reported very strong results for the quarter and year ending December 2016. Y/Y sales increased over 21% from \$73.9 billion to \$89.9 billion. We estimate a year over year increase over the NTM to \$106.1 billion. Economic Cash Flow (EBITDAR) increased Y/Y over 19% from \$37.3 billion to \$44.6 billion. We see operating cash flow margin of at least 50% and estimate Y/Y EBITDAR growth of 19% to \$53 billion over the NTM. NOPAT increased 23% Y/Y from \$16.1 billion to \$19.7 billion. We estimate at least 20% increase Y/Y to \$23.6 billion over the NTM. Return on capital from 13.8% Y/Y 14.6%. We believe this can increase to over 17% over the NTM.
- **YouTube is well positioned to remain the dominate force in video advertising.** YouTube consistently exhibits strong advertising revenue growth and viewership driven by video advertising across TrueView. More companies, individuals and an increasing number of celebrities are using the YouTube platform and launching their own YouTube channels.
- **GOOGL will be one of the key companies to benefit from a possible tax holiday and international cash repatriation.** GOOGL currently has over \$25 billion (\$120 per share) in excess cash. We believe if a temporary favorable tax rate is passed to incentivize companies with significant cash holdings overseas to bring them back to the US, GOOGL will significantly increase its stock buyback well above the current \$7 billion authorization.

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GOOGL continues to demonstrate incredible ability to innovate and execute.

- **GOOGL’s ongoing CapX and development of new technologies will pay off as it simultaneously enhances the features and integration of its various search, advertising, mobile, and vehicle platforms.** Online and mobile video continues to grow. In 2017, it is expected that digital advertising will exceed traditional television advertising. YouTube remains the dominant online and mobile platform. GOOGL uses the tagging of YouTube videos by Nielsen and comScore to measure the effectiveness of ads giving advertisers a much better way to measure return on advertising spend. TrueView bills advertisers only once consumers see the ads. This again helps advertisers better manage their spending and demonstrates how digital advertising is a far more cost-effective way of targeting the best possible customers.
- **GOOGL’s ongoing development and integration of machine learning will improve of all its product offerings.** Over time, machine learning will help interaction become simpler and more natural, as well as drive the functionality of Google Assistant. In addition, it will improve the results of search and things like YouTube recommendations along with improving functionality in Android OS and new products like Google Home. GOOGL has ongoing virtual reality (VR) product development partnerships with hardware manufacturers like ASUS, Huawei and Samsung.
- **Waymo is Google’s now standalone business line within Other Bets, that will be the cornerstone of the future self-driving car.** Android Auto is already incorporated into the infotainment systems of most new vehicles. Waymo is working with automakers in the creation of safety features and currently part of the collision avoidance system in the Chrysler Pacifica minivan.
- **GOOGL is on our Research Focus List and in our Focus Opportunity Portfolio.** GOOGL’s dominance in search, maps, digital advertising, overall management to information access will propel its lead in the future areas of home automation, automotive infotainment and so many other key areas, makes it one of our long standing must own stocks in the Internet, Software and Services Sector.

