Zacks Small-Cap Research

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Biomerica Inc (BMRA-OTCBB)

BMRA: Asian Resurgence Taking Longer

Current Recommendation	**Outperform**
Prior Recommendation	N/A
Date of Last Change	01/23/2013
Current Price (10/22/13)	$0.80
Target Price	**$2.15**

OUTLOOK

Biomerica has been profitable over ten of the last twelve quarters, has fairly regularly generated positive cash flow, and maintains a stellar balance sheet. We think it is clear that management and the board lead the company in a way with an eye on increasing shareholder value. We have come across few companies that have been in existence over 40 years, possess all of the positive characteristics of BMRA and yet trade at what we would characterize as an incredibly cheap valuation. We see very little to no downside risk in the share price at this level. We think the cheap valuation may have more to do with BMRA being a nano-cap and suffering from a lack of exposure rather than having anything to do with fundamentals.

SUMMARY DATA

52-Week High	**$1.25**
52-Week Low	**$0.75**
One-Year Return (%)	**9.64**
Beta	**0.94**
Average Daily Volume (sh)	**6,736**
Shares Outstanding (mil)	**7**
Market Capitalization ($mil)	**$6**
Short Interest Ratio (days)	**1.23**
Institutional Ownership (%)	**0**
Insider Ownership (%)	**25**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.00**
5-Yr. Historical Growth Rates	
Sales (%)	**7.2**
Earnings Per Share (%)	**N/A**
Dividend (%)	**N/A**
P/E using TTM EPS	**11.0**
P/E using 2014 Estimate	**N/A**
P/E using 2015 Estimate	**15.6**
Zacks Rank	**N/A**

Risk Level	**Above Avg.,**
Type of Stock	**Small-Value**
Industry	**Med-Drugs**

ZACKS ESTIMATES

Revenue
(in millions of $)

	Q1 (Aug)	Q2 (Nov)	Q3 (Feb)	Q4 (May)	Year (May)
2013	1.70 A	1.88 A	1.42 A	1.47 A	6.47 A
2014	1.01 A	1.17 E	1.22 E	1.32 E	4.71 E
2015					6.80 E
2016					9.20 E

Earnings per Share
(EPS is operating earnings before non recurring items)

	Q1 (Aug)	Q2 (Nov)	Q3 (Feb)	Q4 (May)	Year (May)
2013	$0.04 A	$0.03 A	-$0.01 A	$0.01 A	$0.07 A
2014	-$0.02 A	-$0.01 E	-$0.00 E	$0.01 E	-$0.03 E
2015					$0.05 E
2016					$0.11 E

Zacks Projected EPS Growth Rate - Next 4 Years % **28**

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WHAT'S NEW……

Q1 Results: ***China Sales Plunge, Now Modeling More Elongated Resurgence to Prior Levels***

Biomerica filed their 10-Q for the fiscal first quarter ending August 31, 2013. For the third straight quarter sales to Asia came in well below our estimate which resulted in a sizeable miss to revenue and EPS relative to our numbers.

As a reminder, during fiscal Q4 (ending 5/31/2013) BMRA entered into an agreement with a new distributor for Asia and ceased its relationship with their prior Asian distributor. As a result of the switch, sales to Asia fell 56% yoy (52% sequentially) in Q4. Biomerica notes that this new distributor has indicated that they expect to increase sales to the same levels as that of the prior distributor, however. Following the abrupt drop in sales to Asia in Q4, we had made some downward revisions to our modeled revenue, which reflected the expectation that sales to Asia would continue to fall on a yoy basis through the first half of fiscal 2014 but then begin to exhibit growth in the second half of the year.

Sales to Asia in fiscal Q1 2014 fell 85% yoy to $136k, while we modeled $586k in sales to Asia in Q1, representing a 35% contraction. The $450k difference in actual vs. estimated sales to Asia accounted for all (and slightly more) of the $421k difference between our modeled ($1.45 million) and actual ($1.01 million) total revenue for Q1. While we still expect sales to the new distributor to meet and eventually exceed legacy levels, given the much more abrupt drop in recent sales than we had anticipated, we have now elongated this ramp which is reflected in the revisions to our model.

Meanwhile, sales in every other territory in which BMRA breaks out revenue (Europe, U.S., S. America, Middle East) were very much in-line with our numbers with the U.S. actually somewhat stronger ($255k A vs. $196k E) than anticipated.

Total revenue fell 40% yoy (down 28% sequentially) in Q1 to $1.0 million and was about 29% below our $1.4 milion estimate. As noted, the entire miss was a result of the lower than anticipated sales to Asia, partially offset by a slight beat in U.S. sales.

Gross margin was 25.7% which was also well below our estimate of 32.2% and is a direct result of the lower revenue number due to the fixed-cost portion of COGS. Operating expenses were right in-line with our number. Net income and EPS of ($168)k and ($0.02) were below our $29k and $0.00 estimates.

Cash

Despite the somewhat disappointing financial results over the past few quarters, BMRA's cash position and balance sheet in general remain in very solid shape. As we've alluded to in the past, book value should continue to put a floor on valuation of the company. Biomerica exited Q1 with about $2.1 million in cash and equivalents, down from $2.5 million at the end of fiscal 2013. Cash flow from operating activities was an outflow $376k in Q1 but excluding changes in working capital (which included a $214k increase in inventory in the quarter), cash from operating activities was an outflow of only $120k.

As a reminder, BMRA has fairly consistently generated positive cash flow, including $1.4 million in fiscal 2013. The company also remains debt free. Book value at the end of Q1 stood at $5.7 million or approximately $0.78/share.

Maintaining Outlook / Recommendation

As noted, we have again made some downward revisions to our modeled revenue - which reflects our updated supposition that sales to Asia may not reach legacy levels during the latter part of the current year - which had been our prior assumption. We now look for a somewhat longer ramp in sales to Asia. And while we expect to see near and long-term revenue growth from all of the company's other itemized geographic territories, some of which we think will come from new product approvals, we think the current fiscal year may show an overall contraction in revenue as the new Chinese distribution arrangement takes time to gear up.

