MINTS The Next Economic Frontier for Investment – A Financial Analysis of the Pharmaceutical Industry

Joseph H. Jurkowski, Ph.D, MBA, CPA, CGMA, CRA
Assistant Professor
Business (Academic Department), Certified Graduate Member D'Youville College 320 Porter Ave.
Buffalo, New York 14201 USA

Dion D. Daly, Ph.D, MS, MBA
Assistant Professor
Business (Academic Department), Certified Graduate Member D'Youville College 320 Porter Ave.
Buffalo, New York 14201 USA

Abstract

We have heard a great deal recently of the BRIC countries (Brazil, Russia, India, China), and the PIGS (Portugal, Italy, Greece, Spain) but now the focus seems to be on the MINT countries, (Malaysia, Indonesia, Nigeria, and Turkey) as the leading emerging economies in the world. Rising labor and other costs now have companies looking for new opportunities in rapid growth markets. But not without specific risks that companies must be willing to take. Corruption, rampant communicable disease, drug abuse and criminal activity, religious issues and disagreements are a few of the challenges companies must face in the new frontier. This paper will attempt to look at four pharmaceutical companies in each of the MINT countries to determine their potential profitability as an investment opportunity. This industry is especially unique since these countries have a growing population which will increase the labor force and also create a need for pharmaceutical products.

Each of these countries is located in an advantageous geographical location which will provide an advantage in growing their economies. Mexico is next to the U.S. and the rest of Latin America. Indonesia is located in the heart of Southeast Asia with strong ties to China. Turkey has positioned itself to have both Eastern and Western influences. Nigeria is in a prime spot as it ls located in the prime economic powerhouse of a continent, Africa. If they get their acts together, solve their problems of corruption, energy, and infrastructure, these four countries could potentially overtake China as a leading economy of the world.

Keywords: Investment, Pharmaceutical, Foreign, Profit, Ratio, Debt, Equity, Asset, Liability, Risk, Mexico, Indonesia, Nigeria, Turkey

MEXICO - Genomma Lab Internacional

Latin America is a relatively small but rapidly growing region for both pharmaceutical production and research and development. As of 2012 the region's share of global production was 3.3% and Mexico is second only to Brazil with production valued at $10.8 billion. Consumption of Pharmaceuticals for the country is $13.7 billion. At this point Mexico is a net importer of goods with $5 billion in imports and exports valued at $1.9 billion. But this could change in the future as production is expected to grow at an annual rate of 9% until 2020 while consumption is expected to grow at a slightly less 8.8%.

Since entering NAFTA and strengthening laws regarding intellectual property, Mexico has become a popular destination for investment as well as cultivated their own small, but rapidly growing, pharmaceutical industry. At this point, the country is currently the 12th largest pharmaceutical market in the world. One of the main reasons for this increase in investment has been the low cost of production in Mexico. It currently offers savings of 18.4% over the cost in the U.S. with only China and India offering less expensive alternatives. However, Mexico has many more production facilities that have been approved by the U.S. Food and Drug Administration and the country has actually become a destination for Chinese and Indian firms looking to enter the U.S. market. Foreign direct investment was $2.9 billion from 2005 to 2012 with the main investors coming from the U.S., Luxembourg, and Ireland. Over 50% of FDI went to Mexico City while 25.6% went to the state of Morelos. At this point the industry is still dominated by foreign companies, the main suppliers to Mexico are the U.S. at 23.4%, Germany at 15.9%, France at 9.4%, and Puerto Rico (listed separately from the U.S. by the Mexican government) at 8.6%. Only one of the ten largest companies operating in the country, Genomma Labs, is of Mexican origin, the rest are the usual multinational **pharmaceutical companies including Merck, Pfizer, Roche, and Bristol Myers Squibb, all of** which have sales of over $500 million.

Genomma Lab Internacional was founded in 1996 by Rodrigo Alonso Herrera Aspra primarily as a direct marketer of over the counter health care products. The company was a relatively minor player in Mexico until they commissioned a study in 1999 to determine the effectiveness of television advertising. They found that they could deliver the same message in less than half of the time of their current television commercials. They began to use an advertising approach of short commercials effectively spread out that made consumers constantly aware of their products. Using this approach they quickly became one of the most popular brands in the country and currently spend more on advertising than any other company in Mexico. Genomma first expanded beyond Mexico in 2005 when they entered Peru and soon entered various Latin American markets. The company went public in 2008 and used the proceeds to buy up other small pharmaceutical companies in North and South America. This expansion by acquisition has positioned them in 15 different countries and strengthened their core Mexican operations. The company is currently targeting the U.S. and has entered a partnership with Walgreens to market their products to American Hispanics.