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Financial Data

Report Basis	LTM	LTM	LTM	LTM	LTM	LTM	LTM	NTM	5 Yr	3 Yr	Current
Reported Period Ending	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017		Average	Average	Trend
Net Sales Revenue	\$37,862.0	\$51,162.0	\$59,730.0	\$65,977.0	\$73,921.0	\$89,920.0	\$106,105.6	\$68,142.0	\$76,606.0	\$98,012.8	
Sales Growth	30.03%	35.13%	16.75%	10.46%	12.04%	21.64%	18.00%	19.20%	14.71%	19.82%	
Sales Growth Trend	27.95%	33.09%	24.10%	12.97%	11.41%	17.80%	19.46%	19.87%	14.06%	18.63%	
Operating Cash Flow (EBITDAR)	\$20,138.4	\$23,969.3	\$26,964.2	\$32,361.6	\$37,323.2	\$44,568.0	\$53,036.0	\$33,037.3	\$38,084.3	\$48,802.0	
EBITDAR Margin	53.19%	46.85%	45.14%	49.05%	50.49%	49.56%	49.98%	48.22%	49.70%	49.77%	
EBITDAR Growth	26.18%	19.02%	12.49%	20.02%	15.33%	19.41%	19.00%	17.26%	18.25%	19.21%	
Net Operating Profit Before Tax (NOPBT)	\$12,745.4	\$13,777.3	\$14,590.2	\$17,358.6	\$19,245.2	\$24,476.0	\$28,934.8	\$17,889.5	\$20,359.9	\$26,705.4	
NOPBT Margin	33.66%	26.93%	24.43%	26.31%	26.03%	27.22%	27.27%	26.18%	26.52%	27.24%	
NOPBT Growth	21.26%	8.10%	5.90%	18.97%	10.87%	27.18%	18.22%	14.20%	19.01%	22.70%	
Cash Operating Income Tax	\$2,677.1	\$2,672.5	\$2,296.8	\$3,350.2	\$3,165.3	\$4,735.1	\$5,353.0	\$3,244.0	\$3,750.2	\$5,044.0	
Economic Tax Effective Rate	21.00%	19.40%	15.74%	19.30%	16.45%	19.35%	18.50%	18.05%	18.36%	18.92%	
Net Operating Profit After Tax (NOPAT)	\$10,068.3	\$11,104.8	\$12,293.4	\$14,008.4	\$16,079.9	\$19,740.9	\$23,581.8	\$14,645.5	\$16,609.7	\$21,661.4	
NOPAT Margin	26.59%	21.71%	20.58%	21.23%	21.75%	22.15%	22.22%	21.45%	21.65%	22.09%	
NOPAT Growth	21.60%	10.30%	10.70%	13.95%	14.79%	22.77%	19.46%	14.50%	17.17%	21.11%	
Cash & Equivalents	\$45,416.0	\$49,557.0	\$58,717.0	\$64,395.0	\$74,049.0	\$86,333.0	\$103,131.1	\$66,610.2	\$74,925.7	\$94,732.1	
Total Assets	\$72,574.0	\$93,798.0	\$110,920.0	\$131,133.0	\$147,461.0	\$167,497.0	\$200,087.5	\$130,161.8	\$148,697.0	\$183,792.2	
Non - Interest Bearing Liabilities (NIBLs)	\$8,407.0	\$14,307.0	\$15,864.0	\$18,327.0	\$18,371.0	\$20,550.0	\$24,548.5	\$17,483.8	\$19,082.7	\$22,549.2	
Net Assets	\$64,167.0	\$79,491.0	\$95,056.0	\$112,806.0	\$129,090.0	\$146,947.0	\$175,539.0	\$112,678.0	\$129,614.3	\$161,243.0	
Economic Asset Adjustments	\$582.3	\$2,313.9	(\$1,106.1)	(\$811.8)	(\$956.4)	\$2,541.0	\$3,035.4	\$396.1	\$257.6	\$2,788.2	
Net Operating Assets	\$64,749.3	\$81,804.9	\$93,949.9	\$111,994.2	\$128,133.6	\$149,488.0	\$178,574.4	\$113,074.1	\$129,871.9	\$164,031.2	
Debt & Debt Equivalents	\$6,806.3	\$8,788.9	\$8,747.9	\$10,692.2	\$11,612.6	\$3,935.0	\$4,700.6	\$8,755.3	\$8,746.6	\$4,317.8	
Equity & Equivalents	\$58,145.0	\$71,715.0	\$87,309.0	\$104,500.0	\$120,331.0	\$139,036.0	\$166,088.7	\$104,578.2	\$121,289.0	\$152,562.4	
Total Capital - Financing Sources	\$64,951.3	\$80,503.9	\$96,056.9	\$115,192.2	\$131,943.6	\$142,971.0	\$170,789.4	\$113,333.5	\$130,035.6	\$156,880.2	
Capital Adjustments	(\$2,020.0)	(\$938.0)	(\$4,609.0)	(\$6,267.0)	(\$7,349.0)	\$2,541.0	\$3,035.4	(\$3,324.4)	(\$3,691.7)	\$2,788.2	
Net Capital Financing Sources	\$62,931.3	\$79,565.9	\$91,447.9	\$108,925.2	\$124,594.6	\$145,512.0	\$173,824.8	\$110,009.1	\$126,343.9	\$159,668.4	
Net Working Capital	\$4,281.1	\$5,956.1	\$7,389.5	\$8,086.9	\$8,494.1	\$11,087.0	\$13,244.2	\$8,202.7	\$9,222.6	\$12,165.6	