We now look for 2014 revenue and EPS of $4.7 million (-27%) and ($0.03) and for this to grow to $10.8 million and $0.15 in fiscal 2017. The changes to our model has resulted in our valuation falling from $2.50/share to $2.15/share. The stock price has retreated to abut $0.80 following the earnings release which is approximately book value. We are maintaining our Outperform rating. Our price target has moved to $2.15/share.

Over the mid-to-longer terms, however, we think Biomerica will be looking to further exploit their existing technology. We view management's priorities as such that they will be focused on accelerating growth through

bringing higher potential and novel products to market - in this morning's earnings release the company alludes to a GI product which we think likely fits into this growth strategy. We note that our current model does not incorporate an assumed contribution from "home run" type products - although we think given the company's expertise in certain disease areas (including GI, foodborne, women's health, and infectious disease), along with patentable and perhaps underexploited technology platforms and management's renewed focus on accelerating growth over the long-term, that big-winner type products could very well materialize over the coming years.

BACKGROUND

For over 40 years Biomerica, Inc. (BMRA) has been involved in the development, manufacturing and marketing of medical diagnostics products for the early detection and monitoring of chronic diseases and medical conditions. Their product line encompasses various diseases and conditions including tests for gastrointestinal/foodborne diseases, infectious diseases, diabetes, women's health, hormone levels and even some esoteric diseases. The company's particular focus is on gastrointestinal/foodborne diseases and diabetes.

The tests are sold into two major market segments, clinical lab and point-of-care (POC). Demand for the clinical lab products mainly comes from hospitals and clinical and research laboratories. The POC segment, which may hold particularly attractive opportunities for growth given recent technological advancements which have significantly improved speed and accuracy of certain rapid tests, includes the over-the-counter retail channel as well as physician offices. Biomerica sells through distributors as well as directly. The majority of Biomerica's revenue is generated from international sales, particularly from Europe and Asia, while domestic sales account for approximately 15% - 20% of total revenue.

Biomerica recently divested the bulk of their internal research and development department in order to focus on a strategy of in-licensing technology and products from other companies, universities and institutions which they expect to result in a greater rate of revenue and earnings growth. The company, with headquarters and administrative offices in Southern California, maintains a portion of their manufacturing facilities in Mexico which helps reduce COGS and operating costs. Since the R&D divestiture in July 2010 BMRA has made meaningful progress in pursuing accelerated growth including the acquisition of several new high potential products as well as consummating additional distribution agreements.

Relative to their financials, revenue grew 24% in fiscal 2012 and was up 6% in 2013. While the first half of fiscal 2013 exhibited strong 19% growth, revenue in the second half contracted by 6%, largely due to a change in distributors in China. While we had expected the revenue contraction due to the swap in distributors in China to be a fairly short-term issue, given the even weaker sales in Asia in Q1 2014, we now think this may be more prolonged than earlier anticipated.

Biomerica has been profitable over ten of the last twelve quarters, has fairly regularly generated positive cash flow (from both an operational cash flow and free cash flow standpoint), and maintains a stellar balance sheet. Add to this the fact that executive compensation is relatively meager (possibly the lowest of any company we cover in the med-tech space), a minimal outstanding share count (7.3 million), and obvious diligence on growing revenue while leveraging their cost base and we think all this is clear evidence that management and the board lead the company in a way with an eye on increasing shareholder value. In our experience, we have come across few companies that have been in existence over 40 years (as BMRA has) and possess all of these positive characteristics yet trade at what we would characterize as an incredibly cheap valuation. As of today's market price BMRA is valued at just 1.0x book value and only 11x trailing EPS.

Given that BMRA trades at roughly book value, has liquid and high quality assets and no debt, and is generating positive cash flow (i.e. - book value is increasing), we see very little to no downside risk in the share price at this level. We think the cheap valuation may have more to do with BMRA being a nano-cap and suffering from a lack of exposure rather than having anything to do with fundamentals. We think the current market value grossly undervalues the company and recommend accumulating the shares up to our $2.00 price target.

PRODUCTS



biomerica.com

Biomerica's diagnostic test kits and components are used to analyze blood, urine, or fecal specimens from patients in the diagnosis of various diseases and other medical complications, or to measure the level of specific hormones, antibodies, antigens or other substances, which may exist in the human body in extremely small concentrations.

The company sells their diagnostic tests worldwide into two major market segments; clinical laboratories and POC. The clinical laboratories tests are enzyme linked immunosorbent assays (ELISA) which are often processed using sophisticated instrumentation at professional and research laboratories. By contrast the POC tests are rapid tests which require minimal handling or special knowledge and can be performed at home or in the physicians office with results typically available within minutes.

Roughly 30% (14) of Biomerica's products are FDA approved for sale in the U.S. In addition to being sold in the U.S., some of these FDA-approved tests are also sold overseas. Of the FDA-approved products, three (Drugs-of-Abuse, Breast Self Exam, and Fecal Occult Blood) are approved for sale through the OTC (retail) channel, three (Rapid Pregnancy, Rapid Ovulation, and Fecal Occult Blood) are CLIA-waived and are used in physicians' offices and the remaining eight are sold to the clinical lab channel.

Similar to the FDA-approved product mix, roughly 60% - 65% of the non-FDA products are sold to the clinical lab channel with the remainder roughly evenly split between physician's office and OTC. The non-FDA cleared clinical lab products can only be sold as analyte specific reagents (ASR) and labeled "for research purposes only" - the distinction being that (among other things) the manufacturer is restricted in the claims that they can make regarding the performance or validation of the products. For clarity, ASR's are a huge part of in-vitro diagnostics (IVD) testing in the U.S. and are widely accepted as scientifically valid. The non-FDA cleared POC tests, however, can not be sold in the U.S. While Biomerica does not disclose revenue by product or customer channel, based on the geographical mix of sales and the fact that the non-FDA cleared POC tests can not be sold in the U.S., we think it's safe to assume that the clinical lab products account for the majority of total revenue. In the U.S., however, the POC products (particularly through the OTC channel) likely account for the majority of domestic sales.



biomerica.com

U.S. product sales have recently accounted for approximately 15% - 20% of Biomerica's total revenue. Asia and Europe account for the majority of the 80% - 85% of revenue that is generated overseas with a small contribution from the Middle East, South America and other international areas. Almost all of BMRA's revenue growth over the last two years has come from sales in Asia.