Genomma is currently traded on the Mexican stock exchange under the ticker symbol LABB. The stock price is 17.52 MXN as of April 17, 2015 and has traded in a 52 week range from 8.75 to 37.15 MXN, showing substantial volatility. Their current P/E is 12.76, EPS is 1.37 MXN, market capitalization is 18.3 billion MXN, and there are 1.05 billion shares outstanding. Price/book is 1.86, and price/sales is 1.59.

For the past several of years the company has continued to increase revenue and profitability until 2014 when there was a large increase in selling general & administrative expenses from $326.1 million to $362.1 million. The increase of $36 million is actually lower than the previous year increase of $50.2 million but for 2014 the company did not have an increase in sales to justify such a large increase in running the company. This increase could also be due to the company gearing up to enter new markets, namely, the U.S. and as a pharmaceutical company their administrative costs of entering the U.S. are likely high. The company has mainly grown through acquisition and this shows up in their interest expense of $23 million which alone is 14% of operating income. In 2011 the company had interest expense of only $4.7 million and has nearly doubled that number ever since. Interest and investment income for the company is a relatively minor $.7 million and has shrunk substantially since 2012 when they generated $2 million.

Genomma has been in a state of aggressive growth through acquisition of the past several years and as such has not maintained a massive amount of cash on their balance sheet. In 2014 they had $76.9 million in cash and equivalents on their books, actually down from 2011 when they had $100 million. In that same period receivables have increased from $229.8 million to $270.8 million and inventory has increased from $71.6 million to $103.7 million. Other current assets have increased fourfold, from $16.3 million to $71.5 million. Total current assets have grown from $431 million to $607.8 million for the year ended 2014. Property, plant, and equipment have grown from $34.9 to $52.3 million but depreciation has also increased substantially. Net PPE has grown from $24.1 million to $29.7 million. Long term investments are a relatively minor $1.2 million for 2014 and the company carries a deferred tax asset of $5.2 million. Intangible assets have grown to $433.4 million from $135 million in 2011 and other long-term assets have grown dramatically, from $.7 million to $550.2 million.

Accounts payable have remained relatively stable for the past several years and from 2013 to 2014 dropped from $106.9 million to $101.1 million. Current liabilities have grown to $493.9 million from $142.1 million in 2011, with the largest increase seen in the “other liabilities” category. The company’s growth shows in their dramatic increase in long-term debt, from $63.1 million in 2011 to $423 million in 2014. Total liabilities have grown from $233.3 million to $970.4 million. Total common equity has also increased, from $357.8 million to $643.4 million.

Although the company is rapidly expanding throughout North and South America their primary market is still Mexico. Within the country they have the 3rd highest amount of sales with $649 million as of 2011. This amount puts them in direct competition with some of the largest pharmaceutical companies in the world. Only Merck and Pfizer have a greater amount of sales than Genomma, more impressive considering

that the company mostly offers over the counter medication which does not sell at nearly the profit of patented products.

As of now, it seems that Genomma has been able to grow without the major players paying them much attention. That will likely change as the company expands into North America and eventually Europe. On top of expansion into new markets, they also plan to begin developing more patented drugs in-house.

The company does not disclose how they manage foreign exchange risk but their attempts at dealing with it have been hit or miss. In 2011 the company's exchange rate adjustment was a positive $4.8 million but was negative for 2012, 2013, and 2014; -$3.9 million, -$4.3 million, and -$1.1 million, respectively. However, revenue increased by 17.7% from 2012 to 2014 and the company operates in countries with some of the most volatile currencies in the world.

