HILLIARD LYONS

COMPANY UPDATE / ESTIMATE CHANGE

Pharmaceuticals
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Bristol-Myers Squibb Company

BMY – NYSE – Neutral – 3

Key Metrics

BMY - NYSE (as of 10/26/17)	$60.95
Price Target	N/A
52-Week Range	$46.01 - $66.09
Shares Outstanding (mm)	1,650
Market Cap. ($mm)	$99,954
1-Mo. Average Daily Volume (000s)	1,458
Institutional Ownership	70.1%
Debt / Total Capital	29.1%
ROE (TTM)	27.7%
Book Value / Share	$9.07
Price / Book Value	6.7x
Indicated Dividend / Yield	$1.56 2.6%
TTM Operating Margin	26.8%

Non-GAAP EPS FYE 12/31

	2016A	Prior 2017E	Curr. 2017E	Prior 2018E	Curr. 2018E
1Q	$0.74		$0.84A	$0.74	$0.85
2Q	$0.69		$0.74A	$0.77	$0.77
3Q	$0.77		$0.75A	$0.88	$0.77
4Q	$0.63	$0.63	$0.65	$0.81	$0.67
Year	$2.83	$2.97	$2.97	$3.20	$3.06
P/E	21.6x		20.5x		19.9x

Figures may not add up due to rounding

Revenue ($billions)

	2016A	Prior 2017E	Curr. 2017E	Prior 2018E	Curr. 2018E
1Q	$4.39		$4.93A	$4.71	$4.99
2Q	$4.87		$5.14A	$4.90	$5.12
3Q	$4.92		$5.25A	$5.11	$5.13
4Q	$5.24	$5.23	$5.32	$5.44	$5.44
Year	$19.43	$20.47	$20.65	$20.15	$20.67

Company Description *– Bristol-Myers Squibb Company is a multinational biopharmaceutical company focused on developing and marketing innovative medicines in the areas of oncology, immunology, cardiovascular, and fibrotic diseases. The company also sells products for the treatment of virologic infections.*

Solid Top Line Offset by Gross Margin Weakness

- **3Q17 Results:** BMY reported revenues of $5.25 billion, growth of 7% year-over-year. This beat our estimate of $5.17 billion and the Street consensus estimate of $5.20 billion. Non-GAAP EPS of $0.75 fell short of our estimate of $0.76 and the Street consensus of $0.77.
- **Positive Highlights:** Opdivo sales remained strong despite some headwinds, exceeding our estimate and the Street consensus. Sprycel revenues also surprised to the upside. Additionally, management increased the bottom end of non-GAAP EPS guidance for 2017 by a nickel.
- **Negative Highlights:** Yervoy missed our estimates, as domestic revenues actually declined sequentially. The gross margin fell short of expectations, coming in at 70.1% versus our estimate of 71.9% and the Street consensus of 72.0%. Even excluding a $70 million inventory write-down, the gross margin compression was about 50 basis points worse than we estimated. Core operating expenses (in GAAP terms) of $2.69 billion were higher than our estimate of $2.50 billion, mostly due to higher than expected R&D expenses.
- **Estimates:** We are increasing our 2017 revenue estimate to $20.65 billion versus our prior estimate of $20.47 billion and leaving our non-GAAP EPS estimate unchanged at $2.97. For 2018, we increased our revenue estimate to $20.67 billion from $20.15 billion but decreased our non-GAAP EPS estimate to $3.06 from $3.20.
- **Outlook and Valuation:** BMY has a volatile year coming up with several clinical trials set to read out, in particular Checkmate-227. Regardless of the outcome of the trial, we believe BMY is well-positioned in the oncology market longer-term due to their R&D commitment to combination therapies and especially biomarker research in what we expect to be a fragmenting market. Closing yesterday at 20.1X our next 12 months EPS estimates, we feel shares are fairly valued at this point and maintain our Neutral rating.