Non FDA-cleared Tests	FDA-cleared Tests
Allerquant™ IgG Food Intolerance ELISA Kit	ACTH ELISA Kit
Allerquant™ IgG Food Additives Kit	Calcitonin ELISA Kit
GAP™ IgM H. Pylori ELISA Kit	Erythropoietin ELISA Kit
GAP™ IgA H. Pylori ELISA Kit	GAP™ IgG H.Pylori ELISA Kit
Gliadin IgG ELISA Kit	hs-CRP ELISA
Gliadin IgA ELISA Kit	Myoglobin ELISA
Transglutaminase IgA ELISA Kit	PTH (Intact) ELISA Kit
Isletest™ GAD ELISA Kit	Troponin I ELISA
Isletest™ ICA ELISA Kit	AWARE™ Breast Self-Examination Kit
Isletest™ IAA ELISA Kit	Drugs-of-Abuse Rapid Tests
Intrinsic Factor Autoantibodies ELISA Kit	EZ Detect™ Fecal Occult Blood Test (OTC package)
LKM-1 Autoantibodies IgG ELISA Kit	EZ-HCG™ Rapid Pregnancy Test
Camplylobacter ELISA Kit	EZ-LH™ Rapid Ovulation Test
Cryptosporidium ELISA Kit	EZ Detect™ Fecal Occult Blood Test (Physician's package)
E. coli O157 ELISA Kit	
Giardia ELISA Kit	
Verotoxin ELISA Kit	
C. difficile Antibody ELISA Kit	
E. histolytica ELISA Kit	
TPMT ELISA Kit	
Fortel™ Cat Allergy Test	
Fortel™ Dog Allergy Test	
Fortel™ Microalbumin Test	
Fortel™ Ultra Midstream Pregnancy Test	
Fortel™ Ovulation Test	
EZ-PSA™ Rapid Test	
EZ-H. Pylori™ Rapid Test	
H. pylori Antigen Test	
Listeria Rapid Test	
Shigella Rapid Test	
Salmonella Rapid Test	

MARKET	
	Clinical Lab
	Physicians Office
	OTC

Sales / Distribution

The OTC products are sold under Biomerica's brand name in some of the largest chain retailers including Walgreen's. The professional POC products are sold through distributors which sell them to physician's offices/labs.

The clinical lab channel is serviced in the U.S. mostly through direct sales to reference labs and diagnostic companies. Outside the U.S. the clinical lab products are sold through third party distributors. Validation and selection of the "right" distributors in attractive demographic markets has proven to be successful for BMRA and has been a major catalyst behind the recent revenue growth in Asia. We expect that the company will continue to implement this strategy in other international markets including in Eastern Europe and South America.

MARKET

In vitro diagnostics encompass a huge portion of all professional and OTC medical testing and includes reagents, test kits, instrumentation and other testing devices, products, supplies and services. Biomerica's target markets and products are part of the IVD segment.

The worldwide market for IVD products is estimated at almost $60 billion and growing at about 10% annually. Kalorama Information, an independent research firm, estimated that growth of IVD has been even more robust outside the U.S., particularly in parts of Asia, Europe and Latin America (see chart below, from Kalorama Information). Similarly, Biomerica has recently experienced significant revenue growth in Asia.

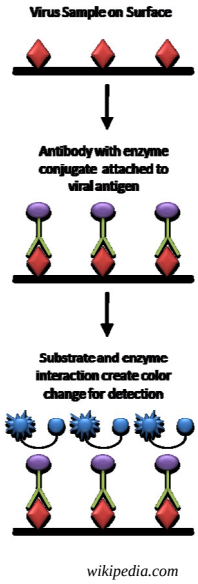
Worldwide In Vitro Diagnostic Reagent Sales by Country/Region
2007-2012
(Sales $ MM)

	Sales 2007	%Mkt	Sales 2012	% Mkt	CAGR
N. America	$18,450	44	$23,090	41	5
EU 15/W. Europe	12,550	31	14,895	26	6
Japan	4,615	11	5,065	9	2
China	1,015	2	2,175	4	16
L. America*	830	2	1,695	3	15
India	520	1	1,000	2	14
E. Europe	710	1	950	2	9
ROW	4790	8	7446	13	9
Total	$41,950	100	$56,316	100	6

* includes Mexico

ELISA Remains Dominant in Clinical Lab Segment

Biomerica's clinical laboratory products consist of ELISA analytes and kits. ELISA diagnostics typically involves multi-well microtiter plates in which the wells of the plate are coated with a specific antigen. The plates are then filled with a patient sample (ie. - plasma, serum, etc) and the antibodies in the sample that are against the antigens will bind to the antigens. A detection antibody is then added which is covalently linked to an enzyme. Finally, an enzymatic substrate is added which interacts with the enzyme and generates visible color (read with the naked eye or an electronic plate reader) and indicates the quantity of antigen in the sample.



wikipedia.com

ELISA has been in existence for about 40 years and has had a long reputation for accuracy, performance and reproducibility. Other technologies have recently evolved such as molecular diagnostics that have shown improved sensitivity and potentially great promise in early detection of diseases such as cancer. Nonetheless, ELISA remains the dominant testing format in the clinical lab diagnostics space and is not likely to lose that designation anytime soon.

Dozens of companies compete in the ELISA space which includes manufacturers of reagents, kits, and instrumentation. Instrument manufacturers (which include major corporations such as Siemens, Roche, and Abbott among others) generally also supply their installed base with proprietary consumables which can provide a certain level of (capitve) customer loyalty and potentially bigger margins. Smaller players such as Biomerica which don't have the benefit of large R&D and marketing departments or feeding an installed base can effectively compete on product quality/consistency, product menu (including more esoteric tests which the major players may have little or no presence in), geographical diversification (particularly by exploiting ex-U.S. markets including emerging countries where the "majors" may have less of a competitive edge) and pricing as well as providing more intangible benefits such as superior customer service and prompt/reliable shipping.