Cost of Net Working Capital	\$244.8	\$343.3	\$504.3	\$519.4	\$573.1	\$731.0	\$873.3	\$534.2	\$607.8	\$802.1	
% of Revenue	0.65%	0.67%	0.84%	0.79%	0.78%	0.81%	0.82%	0.78%	0.79%	0.82%	
Operational Capital	\$14,358.4	\$18,822.0	\$21,814.4	\$30,870.1	\$36,578.6	\$45,321.0	\$54,139.3	\$30,681.2	\$37,589.9	\$49,730.1	
Cost of Operational Capital	\$831.9	\$1,112.6	\$1,535.7	\$1,768.2	\$2,331.1	\$3,057.5	\$3,652.5	\$1,961.0	\$2,385.6	\$3,355.0	
% of Revenue	2.20%	2.17%	2.57%	2.68%	3.15%	3.40%	3.44%	2.80%	3.08%	3.42%	
Productive Capital	\$23,282.4	\$36,832.0	\$39,372.4	\$51,076.1	\$56,294.6	\$65,096.0	\$77,762.0	\$49,734.2	\$57,488.9	\$71,429.0	
Cost of Productive Capital	\$1,375.6	\$2,015.8	\$2,879.9	\$3,035.6	\$3,710.8	\$4,531.9	\$5,413.6	\$3,234.8	\$3,759.4	\$4,972.7	
% of Revenue	3.63%	3.94%	4.82%	4.60%	5.02%	5.04%	5.10%	4.68%	4.89%	5.07%	
Total Operating Capital	\$21,226.4	\$34,806.0	\$38,219.4	\$50,898.1	\$57,780.6	\$61,773.0	\$73,792.4	\$48,695.4	\$56,817.2	\$67,782.7	
Cost of Total Operating Capital	\$1,255.9	\$1,878.9	\$2,759.7	\$2,990.9	\$3,756.0	\$4,463.3	\$5,331.7	\$3,169.8	\$3,736.7	\$4,897.5	
% of Revenue	3.32%	3.67%	4.62%	4.53%	5.08%	4.96%	5.02%	4.57%	4.86%	4.99%	
Non - Operating Capital	\$43,522.9	\$46,998.9	\$55,730.5	\$61,096.2	\$70,353.0	\$81,837.0	\$97,760.3	\$63,203.1	\$71,095.4	\$89,798.7	
Cost of Non - Operating Capital	\$2,599.3	\$3,035.4	\$3,882.3	\$3,920.9	\$4,543.0	\$5,681.7	\$6,787.2	\$4,212.6	\$4,715.2	\$6,234.4	
% of Revenue	6.87%	5.93%	6.50%	5.94%	6.15%	6.32%	6.40%	6.17%	6.14%	6.36%	
Total Capital	\$64,749.3	\$81,804.9	\$93,949.9	\$111,994.2	\$128,133.6	\$143,610.0	\$171,552.7	\$111,898.5	\$127,912.6	\$157,581.4	
Cost of Total Capital	\$3,855.2	\$4,914.3	\$6,642.0	\$6,911.8	\$8,299.0	\$10,145.0	\$12,118.9	\$7,382.4	\$8,451.9	\$11,131.9	
% of Revenue	10.18%	9.61%	11.12%	10.48%	11.23%	11.28%	11.42%	10.74%	11.00%	11.35%	
Cost of Capital (WACC)	6.70%	6.71%	7.56%	6.71%	6.91%	7.47%	7.47%	7.07%	7.03%	7.47%	
Capital Structure											
Debt & Debt Equivalents	\$6,806.3	\$8,788.9	\$8,747.9	\$10,692.2	\$11,612.6	\$3,935.0	\$4,700.6	\$8,755.3	\$8,746.6	\$4,317.8	
Debt & Debt Equivalents % of Market Value	3.95%	4.48%	2.74%	3.14%	2.32%	0.78%	0.78%	2.35%	1.95%	0.78%	
Preferred Equity	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	
Preferred Equity % of Market Value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Market Value of Common Equity	\$165,351.1	\$187,425.3	\$310,125.1	\$329,768.5	\$488,852.2	\$499,761.7	\$597,002.1	\$363,186.6	\$439,460.8	\$548,381.9	
Common Equity % of Market Value	96.05%	95.52%	97.26%	96.86%	97.68%	99.22%	99.22%	97.65%	98.05%	99.22%	
Total Economic Market Value (MV)	\$172,157.3	\$196,214.2	\$318,873.1	\$340,460.7	\$500,464.8	\$503,696.7	\$601,702.7	\$371,941.9	\$448,207.4	\$552,699.7	
Total %	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
Excess Cash	\$43,522.9	\$46,998.9	\$55,730.5	\$61,096.2	\$70,353.0	\$81,837.0	\$97,760.3	\$63,203.1	\$71,095.4	\$89,798.7	
Economic Enterprise Value	\$128,634.4	\$149,215.3	\$263,142.6	\$279,364.6	\$430,111.8	\$421,859.7	\$503,942.4	\$308,738.8	\$377,112.0	\$462,901.0	
Average Capital	\$55,906.5	\$71,248.6	\$85,506.9	\$100,186.6	\$116,759.9	\$135,053.3	\$159,668.4	\$101,751.1	\$117,333.3	\$147,360.8	
Capital Δ	\$14,049.6	\$16,634.7	\$11,882.0	\$17,477.3	\$15,669.4	\$20,917.4	\$28,312.8	\$16,516.1	\$18,021.4	\$24,615.1	