Note Important Disclosures on pages 8 and 9
Note Analyst Certification on page 8

ADDITIONAL COMMENTARY

Revenue Review			
Drug / Franchise *(in millions)*	**Our Estimate**	**3Q17 Results**	**3Q17 Y/Y Growth**
Baraclude	264	264	-13.7%
HCV	91	73	-80.7%
Reyataz	184	174	-26.9%
Sustiva	201	183	-33.5%
Empliciti	56	60	46.3%
Opdivo	1,188	1,265	37.5%
Sprycel	479	509	7.8%
Yervoy	335	323	13.3%
Orencia	633	632	10.5%
Eliquis	1,241	1,232	39.4%
Mature and Other	499	539	-2.0%
Total Revenue	**5,171**	**5,254**	**6.7%**

Source: Company Reports, Hilliard Lyons Estimates

Performance Review

- Revenue grew 7%, with a roughly 1% boost from currency swings. Growth was particularly strong in Europe (33%) followed by the U.S. (3%), while revenues in the rest of the world actually shrank 9%.
- The **Virology portfolio**, largely made up of older drugs off patent or nearing patent expiries, fell short of our estimates. The hepatitis C virus (HCV) franchise eroded faster than we anticipated, and the company doesn't appear to be ringing the register in China after being the first all-oral regimen to receive regulatory approval in the country. Inroads are difficult to make in China, but we fear the company may be missing the narrow window of opportunity, as Gilead and Merck are not far behind with competitive products. Reyataz and Sustiva continue to lose ground to other HIV rivals, and both drugs lose exclusivity in the U.S. at the end of the year.
- **Empliciti** grew 9% sequentially, nudging ahead of our estimate. Competitive pressures continue to limit opportunities for Empliciti, in our opinion.
- **Opdivo** performance was strong and exceeded both our estimate and the Street consensus, led by 14% international sequential growth. Management noted their second-line (2L) non-small cell lung cancer (NSCLC) market share in the U.S. is fairly stable in the high 30s. We were surprised to learn the eligible pool of patients for 2L NSCLC has only shrunk by 5% as a result of 1L treatment with Merck's Keytruda, but we expect that to accelerate over the next couple quarters. Management noted performance was strong in both renal cell carcinoma (RCC) and melanoma and sounded positive when discussing early trends in the recently launched indication of hepatocellular carcinoma (HCC).
- **Yervoy** missed our estimate due to a domestic sequential decline. International growth remained strong at 9% sequentially and 33% year-over-year. Management noted the Opdivo/ Yervoy combo has about 30% share of 1L melanoma while monotherapies (Opdivo or Keytruda) have about 40%, something for investors to consider as the combo looks to penetrate higher risk 1L (RCC) down the road.
- **Sprycel** revenue growth was strong both domestically and internationally, but this is set to reverse on the international front given the recent patent loss in Europe. We remind investors 4Q16 European revenues for Sprycel were approximately $100 million.

- **Orencia** growth remained strong and was in line with our estimates. The drug has an additional tailwind on the horizon as the FDA and the European Commission approved Orencia for the treatment of psoriatic arthritis. While materially helpful, we don't expect a substantial boost to Orencia sales from this increasingly competitive category.
- **Eliquis** growth was impressive even if it fell shy of our estimate. Eliquis is now the leading novel oral anticoagulant (NOAC) in new-to-brand share in several European countries and the number one NOAC in total prescriptions in the U.S., Japan, and Canada.
- The gross margin declined 132 basis points from 3Q16 to 70.1% but we note there was a one-time inventory write-down of $70 million due to HCV struggles. Excluding that, the gross margin would have been 71.4%, still falling short of our estimate of 71.9%. Management pointed to product mix (particularly Eliquis) as the primary source of the decline. As a reminder, Eliquis is part of an alliance with Pfizer and carries a gross margin around 50%.
- Core operating expenses came in higher than anticipated due to both MS&A and R&D. MS&A expenses were $1.15 billion versus our estimate of $1.07 billion, and R&D expenses were $1.54 billion versus our estimate of $1.42 billion. Management significantly boosted the 2017 guidance for R&D spending.
- With Other Income of $0.19 billion (we estimated $0.13 billion), GAAP pre-tax income was $1.18 billion versus our estimate of $1.35 billion. An effective tax rate of 27.6% led to GAAP EPS of $0.51 versus our estimate of $0.64. After non-GAAP adjustments of $0.43 billion and a non-GAAP tax rate of 22.9%, non-GAAP EPS were $0.75 versus our estimate of $0.76 and the Street consensus of $0.77.