According to data from Kalorama Information, the infectious disease assay category dominates in terms of share of the worldwide market for lab-based tests. The lab-based diagnostics experiencing the greatest growth over the last five years included glucose/HbA1C, autoimmune, cancer, infectious disease, and cardiac (see chart below, from Kalorama Information).

Worldwide Lab-Based Immunoassay Sales by Analyte Type 2007-2012 (ID, Tumor Markers, Cardiac Markers, Diabetes/HbA1c, Thyroid, Proteins, Autoimmune, Anemia, Therapeutic Drugs, Fertility, Allergy, Drugs of Abuse)

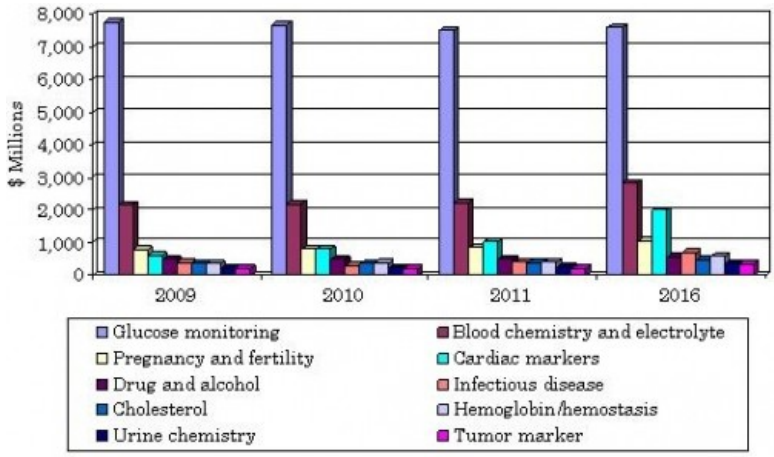
(Sales $ MM)

	IVD Sales 2007	% Mkt	IVD Sales 2012	% Mkt	CAGR
Infectious Diseases	2,500	37	3,325	37	6
Tumor markers	740	11	1125	13	9
Cardiac markers	785	12	1050	12	6
Diabetes/HbA1c	370	3	590	7	10
Thyroid	365	6	465	5	5
Proteins	330	5	420	5	5
Autoimmune	250	4	410	5	10
Anemia	305	5	390	4	5
Therapeutic Drugs	310	5	335	4	2
Fertility	280	5	330	4	3
Allergy	260	4	290	3	2
Drugs of Abuse	190	3	200	2	1
TOTAL	6,685	100	8,930	100	6

POC Growing On Improved Performance and Speed

The point-of-care market includes tests used by professionals such as at physician's offices and over-the-counter which are generally sold at retail (drug stores) and used directly by the consumer. Biomerica participates in both of these POC segments. Rapid, easy to use and interpret qualitative tests which are membrane-based test strips enclosed inside a plastic cassette are a big portion of the POC diagnostic market. Some more sophisticated testing is also approved for the POC setting and can include assay kits run on small (often handheld) analyzers. Common examples of POC test are pregnancy and insulin (diabetes) tests.

By most estimates the POC diagnostics market is expected to experience meaningful growth over the next several years. According to BCC Research the worldwide POC diagnostics market is expected to grow to approximately $16.5 billion by 2016 from $13.8 billion in 2011, representing a CAGR of 3.8%. However, excluding glucose (which accounts for ~90% of OTC POC, ~25% of professional POC, and ~65% of total POC) the global POC market is expected to grow at a CAGR of 7.2% (from $6.3 billion to $8.9 billion) over that same period. The anticipated major drivers of this expected growth are tests for cardiac markers, infectious diseases, and cancer.



Relative to the assays experiencing the highest rates of growth (ex glucose/HbA1C) in the two individual POC segments, Kalorama Information (see charts below) points to blood chemistry, critical care/cardiac markers, and cholesterol in the professional POC space and fecal occult blood, drugs of abuse, and lower volume products such as FSH (menopause), TSH (thyroid), and H.pylori (ulcers/stomach cancer) on the OTC segment. FSH and TSH

tests have had limited success in the U.S. but experienced much more rapid growth in international markets, particularly Europe.

OTC POC By Category

	Sales 2008	% Mkt	Sales 2013	% Mkt	% CAGR
OTC/Self Tests					
Glucose	$7,555	94	9,860	94	5
Pregnancy/Ovulation	390	5	450	4	3
Coagulation/PT	50	1	75	1	8
Fecal occult blood	25	0.3	40	0.4	10
Drugs of abuse	10	0.1	15	0.1	8
HbA1c	5	0.1	25	0.2	38
HIV	5	0.1	6	0.1	4
Cholesterol	5	0.1	6	0.1	4
Other	5	0.1	10	0.1	15
OTC/Self Total	**8,050**	**100**	**10,487**	**100**	**5**
OTC w/o glucose	495		627		5

Other = FSH, TSH, H. pylori, etc.

Professional POC By Category

Professional POC	2008	%	2013	%	CAGR
Glucose	1,334	28	1,400	24	1
Critical Care	500	10	700	12	7
Cardiac Markers	490	10	650	11	6
Infectious Diseases	470	10	550	9	3
Cholesterol/Lipids	335	7	475	8	7
Coagulation/PT, ACT	300	6	475	8	10
Hematology	290	6	310	5	1
HbA1c	200	4	325	5	10
Chemistry/Immunoassays	180	4	210	4	3
Fecal occult blood	155	3	200	3	5
Drugs of Abuse	155	3	185	3	4
Pregnancy	146	3	170	3	3
Urinalysis	120	3	140	2	3
Oncology	95	2	130	2	6
Other	10	0.2	15	0	8
Professional Total	**4,780**	**100**	**5,935**	**100**	**5**
Prof w/o glucose	3,446		4,535		6

Professional POC Growth

Driving much of this growth in the professional segment is healthcare providers shifting more testing from central labs to POC as the menu of CLIA waived tests increase. Higher healthcare costs, lower reimbursement rates, improved accuracy and the demand for and clinical advantages of immediate testing results will likely continue this trend indefinitely. POC testing offers certain significant advantages over central lab testing such as lower cost, simpler testing procedures, ease of interpretation, improved therapeutic intervention and the elimination of the need for patients to return for a follow-up visit. While these have always been benefits of POC testing, in the past clinical lab testing had benefitted from greater sensitivity and specificity which had deterred a greater reliance on POC diagnostics. The recent advent of new technologies has significantly narrowed the gap between the quality of results delivered from the professional labs versus POC which has been a major impetus for the macro shift towards a greater use of POC diagnostics.