Source: Company Data, Financial statements and Tigress Research

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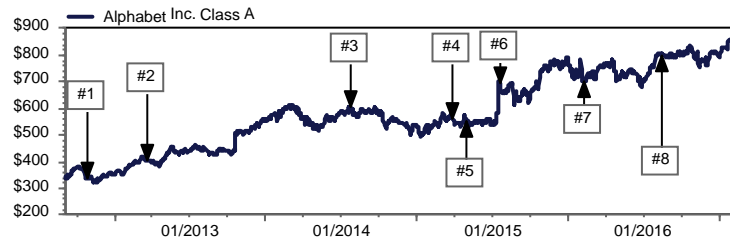
Report Basis	LTM	LTM	LTM	LTM	LTM	LTM	NTM	5 Yr	3 Yr	Current
Reported Period Ending	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	Average	Average	Trend
Return on Market Value (NOPAT / MV)	5.85%	5.66%	3.86%	4.11%	3.21%	3.92%	4.68%	4.15%	3.75%	4.30%
Return on Enterprise Value (NOPAT / EV)	7.83%	7.44%	4.67%	5.01%	3.74%	4.68%	5.59%	5.11%	4.48%	5.13%
Return on Capital (NOPAT / Average Capital)	18.01%	15.59%	14.38%	13.98%	13.77%	14.62%	17.46%	14.47%	14.12%	16.04%
Cost of Capital (WACC)	6.70%	6.71%	7.56%	6.71%	6.91%	7.47%	7.47%	7.07%	7.03%	7.47%
Economic Return Spread	11.31%	8.88%	6.82%	7.27%	6.86%	7.15%	8.54%	7.40%	7.09%	7.85%
Capital Charge	\$3,747.0	\$4,778.3	\$6,462.8	\$6,724.8	\$8,070.7	\$10,083.8	\$12,045.9	\$7,224.1	\$8,293.1	\$11,064.9
Economic Profit (EP)	\$6,321.3	\$6,326.6	\$5,830.5	\$7,283.5	\$8,009.3	\$9,657.1	\$11,536.1	\$7,421.4	\$8,316.6	\$10,596.6
Economic Profit Improvement (EPI)	\$1,506.1	\$5.3	(\$496.0)	\$1,453.0	\$725.7	\$1,647.8	\$1,879.0	\$667.2	\$1,275.5	\$1,763.4
EP Growth	31.28%	0.08%	-7.84%	24.92%	9.96%	20.57%	19.46%	9.54%	18.49%	20.02%
Economic Profit Margin on Sales	16.70%	12.37%	9.76%	11.04%	10.83%	10.74%	10.87%	10.95%	10.87%	10.81%
Economic Profit Per Share	\$9.80	\$9.68	\$8.77	\$10.78	\$11.70	\$32.63	\$38.97	\$14.71	\$18.37	\$35.80
GAAP Earnings Per Share	\$15.08	\$16.43	\$18.29	\$20.27	\$23.21	\$41.50	\$41.50	\$21.30	\$23.93	\$34.91
Excess Cash Per Share	\$67.19	\$71.42	\$83.30	\$89.99	\$102.35	\$116.87	\$139.61	\$92.79	\$103.07	\$128.24
Performance Drivers										
Sales Growth	30.03%	35.13%	16.75%	10.46%	12.04%	21.64%	18.00%	19.20%	14.71%	19.82%
Sales Growth Trend (ROC Sales Growth)	27.95%	33.09%	24.10%	12.97%	11.41%	17.80%	19.46%	19.87%	14.06%	18.63%
EBITDAR Margin	53.19%	46.85%	45.14%	49.05%	50.49%	49.56%	49.98%	48.22%	49.70%	49.77%
EBITDAR Growth	26.18%	19.02%	12.49%	20.02%	15.33%	19.41%	19.00%	17.26%	18.25%	19.21%
NOPBT Margin	33.66%	26.93%	24.43%	26.31%	26.03%	27.22%	27.27%	26.18%	26.52%	27.24%
NOPBT Growth	21.26%	8.10%	5.90%	18.97%	10.87%	27.18%	18.22%	14.20%	19.01%	22.70%
NOPAT Margin	26.59%	21.71%	20.58%	21.23%	21.75%	21.95%	22.22%	21.45%	21.65%	22.09%
NOPAT Growth	21.60%	10.30%	10.70%	13.95%	14.79%	22.77%	19.46%	14.50%	17.17%	21.11%
Economic Profit Margin on Sales (EP / Sales)	16.70%	12.37%	9.76%	11.04%	10.83%	10.74%	10.87%	10.95%	10.87%	10.81%