Earnings Conference Call Notes

- Unsurprisingly, there were numerous questions about Checkmate-227, BMY's trial testing various combinations in 1L NSCLC. Many centered on timing as is typical, and many more than in the past centered on diagnostics and the potential for statistical analysis using tumor mutational burden (TMB). Frankly, management didn't disclose much when it came to timing or statistical analysis of the trial. They did note for other trials (Checkmate-9LA) that patients would be analyzed for TMB with Foundation Medicine's FoundationOne panel rather than whole exosome sequencing.
- We also felt there was more pipeline chatter than in the past. There is no denying 2018 will be a volatile year for BMY, for better or for worse. Without a doubt, in our view, Checkmate-227 will be the primary driver of the volatility. Additionally, after trial data rolls in, the market will start getting looks at early trends in market share for important indications such as NSCLC, driving more volatility around quarterly results. However, one underappreciated driver of volatility could be the amount of data generated by BMY's pipeline. Big news could come from several pipeline assets or potential competitors, such as the FGF-21 molecule, the IDO inhibitor, and relatlimab (LAG-3) as well as less appreciated assets such as the BTK inhibitor or the TYK2 inhibitor.

News Review

Listed below are key news items since the last quarterly financial report:

- Key items from the European Society for Medical Oncology (ESMO) Annual Congress, including Checkmate-214 discussion, can be found in our *ESMO 2017 Recap* report.
- BMY acquired IFM Therapeutics for $300 million upfront with possible additional payments up to $1.01 billion. BMY was attracted to IFM's preclinical STING and NLRP3 agonist programs focused on enhancing the innate immune response for treating cancer.
- Several **Opdivo collaborations** were announced. BMY and Clovis Oncology announced plans to **initiate a Phase 3 trial** testing Clovis' Rubraca combined with Opdivo as first-line (1L) maintenance treatments in ovarian and triple-negative breast cancer. The companies will also initiate a Phase 2 trial

testing the combo in castration-resistant prostate cancer. BMY and Daiichi Sankyo are testing Opdivo in combination with DS-8201 in HER2-positive breast and bladder cancers. BMY and AbbVie will test Opdivo and ABBV-399 in non-small cell lung cancer (NSCLC) that overexpresses c-Met. BMY and Halozyme will collaborate to create a subcutaneous delivery option of up to 11 drugs.

- **Opdivo regulatory actions** continued apace. The FDA approved the drug in 2L colorectal cancer with certain biomarkers (dMMR and MSI-H) as well as 2L liver cancer. The FDA also granted Priority Review to the Opdivo application for use in the adjuvant setting of melanoma. The Japan Ministry of Health, Labor and Welfare approved Opdivo in 2L gastric cancer.
- BMY named Karen Vousden, Ph.D. to the Board. Dr. Vousden's background is in cancer research and she is currently the Chief Scientist at Cancer Research UK. The company also appointed Saurabh Saha, M.D., Ph.D. as the Global Head of Translational Medicine, yet another sign of BMY's strong commitment to biomarker research, in our opinion. Dr. Saha was most recently a venture partner at Atlas Venture.