Another recent driver of interest in POC testing which primarily addresses the professional POC segment (although also has relevance to OTC POC) is political/legislative/reimbursement/advocacy efforts which are focused on lowering healthcare costs through earlier diagnosis and intervention. Examples include Obamacare which has a focus on quality over quantity of care and increasing the insured base by 30+ million, improved reimbursement, and recent recommendations by the U.S. Preventative Services Task Force (USPSTF) and/or Centers for Disease Control relative to advocating increased or improved testing/screening for conditions such as HIV, HCV, prostate cancer, and breast cancer.

OTC POC Growth

Growth in the OTC setting is coming from a combination of catalysts including an increasing breadth of tests for more indications, more user friendly tests (such as Biomerica's fecal occult blood test), more accurate/sensitive tests, DTC marketing campaigns, and the aforementioned recent focus on reducing healthcare costs through earlier diagnosis.

U.S. Dominates POC Testing, Although Overseas May Offer Higher Growth…

According to estimates by Kalorama Information (chart below), the U.S. accounts for approximately 55% of the worldwide market for POC diagnostics with Europe next inline at 35%. The majority of growth in POC may come from overseas, however.

Region	Sales ($MM)	Percent of Market
United States	$7,100	55%
Europe	4,500	35%
Asia/Japan	647	5%
Rest of World	647	5%
Total	**12,894**	**100%**

In Europe, where POC testing had been restricted to some degree as central lab testing dominated in certain countries such as Germany, a shift is underway as a result of a greater emphasis on earlier diagnosis and prevention - which should benefit the POC setting. Similarly, the U.K. recently adopted a more decentralized approach to disease prevention and healthcare delivery, largely driven by an emphasis on controlling healthcare costs - this has resulted in greater use of POC testing. Japan's highly centralized healthcare system means most testing is performed in clinical labs. The Japanese POC market is loosening however, particularly for rapid tests for emergency and critical care. Other parts of Asia, including China and India, which are evolving economically as well as adopting a more Western diet (i.e. - high fat/calorie/cholesterol) are viewed as huge growth opportunities for U.S. diagnostics companies - higher incomes means POC tests are now more affordable in these countries and poorer diets means an increased need for testing of a variety of conditions (cancer, cholesterol, cardiac markers, etc). In Africa and other emerging markets viral infections including HIV and hepatitis C continue to be problematic and even of epidemic proportions in certain areas (e.g. - HIV in sub-Saharan Africa) - rapid POC testing has quickly become a front-line measure to help control the further spread of these diseases.

FINANCIAL CONDITION / CAPITAL STRUCTURE

Balance Sheet / Cash Flow

Biomerica has a history of maintaining a healthy financial condition and remains that way currently. Cash balance at the end of fiscal Q1 2014 (ending 8/31/2013) was $2.1 million. BMRA has access to a credit line but has nothing drawn on it. Book value stands at $5.7 million and quality of assets appears reasonably strong. Intangibles account for less than 5% of total assets.

Biomerica has been generating positive cash flow on both a cash from operations as well as a free cash flow basis (cash from operations less CapEx). Through fiscal 2013 cash flow from operations and free cash flow were $1.4 million and $1.1 million, respectively. In Q1 2014 did burn a moderate amount of cash, however. Cash flow from operating activities was an outflow $376k in Q1 but excluding changes in working capital (which included a $214k increase in inventory in the quarter), cash from operating activities was an outflow of only $120k.

Assuming BMRA continues to generate positive cash flow, book value should continue to increase. BMRA's ability to generate positive cash flow is due in no small part to their relatively meager CapEx needs and SG&A spend along with keeping manufacturing costs down (low cost facility in Mexico), exiting most R&D functions, and low overhead. We do not anticipate any significant PP&E/intangible asset purchases in the foreseeable future. Relative to SG&A we note that executive compensation is relatively meager (see table below from BMRA public filings) and is possibly the lowest of any company we cover in the med-tech space (many of which, unlike BMRA, do not generate positive cash flow). We think this speaks loudly to management's and the board's focus on increasing shareholder value.

EXECUTIVE COMPENSATION
SUMMARY COMPENSATION TABLE (Yrs ended May 31, 2012 & 2013)

Name and Principal Position	Year	Salary ($)	Bonus ($)	Stock Awards ($)	Option Awards ($) (4)	Non Equity Incentive Plan Compen-sation ($)	Non-qualified Deferred Compen-sation Earnings	All Other Compen-sation ($)	Total ($)
Zackary Irani Chairman & Chief Executive Officer	2013	135,000	7,800	-0-	-0-	-0-	-0-	-0-	142,800
	2012	135,000	8,050	-0-	16,784	-0-	-0-	-0-	159,834
Francis Capitanio President	2013	134,246	7,800	-0-	-0-	-0-	-0-	-0-	142,046
	2012	135,063	8,050	-0-	11,189	-0-	-0-	-0-	154,302
Janet Moore Chief Financial Officer, Treasurer & Secretary	2013	99,072	7,800	-0-	-0-	-0-	-0-	-0-	106,872
	2012	95,832	8,050	-0-	7,609	-0-	-0-	-0-	111,491

Capital Structure

BMRA's capital structure is straightforward with no debt, no preferred, no convertibles or esoteric securities. Basic and dilutive share counts are 7.3 million, which is impressively minimal and relatively very low compared to most micro-cap companies that we cover. Unlike many companies which struggle to maintain solvency and resort to regular and sizeable share compensation programs in an effort to reduce cash burn, BMRA funds itself with internally generated funds and does not have to rely on issuance of dilutive stock/options/warrants to maintain operations. We think this again speaks to BMRA's leadership and attention to increasing shareholder value.