Economic Profit Growth	31.28%	0.08%	-7.84%	24.92%	9.96%	20.57%	19.46%	9.54%	18.49%	20.02%
Economic Return Spread (ROC-WACC)	11.31%	8.88%	6.82%	7.27%	6.86%	7.15%	9.99%	7.40%	7.09%	8.57%
Economic Return Ratio (ROC / WACC)	268.70%	232.40%	190.22%	208.31%	199.24%	195.77%	233.86%	205.19%	201.11%	214.81%
Economic Profit Momentum (ΔEP/Capital)	2.39%	0.01%	-0.54%	1.33%	0.58%	1.13%	1.08%	0.50%	1.02%	1.11%
Economic Profit Momentum Margin (ΔEP/Sales)	3.98%	0.01%	-0.83%	2.20%	0.98%	1.83%	1.77%	0.84%	1.67%	1.80%
Capital Growth	28.74%	26.43%	14.93%	19.11%	14.39%	16.79%	19.46%	18.33%	16.76%	18.12%
Capital Turns	0.60X	0.64X	0.65X	0.61X	0.59X	0.62X	0.61X	0.62X	0.61X	0.61X
EVC Acceleration Margin	5.17%	0.01%	-0.97%	2.43%	1.10%	2.23%	2.09%	0.63%	1.87%	2.30%
EVC Acceleration Spread	3.56%	0.01%	-0.70%	1.70%	0.72%	1.41%	1.39%	0.42%	1.25%	1.50%
Risk Factors										
Free Cash Flow (NOPAT - Δ Capital)	(\$3,981.3)	(\$5,529.8)	\$411.4	(\$3,468.9)	\$410.6	(\$1,176.5)	(\$4,731.0)	(\$1,870.7)	(\$1,411.6)	(\$2,953.7)
Free Cash Flow Rate (FCF / Capital)	-6.33%	-6.95%	0.45%	-3.18%	0.33%	-0.81%	-2.72%	-2.03%	-1.22%	-1.77%
Free Cash Flow Yield (FCF / MV)	-2.31%	-2.82%	0.13%	-1.02%	0.08%	-0.23%	-0.79%	-0.77%	-0.39%	-0.51%
Total Debt / Total Capital	10.82%	11.05%	9.57%	9.82%	9.32%	2.70%	2.70%	8.49%	7.28%	2.70%
Total Debt / EBITDAR	33.80%	36.67%	32.44%	33.04%	31.11%	8.83%	8.86%	28.42%	24.33%	8.85%
Excess Cash	\$43,522.9	\$46,998.9	\$55,730.5	\$61,096.2	\$70,353.0	\$81,837.0	\$0.0	\$63,203.1	\$71,095.4	\$40,918.5
Financial Leverage ((Total Debt - Excess Cash) / Pension Leverage (Net Pension Liability / MV))	-21.33%	-19.47%	-14.73%	-14.80%	-11.74%	-15.47%	0.78%	-15.24%	-14.00%	-7.34%
Equity Risk Index (S&P 500 = 1.00)	1.09	1.09	1.09	1.11	1.11	1.11	1.11	1.10	1.11	1.11
Stock Price Volatility	4.32	3.99	3.02	3.06	3.93	3.77	3.77	3.55	3.59	3.77
Sales Index (NL Sales)	10.54	10.84	11.00	11.10	11.21	11.41	11.57	11.11	11.24	11.49
Market Value Index (NL Market Value)	12.06	12.19	12.67	12.74	13.12	13.13	13.31	12.77	13.00	13.22
Size Index (NL Sales: MV)	11.30	11.51	11.84	11.92	12.17	12.27	12.44	11.94	12.12	12.35
Beta	1.13	1.13	1.14	1.17	1.16	1.16	1.16	1.15	1.16	1.16
TFP Adjusted Beta	1.09	1.09	1.09	1.11	1.11	1.11	1.11	1.10	1.11	1.11
Stock Price Volatility	4.32	3.99	3.02	3.06	3.93	3.77	3.77	3.55	3.59	3.77
Valuation Measures										
Total Economic Market Value (MV)	\$172,157.3	\$196,214.2	\$318,873.1	\$340,460.7	\$500,464.8	\$503,696.7	\$601,702.7	\$371,941.9	\$448,207.4	\$552,699.7