2017 GUIDANCE AND ESTIMATES UPDATE

- Revenue guidance remained the same, with management expecting an increase in the mid-single digits.
- The gross margin is still expected to be between 72% and 73% on a non-GAAP basis. The company noted the GAAP gross margin should be approximately 71.5%.
- Marketing, Selling & Administrative expenses are still expected to decrease in the mid- to high-single digit range. R&D expenses are now expected to increase in the 25-30% range on a GAAP basis versus a high-teens increase previously. Non-GAAP R&D expense guidance remained the same in the low-double digit range.
- With an effective tax rate of 25-26% (23% previously), BMY now expects GAAP EPS to be $2.36-$2.46 ($2.66-$2.76 previously). With an effective tax rate of 22% (21% previously), BMY expects non-GAAP EPS to be $2.95-$3.05 versus $2.90-$3.00 previously.

We are increasing our 2017 revenue estimate to $20.65 billion versus our prior estimate of $20.47 billion. However, our non-GAAP EPS estimate is unchanged at $2.97. For 2018, we increased our revenue estimate to $20.67 billion from $20.15 billion but decreased our non-GAAP EPS estimate to $3.06 from $3.20. Turning to 2019, we increased our revenue estimate to $22.71 billion from $22.00 billion but decreased our non-GAAP EPS estimate to $3.76 from $3.97. Key changes include:

- From a revenue perspective, the biggest change was an increase to Eliquis. Despite the modest miss this quarter, we continue to grow more confident in its longer-term market share among the NOAC class. We increased our Sprycel estimate as we continue to await a generic entrance to the European market. On the other hand, we lowered our HCV estimate due to rapid erosion and a lack of headway in China with competition not far behind. We also lowered Yervoy estimates as a result of stagnation for the Opdivo/ Yervoy combo in metastatic melanoma. We are pretty bullish on the combo in 1L RCC for higher risk patients that are PD-L1 positive but this is also offset by erosion in adjuvant melanoma as Opdivo takes share. Most other revenue changes, including Opdivo, were simply tweaks to incorporate this quarter.
- We decreased our gross margin estimate pretty substantially in both 2017 and 2018 and beyond. An increased Eliquis estimate also comes with gross margin pressure. Furthermore, we may have admittedly underappreciated the impact of the shrinking virology portfolio.
- We increased operating expense estimates for 2017 and 2018, driven by R&D. Due to an implied drastic decline in year-over-year MS&A expenses in 4Q17 based on guidance, we actually left that line item unchanged for FY18. However, between the substantial increase in R&D guidance and talk of the pipeline (including possible registrational studies for FGF-21), we significantly increased our R&D forecast; investors should note we still forecast a decline though.

VALUATION & RATING

BMY closed yesterday at 20.1X our next twelve months non-GAAP EPS estimate. Our forward P/E multiple model, which assesses the biopharmaceutical industry on the basis of risk and growth, suggests this P/E is just modestly higher than it should be. However, 2018 was naturally set up to be a tough year due to rapid erosion of the virology portfolio, so the next twelve months is not the most useful for multiples. Looking at longer term estimates and a discounted cash flow model suggests upside from the current price, but not quite enough for us to change our rating. Thus, we are maintaining our Neutral rating.

SUITABILITY

Bristol-Myers Squibb is a large and well-established biopharmaceutical company with a diversified portfolio. However, we believe their portfolio will become more concentrated in coming years. Further, their event risk has risen in the near term given upcoming critical clinical trial data (trial Checkmate-227). Thus, we assign BMY shares a suitability rating of 3.

RISKS & CONSIDERATIONS

- **Competition and innovation** – The biopharmaceutical business requires complex operations with many unique and uncertain aspects. A competitor or new company could produce new therapies that could displace BMY drugs.
- **Regulatory** – The biopharmaceutical industry is subject to an intense regulatory environment throughout a product life cycle. Regulatory actions against the company or an individual product may harm financial results.
- **Legal** – Product lawsuits are extremely common in the biopharmaceutical sector. An unfavorable court decision could hamper the ability to market a product or subject the company to earlier generic competition.