OUTLOOK

Revenue: *Asia Sales Recently Weak Due To Change in Distributors But Look To Return To Legacy Levels Over Mid-Term. Near-to-Mid Term We Look For Europe to Return to Growth, Deeper Penetration Into S. America and Double-Digit Growth in U.S.*

We think Asia continues to be the major catalyst driving mid-term revenue growth as Biomerica expands both their geographic reach as well as their product menu throughout the continent, both key aspects to the company's growth strategy, particularly overseas. With Asia accounting for over 60% of the world's population and experiencing increasing demand for higher quality healthcare as a result of greater economic prosperity, an aging population (particularly in China due to their high birth rate after 1949 and one-child policy), and greater adoption of Western diets, Asia represents an under-served market with potentially very attractive opportunities for the foreseeable future.

Similar to Asia, parts of South America have benefitted from rapid economic growth and a resultant increased demand for better healthcare including earlier diagnosis and intervention. While Biomerica's revenue from South America has been minimal to-date, we expect the company will look to expand their presence there through additional distribution agreements and think over the mid-to-long term South America could be a meaningful contributor to revenue.

Europe accounts for ~35% of BMRA's revenue. Growth had recently flattened but significantly increased the last two quarters with management pointing to increased sales of products not purchased previously in Europe as the

catalyst. It is not clear whether this catalyst will continue to buoy growth in Europe. While the regulatory environment is significantly less stringent in most of Europe as compared to the U.S. relative to diagnostic tests, POC testing there is still largely in its infancy. The recent shift in greater (although still very modest) reliance on POC testing in some parts of Europe including Germany and the U.K. as a result of more emphasis on earlier diagnosis and prevention should offer greater opportunities for growth of both BMRA's POC and clinical lab products. In addition, Eastern Europe, which is more of an emerging territory with potentially less competition could provide opportunity for growth via bolt-on distribution. We think Europe can return to growth over the next couple of years and model somewhat modest mid-to-single digit revenue growth in Europe from fiscal 2014 through 2016 - which actually could end up being conservative.

In contrast to BMRA's international markets, growth in the U.S. has less to do with expanding distribution or their overall product portfolio and more to do with exploiting niche areas and potentially bringing some of their professional POC products to the OTC/retail channel and/or seeking CLIA waiver for some of their ASR tests (both of which would require additional regulatory approval). Product differentiation such as their more user friendly fecal occult blood test as well as offering a menu of more esoteric tests provides somewhat of a competitive barrier against their much larger and deeper entrenched peers. We expect this to continue to be a part of BMRA's domestic strategy. If the company can bring more of their existing tests to the POC channel, which is already a well-established part of the U.S. healthcare system, that could provide a real opportunity to grow domestic revenue. Another real opportunity for U.S. growth could be with potential partnerships or licensing agreements to supply ASR or CLIA-waived test kits to instrument manufacturers. Instrument manufacturers have a real interest expanding their testing menus as the more tests that can be run on each instrument can provide a significant competitive advantage - BMRA's more esoteric tests potentially offer valuable competitive differentiation.

Management Focused on Accelerating Growth Over Long-Term

Over the mid-to-longer terms we think Biomerica will be looking to further exploit their existing technology. We view management's priorities as such that they will be focused on accelerating growth through bringing higher potential and novel products to market - BMRA recently alluded to a GI product which we think likely fits into this growth strategy. We note that our current model does not incorporate an assumed contribution from "home run" type products - although we think given the company's expertise in certain disease areas (including GI, foodborne, women's health, and infectious disease), along with patentable and perhaps underexploited technology platforms and management's renewed focus on accelerating growth over the long-term, that big-winner type products could very well materialize over the coming years.

Operating Expenses: *Should Be Highly Leverageble - We Look for Operating Income to Grow Faster than Revenue*

As we have detailed in our coverage of BMRA, the company's operating expenses as a % of revenue have historically been relatively low and have even improved consistently with the recent revenue growth. Based on our discussions with management we think it's likely that BMRA may squeeze even more leverage in operating expenses with further revenue growth. Gross margin has also widened with growth in sales (although GM contracted in the last three quarters with a dip in sales) - which we also think can continue to benefit as revenue grows and dilutes the fixed-cost portion of COGS. Our financial model assumes GM widens about 450 basis points (37.5% - 42.5%) from 2013 to 2017 and operating expenses as % of revenue fall from 29.6% to 25% over that same period on annual revenue growth of 14%.

EPS: *Expect Growth Over Mid-to-Long Term*

The combination of revenue growth, incremental widening of GM and increased operating leverage should result in EPS growth, although perhaps not as rapidly as growth of operating income as BMRA's NOLs and deferred tax assets will expire and result in an increase in the effective income tax. Nonetheless, EPS should still show strong growth through 2017. While we model EPS to fall to ($0.03) in 2014 as a result of the near-term hiccup from the change in Asian distributors, we think it turns back positive to $0.05 in 2015 and to $0.15 in 2017.

VALUATION / RECOMMENDATION

We use a comparable cohort of seven companies of various market capitalizations in the medical diagnostics space with products/services that target the POC and/or clinical lab markets to value BMRA. Based on several

metrics, BMRA is valued between $1.82 and $2.70 per share. Average (excluding the high and low values) is $2.14 which we round up to $2.15/share.

Relative to risk mitigation, cash flow and book value are key. BMRA's current enterprise value is less than 5.5x EBITDA (compared to 17x comp avg) and market value is just 1.0x book value (compared to 3.6x comp avg). Assuming Biomerica continues to generate positive free cash flow over the long term, book value should increase further. The company has liquid and high quality assets ($2.1 million cash, high quality A/R and inventory, minimal intangibles), and zero debt. We think all this adds up to very low downside risk.