Economic Enterprise Value	\$128,634.4	\$149,215.3	\$263,142.6	\$279,364.6	\$430,111.8	\$421,859.7	\$503,942.4	\$308,738.8	\$377,112.0	\$462,901.0
Equity Market Value	\$165,351.1	\$187,425.3	\$310,125.1	\$329,768.5	\$488,852.2	\$499,761.7	\$597,002.1	\$363,186.6	\$439,460.8	\$548,381.9
Total Capital	\$64,749.3	\$81,804.9	\$93,949.9	\$111,994.2	\$128,133.6	\$143,610.0	\$171,552.7	\$111,898.5	\$127,912.6	\$157,581.4
Market Value Created MVC (MV - Capital)	\$107,408.1	\$114,409.3	\$224,923.1	\$228,466.5	\$372,331.2	\$360,086.7	\$430,150.0	\$260,043.4	\$320,294.8	\$395,118.3
MVC Margin (MVC / Sales)	283.68%	223.62%	376.57%	346.28%	503.69%	400.45%	405.40%	381.62%	418.11%	403.13%
MVC Spread (MVC / Capital)	165.88%	139.86%	239.41%	204.00%	290.58%	250.74%	250.74%	232.39%	250.40%	250.74%
Current EVC Value (EP / WACC)	\$94,315.5	\$94,335.8	\$77,141.5	\$108,510.2	\$115,871.8	\$129,337.7	\$154,503.4	\$104,953.3	\$118,296.1	\$141,920.5
Current Operations Value COV	\$150,222.0	\$165,584.4	\$162,648.5	\$208,696.8	\$232,631.7	\$264,391.0	\$314,171.8	\$206,704.3	\$235,629.3	\$289,281.4
Current Operations Value Per Share	\$232.93	\$253.27	\$244.57	\$308.75	\$339.79	\$893.23	\$527.95	\$347.36	\$426.72	\$649.29
Future Growth Value (MVC - EVA Value)	\$21,935.4	\$30,629.9	\$156,224.6	\$131,763.9	\$267,833.1	\$239,305.7	\$287,531.0	\$165,237.6	\$212,578.1	\$263,418.3
Future Growth Value Reliance (FGV / MV)	12.74%	15.61%	48.99%	38.70%	53.52%	47.51%	47.79%	44.43%	47.43%	47.66%
Share Price	\$323.26	\$354.03	\$560.90	\$530.66	\$778.01	\$0.00	\$0.00	\$444.72	\$436.22	\$0.00
Dividend Yield	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-100.00%
Total Shareholder Return (TTM)	8.74%	9.52%	58.43%	-5.39%	46.61%	-100.00%	0.00%	0.00%	-1.91%	-100.00%
MV to IC Ratio	2.66X	2.40X	3.39X	3.04X	3.91X	3.51X	3.51X	3.32X	3.50X	3.51X
EV / EBITDAR Multiple	6.39X	6.23X	9.76X	8.63X	11.52X	9.47X	9.50X	9.35X	9.90X	9.49X
EV / NOPBIT Multiple	10.09X	10.83X	18.04X	16.09X	22.35X	17.24X	17.42X	17.26X	18.52X	17.33X
EV / NOPAT Multiple	12.78X	13.44X	21.41X	19.94X	26.75X	21.37X	21.37X	21.08X	22.70X	21.37X
EV / EP Multiple	20.35X	23.59X	45.13X	38.36X	53.70X	43.68X	43.68X	41.60X	45.34X	43.68X
Future Growth Value (% of MV)	12.74%	15.61%	48.99%	38.70%	53.52%	47.51%	47.79%	44.43%	47.43%	47.66%
Current Operations Value (% of MV)	87.26%	84.39%	51.01%	61.30%	46.48%	52.49%	52.21%	55.57%	52.57%	52.34%
Market Value (COV + FGV %)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Basic Shares Outstanding	644.9	653.8	665.0	675.9	684.6	296.0	595.1	595.1	552.2	445.5