Prices of other stocks mentioned:

Merck & Company (MRK - $61.99)
Gilead Sciences (GILD - $77.88)
Daiichi Sankyo (DSKYF - $22.90)
AbbVie (ABBV - $89.56)
Clovis Oncology (CLVS - $74.35)
Halozyme (HALO - $17.01)
Foundation Medicine (FMI - $41.65)
Pfizer (PFE - $35.74)

Revenue Build												
In millions	**2015 A**	**2016 A**	**1Q17 A**	**2Q17 A**	**3Q17 A**	**4Q17 E**	**2017 E**	**2018 E**	**2019 E**	**2020 E**	**2021 E**	**2022 E**
Baraclude	1,312	1,192	282	273	264	258	1,077	782	626	501	401	320
HCV	1,603	1,578	162	112	73	62	409	217	170	122	80	52
Reyataz	1,139	912	193	188	174	166	721	409	237	142	85	51
Sustiva	1,252	1,065	184	188	183	175	730	244	122	98	78	63
Empliciti	3	150	53	55	60	63	231	286	328	344	361	379
Opdivo	942	3,774	1,127	1,195	1,265	1,261	4,848	5,151	6,825	8,020	9,223	10,422
Sprycel	1,620	1,824	463	506	509	513	1,991	1,889	1,959	1,591	687	328
Yervoy	1,126	1,053	330	322	323	327	1,302	1,426	1,533	1,610	1,556	1,385
Orencia	1,885	2,265	535	650	632	692	2,509	2,622	2,462	2,273	2,086	1,913
Eliquis	1,860	3,343	1,101	1,176	1,232	1,282	4,791	5,914	6,653	7,319	7,831	8,222
Other*	3,818	2,271	499	479	539	525	2,042	1,733	1,796	2,309	2,980	3,836
Total	**16,560**	**19,427**	**4,929**	**5,144**	**5,254**	**5,323**	**20,650**	**20,674**	**22,713**	**24,328**	**25,369**	**26,971**
% of Total												
Baraclude	7.9%	6.1%	5.7%	5.3%	5.0%	4.8%	5.2%	3.8%	2.8%	2.1%	1.6%	1.2%
HCV	9.7%	8.1%	3.3%	2.2%	1.4%	1.2%	2.0%	1.1%	0.8%	0.5%	0.3%	0.2%
Reyataz	6.9%	4.7%	3.9%	3.7%	3.3%	3.1%	3.5%	2.0%	1.0%	0.6%	0.3%	0.2%
Sustiva	7.6%	5.5%	3.7%	3.7%	3.5%	3.3%	3.5%	1.2%	0.5%	0.4%	0.3%	0.2%
Empliciti	0.0%	0.8%	1.1%	1.1%	1.1%	1.2%	1.1%	1.4%	1.4%	1.4%	1.4%	1.4%
Opdivo	5.7%	19.4%	22.9%	23.2%	24.1%	23.7%	23.5%	24.9%	30.1%	33.0%	36.4%	38.6%
Sprycel	9.8%	9.4%	9.4%	9.8%	9.7%	9.6%	9.6%	9.1%	8.6%	6.5%	2.7%	1.2%
Yervoy	6.8%	5.4%	6.7%	6.3%	6.1%	6.1%	6.3%	6.9%	6.8%	6.6%	6.1%	5.1%
Orencia	11.4%	11.7%	10.9%	12.6%	12.0%	13.0%	12.1%	12.7%	10.8%	9.3%	8.2%	7.1%
Eliquis	11.2%	17.2%	22.3%	22.9%	23.4%	24.1%	23.2%	28.6%	29.3%	30.1%	30.9%	30.5%
Other*	23.1%	11.7%	10.1%	9.3%	10.3%	9.9%	9.9%	8.4%	7.9%	9.5%	11.7%	14.2%