In summary, we believe BMRA is significantly undervalued with some of the lowest downside risk available in the micro-cap space. We recommend buying the shares up to our $2.15/share target price and are maintaining our Outperform rating.

Comparable Multiples

Ticker	P/E (ttm)	P/E (FY1)	P/E (FY4)	P/Book	EV / EBITDA (ttm)	P/S (ttm)	P/S (FY1)
TRIB	30.2	21.2	14.9	2.8	22.0	5.8	2.6
CEMI	33.2	45.6	11.8	1.7	11.0	1.4	1.2
VIVO	26.9	24.0	16.1	6.5	15.4	5.4	5.3
LIFE	31.1	16.6	16.9	2.7	12.5	3.4	3.4
ERB	N/A	N/A	N/A	4.5	0.0	2.9	N/A
CONX	N/A	N/A	N/A	1.9	N/A	1.0	0.9
ABAX	31.5	31.4	19.2	4.9	25.5	4.9	4.4
Average	**29.0**	**26.6**	**14.6**	**3.6**	**16.7**	**3.5**	**3.0**

FY1, FY4 = forecast year 1, forecast year 4

Biomerica Stock Value Based On Comp:

	P/E (ttm)	P/E (FY1)	P/E (FY4)	P/Book	EV / EBITDA (ttm)	P/S (ttm)	P/S (FY1)	AVG
BMRA	$2.09	~~$0.68~~	$2.22	$2.70	$1.82	~~$3.10~~	$1.89	**$2.14**

FINANCIAL MODEL

Biomerica Inc.

	2013 A	Q1A	Q2E	Q3E	Q4E	2014 E	2015 E	2016 E	2017 E
Total Revenues	$6,473.0	$1,013.7	$1,164.1	$1,215.0	$1,315.7	$4,708.8	$6,804.1	$9,199.2	$10,792.6
YOY Growth	*6.4%*	*-40.4%*	*-38.2%*	*-14.2%*	*-10.5%*	*-27.3%*	*44.5%*	*35.2%*	*17.3%*
Cost of Goods Sold	$4,045.1	$753.4	$779.9	$777.6	$815.7	$3,126.7	$4,347.8	$5,602.3	$6,259.7
Gross Income	$2,427.9	$260.3	$384.1	$437.4	$500.0	$1,582.1	$2,456.3	$3,596.9	$4,532.9
Gross Margin	*37.5%*	*25.7%*	*33.0%*	*36.0%*	*38.0%*	*33.6%*	*36.1%*	*39.1%*	*42.0%*
SG&A	$1,454.8	$342.8	$372.5	$352.4	$342.1	$1,409.8	$1,667.0	$2,152.6	$2,288.0
% SG&A	*22.5%*	*33.8%*	*32.0%*	*29.0%*	*26.0%*	*29.9%*	*24.5%*	*23.4%*	*21.2%*
R&D	$459.1	$91.3	$95.0	$95.0	$95.0	$376.3	$385.0	$398.0	$408.0
% R&D	*7.1%*	*9.0%*	*8.2%*	*7.8%*	*7.2%*	*8.0%*	*5.7%*	*4.3%*	*3.8%*
Operating Income	$514.0	($173.8)	($83.4)	($9.9)	$62.9	($203.9)	$404.3	$1,046.3	$1,836.9
Operating Margin	*7.9%*	*-17.1%*	*-7.2%*	*-0.8%*	*4.8%*	*-4.3%*	*5.9%*	*11.4%*	*17.0%*
Total Other Income (Expense)	$10.5	$6.1	$1.5	$1.5	$1.5	$10.6	$7.4	$9.1	$14.2
Pre-Tax Income	$524.5	($167.7)	($81.9)	($8.4)	$64.4	($193.4)	$411.7	$1,055.4	$1,851.1
Tax expense (benefit)	($12.5)	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$166.7	$555.3
Tax Rate	*-2.4%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*15.8%*	*30.0%*
Net Income	$537.0	($167.7)	($81.9)	($8.4)	$64.4	($193.4)	$411.7	$888.6	$1,295.7
YOY Growth	*-2.1%*	*-130.6%*	*-128.1%*	*-103.6%*	*-280.7%*	*435.5%*	*-312.9%*	*115.9%*	*45.8%*
Net Margin	*8.3%*	*-16.5%*	*-7.0%*	*-0.7%*	*4.9%*	*-4.1%*	*6.1%*	*9.7%*	*12.0%*
EPS	$0.07	($0.02)	($0.01)	($0.00)	$0.01	($0.03)	$0.05	$0.11	$0.15
YOY Growth	*-6.6%*					*424.4%*	*-295.4%*	*109.2%*	*45.1%*
Diluted Shares O/S	7,451	7,281	7,300	7,350	8,170	7,525	8,200	8,460	8,500

Brian Marckx, CFA

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LEADERSHIP

Zackary Irani
CEO and Chairman
Mr. Zackary Irani has been a Director of the Company, and has been serving as the Company's Chairman of the Board and Chief Executive Officer since April 29, 1997. Prior to that time, Mr. Irani served as the Company's Vice President of Business Development. He has been an employee of the Company since 1986. During fiscal 2008 and 2009, Mr. Irani also served as Chairman of the Board of Lancer Orthodontics, Inc. and served as Lancer's Chief Executive Officer from April 1997 until April 2004.

Janet Moore
CEO and Director
Ms. Janet Moore has been a Director of the Company since April 29, 1997, and has been serving as the Company's Secretary and Treasurer since 1985. She has served as the Company's Chief Financial Officer since 1999 and has been an employee of the Company since 1976. During fiscal 2008 and through September 29, 2008, Ms. Moore also served as a director and Secretary of Lancer Orthodontics, Inc.

Francis Capitanio
President
Mr. Francis Capitanio, age 68, has served as the President of the diagnostics division of Biomerica since July 10, 2000. Mr. Capitanio was President and Chief Executive Officer of Kalisto Biologicals, Inc. from 1997 until 2000. From 1980 until 1996, he was President and Chief Executive Officer of Diatech Diagnostics.