Source: Company Data, Financial statements and Tigress Research

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Ratings History

Alphabet Inc. Class A (GOOGL-US)				
Item #	Date	Research Action	Rating	Price
#8	08/16/2016	Reiterate Rating	Strong Buy	\$801.19
#7	02/09/2016	Reiterate Rating	Strong Buy	\$701.02
#6	07/20/2015	Reiterate Rating	Strong Buy	\$692.84
#5	05/01/2015	Reiterate Rating	Strong Buy	\$551.16
#4	03/27/2015	Reiterate Rating	Strong Buy	\$557.55
#3	07/23/2014	Reiterate Rating	Strong Buy	\$605.19
#2	03/20/2013	Reiterate Rating	Strong Buy	\$407.75
#1	10/25/2012	Initiation of Coverage	Strong Buy	\$339.21



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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.

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Buy:	Expect out-performance for the price of the stock relative to its industry peer group and general market over the next 12 months.
Neutral:	Expect little or no outperformance opportunity over the next 12 months.
Underperform:	Expect underperformance for the price of the stock relative to its industry peer group and general market over the next 12 months.
Sell:	Expect price decline or significant relative market and industry underperformance over the next 12 months.

Rating Distribution (01/27/2017)

	Companies Under Coverage		Relationship Companies Under Coverage*	
	#	%	#	%
Strong Buy:	16	15%	0	0%
Buy:	49	44%	4	80%
Neutral:	38	36%	1	20%
Underperform:	6	5%	0	0%
Sell:	0	0%	0	0%
Total	109	100%	5	100%

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Company:	Disclosure:
Alphabet Inc. Class A (GOOGL-US)	14
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