** Includes older products such as Abilify and Erbitux (2015 only) and our estimate of risk-adjusted revenues from the pipeline*
Source:Company Reports and Hilliard Lyons estimates

BRISTOL-MYERS SQUIBB												BMY: NEUTRAL
In billions (except share data)	2015 A	2016 A	1Q17 A	2Q17 A	3Q17 A	4Q17 E	2017 E	2018 E	2019 E	2020 E	2021 E	2022 E
Fiscal Period End	12/31/2015	12/31/2016	3/31/2017	6/30/2017	9/30/2017	12/31/2017	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022
Income Statement												
Net Revenue	**16.56**	**19.43**	**4.93**	**5.14**	**5.25**	**5.32**	**20.65**	**20.67**	**22.71**	**24.33**	**25.37**	**26.97**
Gross Margin %	*76.4%*	*74.5%*	*74.5%*	*69.6%*	*70.1%*	*71.8%*	*71.5%*	*71.2%*	*71.3%*	*71.4%*	*71.6%*	*72.1%*
Core Operating Expenses	10.8	9.9	2.4	2.8	2.7	3.0	10.9	10.1	10.1	10.3	10.6	11.1
Other (Income)/Expense	(0.2)	(1.3)	(0.6)	(0.5)	(0.2)	0.0	(1.3)	(0.9)	(0.9)	(1.1)	(1.1)	(1.1)
Total Operating Expenses	10.6	8.6	1.7	2.3	2.5	3.1	9.6	9.2	9.2	9.2	9.5	10.0
GAAP Operating Income	**2.1**	**5.9**	**2.0**	**1.3**	**1.2**	**0.8**	**5.2**	**5.5**	**7.0**	**8.2**	**8.6**	**9.5**
GAAP Operating Margin %	*12.5%*	*30.4%*	*39.7%*	*25.2%*	*22.5%*	*14.1%*	*25.1%*	*26.5%*	*30.8%*	*33.7%*	*34.1%*	*35.1%*
Operating Income ex. Spec. Items	**4.3**	**6.2**	**1.8**	**1.6**	**1.6**	**1.4**	**6.3**	**6.4**	**7.8**	**8.5**	**9.0**	**9.8**
Non-GAAP Operating Margin %	*25.8%*	*31.7%*	*35.9%*	*30.7%*	*30.6%*	*25.7%*	*30.6%*	*31.0%*	*34.4%*	*35.0%*	*35.4%*	*36.2%*
Non-GAAP Effective Tax Rate	*20.9%*	*22.0%*	*20.2%*	*22.4%*	*22.9%*	*21.3%*	*21.7%*	*20.9%*	*20.9%*	*21.0%*	*21.0%*	*21.0%*
Non-GAAP Net Income	**3.4**	**4.8**	**1.4**	**1.2**	**1.2**	**1.1**	**5.0**	**5.1**	**6.2**	**6.7**	**7.1**	**7.7**
Diluted Shares Outstanding	1.68	1.68	1.67	1.65	1.65	1.64	1.65	1.64	1.63	1.63	1.62	1.62
Non-GAAP Diluted EPS	**$1.98**	**$2.83**	**$0.84**	**$0.74**	**$0.75**	**$0.65**	**$2.97**	**$3.06**	**$3.76**	**$4.10**	**$4.33**	**$4.74**
GAAP Diluted EPS	$0.93	$2.65	$0.94	$0.56	$0.51	$0.34	$2.36	$2.61	$3.36	$3.95	$4.17	$4.58
Balance Sheet												
Cash and Equivalents	2.4	4.2	3.9	3.5	4.6	5.7	5.7	6.9	9.2	12.8	16.8	21.3
Other Current Assets	8.0	9.5	9.7	10.9	10.4	10.0	10.0	10.1	10.6	11.1	11.3	11.9
Total Current Assets	**10.4**	**13.7**	**13.6**	**14.3**	**15.0**	**15.7**	**15.7**	**17.0**	**19.8**	**23.9**	**28.1**	**33.2**
Net PP&E	4.4	5.0	5.0	4.9	5.0	5.4	5.4	6.3	7.0	7.9	8.7	9.5
Intangible Assets	8.3	8.3	8.2	8.1	8.1	8.1	8.1	8.1	8.1	8.2	8.2	8.2
Other Assets	8.6	6.8	6.2	6.0	5.8	5.9	5.9	6.0	6.0	6.2	6.3	6.3
Total Assets	**31.7**	**33.7**	**32.9**	**33.4**	**34.0**	**35.1**	**35.1**	**37.4**	**41.0**	**46.2**	**51.2**	**57.3**
Current Liabilities	8.0	8.8	8.5	9.0	9.4	10.4	10.4	9.6	10.8	11.1	11.2	11.8
Non-Current Liabilities	9.3	8.5	9.9	9.6	9.6	10.0	10.0	10.2	9.2	9.5	9.8	10.1
Total Liabilities	**17.3**	**17.4**	**18.4**	**18.6**	**19.1**	**20.4**	**20.4**	**19.8**	**20.0**	**20.6**	**21.0**	**21.8**
Total Shareholders' Equity	**14.4**	**16.3**	**14.5**	**14.8**	**14.9**	**14.7**	**14.7**	**17.6**	**21.0**	**25.6**	**30.2**	**35.5**
Cash Flow Statement												
Cash Flow from Operations	1.8	2.9	0.9	1.6	1.7	2.0	6.2	4.8	7.1	7.3	7.8	8.5
Cash Flow from Investing	(1.6)	1.5	(0.2)	(1.0)	0.1	(0.1)	(1.2)	(0.8)	(0.7)	(0.7)	(0.7)	(0.8)
Cash Flow from Financing	(3.4)	(2.4)	(1.0)	(1.0)	(0.7)	(0.8)	(3.5)	(2.8)	(4.0)	(3.0)	(3.1)	(3.2)
Free Cash Flow to Equity	**-0.1**	**1.7**	**2.3**	**1.0**	**1.6**	**1.8**	**5.1**	**4.0**	**5.1**	**6.6**	**7.0**	**7.7**