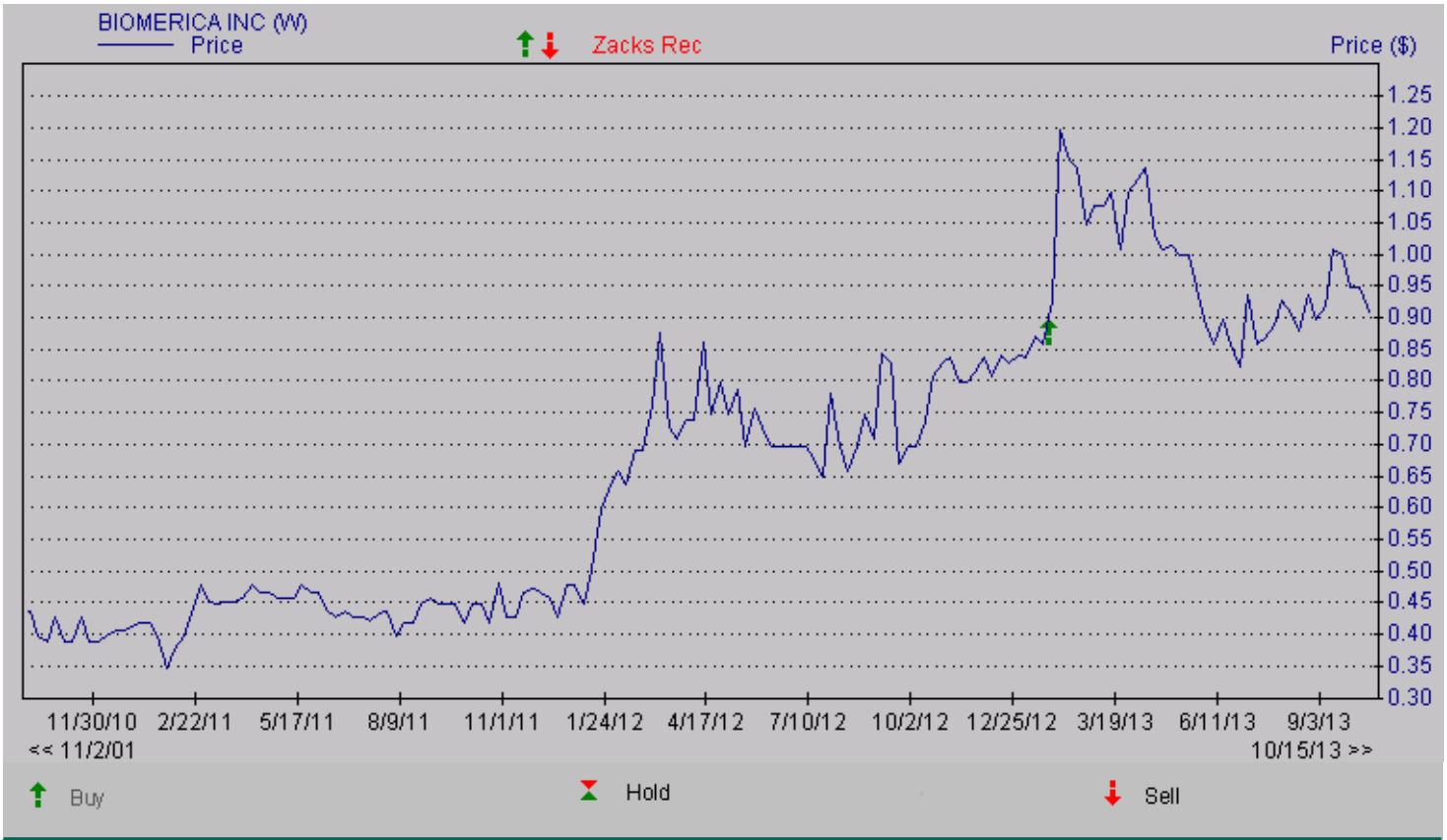
Francis R. Cano
Director
Francis R. Cano, Ph.D., has served as a Director of the Company since June 1999. Dr. Cano is the managing director of Cano Biotechnology, a thirteen year old consulting business which is focused on vaccines and immunotherapeutics. He co-founded Aviron in 1993 and served as the President and Chief Operating Officer. The Company developed an intranasal flu vaccine and was acquired by MedImmune in 2002 for $1.2 billion. From 1972-1993 Dr. Cano held various scientific/management positions with American Cyanamid, the last of which was as Vice President-General Manager of the Lederle-Praxis Biological Division. During fiscal 2008 and through September 29, 2008, Dr. Cano also served on the board of Lancer Orthodontics, Inc., and currently serves on the board of Arbor Vita Corporation and Dynavax.

Allen Barbieri
Director
Mr. Allen Barbieri has served as a Director of the Company since October 1999. Mr. Barbieri currently serves as the CEO of LubriGreen Biosynthetics, a privately held renewable lubricants manufacturing company. Prior to that, from April 2004 to Sept. 2009, Mr. Barbieri served as the Chief Executive Officer of Lancer Orthodontics, Inc. and from 1999 until the present time, Mr. Barbieri has also worked as a private investor. From 1998 to 1999, he served as President and Chief Financial Officer of Buy.com. From 1994 until 1998 Mr. Barbieri was President and Chief Executive Officer of Pacific National Bank.

Jane Emerson
Director
Dr. Emerson has served as a director of the Company since April 2007. Since July 1, 2009 Dr. Emerson has served as Chief of Clinical Pathology at the USC Keck School of Medicine, Los Angeles, California. From 1994 to 2009 Dr. Emerson served as Chief, Division of Clinical Pathology for the University of California, Irvine. From 2000 to 2009 she also served as the Chief of Clinical Pathology and from 2004 to 2009 as a Clinical Professor for the University of California, Irvine. From 2005 to 2009 Dr. Emerson served as Vice Chair for Clinical Programs, Department of Pathology and Laboratory Medicine for the University of California, Irvine.

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