Source: Company Reports and Hilliard Lyons estimates

Additional information is available upon request.

Analyst Certification

I, Kurt A. Kemper, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject company(ies) and its (their) securities. I also certify that I have not been, am not, and will not be receiving direct or indirect compensation in exchange for expressing the specific recommendation(s) in this report.

Important Disclosures

Hilliard Lyons' analysts receive bonus compensation based on Hilliard Lyons' profitability. They do not receive direct payments from investment banking activity.

Investment Ratings:
Buy - We believe the stock has significant total return potential in the coming 12 months.
Long-term Buy - We believe the stock is an above average holding in its sector, and expect solid returns to be realized over a longer time frame than our Buy rated issues, typically 2-3 years.
Neutral - We believe the stock is an average holding in its sector, is currently fully valued, and may be used as a source of funds if better opportunities arise.
Underperform - We believe the stock is vulnerable to a price set back in the next 12 months.

Definitions of Suitabilities:
1. A large cap, core holding with a solid history.
2. A historically secure company which could be cyclical, has a shorter history than a "1" or is subject to event driven setbacks.
3. An above average risk/reward ratio could be due to small size, lack of product diversity, sporadic earnings or high leverage.
4. Speculative, due to small size, inconsistent profitability, erratic revenue, volatility, low trading volume or a narrow customer or product base.

	Hilliard Lyons Recommended Issues		Investment Banking Provided in Past 12 Mo.	
Rating	# of Stocks Covered	% of Stocks Covered	Banking	No Banking
Buy	39	32%	8%	92%
Hold/Neutral	74	60%	9%	91%
Sell	8	7%	0%	100%
Restriction	2	2%	100%	0%

As of 5 October 2017

Other Disclosures

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