INDONESIA - P T Kalbe Farma

PT Kalbe Farma (Kalbe) is an Indonesian pharmaceutical company engaged in the production and distribution of pharmaceutical products for human and animal care. Kalbe Farma was founded in 1966 by Dr. Boenyamin Setiawan as a family pharmacy business. The company started out in a garage workshop in Tanjung Priok, a subdistrict of North Jakarta, Indonesia, making anthelmintic which are drugsthat expel parasitic worms from the body. Kalbe expanded its business through multiple acquisitions between 1977 and 1993, including PT Dankos Laboratories, PT Bintang Toedjoe, PT Hexpharm Jaya, and PT Sanghiang Perkasa. In 1991, the company went public by listing on the Jakarta Stock Exchange and Surabaya Stock Exchange, which is now merged as the Indonesian Stock Exchange. In 1994, Kalbe entered into the energy drink market with the launch of its Extra Joss brand. Between 1995 and 1997, Kalbe divested ownership in PT Helios Amott' s Indonesia, a food business, and divested their glass packaging division, and acquired WOODS brand and 80% ownership in PT Saka Farma. Kalbe consolidated the Kalbe Group in 2005. In 2012, the company acquired a 100% stake in PT Hale International, an Indonesian-based health beverage company. Today, Kalbe Farma is grouped into four business divisions; the prescription pharmaceuticals division, consumer health, nutritionals, and distribution and logistics. In Indonesia, Kalbe maintains coverage to over 70% of general practitioners, 90% of specialists, 100% of hospitals, and 100% of pharmacies for the prescription pharmaceuticals market. Kalbe has expanded its business to Southeast Asia and Africa. Kalbe is a leading provider of "comprehensive healthcare solutions," including pharmaceuticals, nutrition, health foods and beverages, and medical devices.

Kalbe is the largest publicly-listed pharmaceutical company in Southeast Asia, with a market share of 16% and market capitalization of Rp53.8 trillion and Rp13.6 trillion sales turnover by end of 2012. Kalbe's top competitors for Indonesia, Southeast Asia and Africa are PT Pyridam Farma Tbk, PT Merck Tbk, and Donwha Phann Ind Co., Ltd. PT Pyridam Farma is a publicly traded Indonesian pharmaceutical manufacturing company, recording revenues of Rp176,730 million in 2012. Pyridam Farma operates in two segments, Pharmaceutical Products and Toll Manufacturing Services, and

Medical Equipment. PT Merck is a publically traded Indonesian pharmaceutical company that manufactures and markets prescription drugs, over the counter drugs, and chemical reagents, recording revenues of Rp929, 876 million in the 2012 fiscal year. Donwha Pharma Ind Co., Ltd. is a publically traded South Korean pharmaceutical manufacturer, recording revenues of W223, 372 million. Donwha Pharma offers products in the areas of gastrointestinal, cardiovascular, respiratory, neuropsychologic, as well as others.

Additionally, the company develops Milican Injection, a radiopharmaceutical drug for liver cancer. Kalbe Farma operates in four divisions, prescription pharmaceuticals, consumer health, nutritionals, and distribution and logistics. The prescription pharmaceuticals division provides generic drugs, branded generics, and licensed drugs including brainact, cefspan, mycoral, cemevit, neurotam, and DPG. Additionally, this division engages in stem cell research for various diseases and molecular diagnostic services for cancer treatment. The consumer health division offers over-the-counter drugs and supplements as well as energy drinks and health ready-to-drink products such as promag, komix, entrostop, woods, extrajoss, and hydro coco. The nutritionals division provides products including morinaga chil kid, prenagen, milna zee, and fitbar. This division also provides products for consumers with special medical needs. The distribution and logistics division distributed third party pharmaceuticals products and operates an integrated chain of clinics that provide physician's general practice, pharmacies, laboratory, and health mart services. In the worldwide pharmaceutical industry, Kalbe Farma is far below the top industry companies including Pfizer INC, Novartis AG, Merck & Co., Sanofi, and GlaxoSmithKline PLC.

NIGERIA - Neimeth International Pharmaceuticals

Nigeria has a population of over 140 million people and a per capital of $988 USD. The country is even though it has over 37 major cities and a large rural area but 60% of the population is deprived of essential amenities. Nigeria's pharmaceutical market is "underdeveloped by Western standards as poor infrastructure, a weak regulatory system and lack of specialized facilities weaken growth potential". The Nigerian Government realizes their healthcare system is very poor and has gotten involved in making it better. The Federal Ministry of Health (FMOH) was created to help insure a better healthcare system. The leading cause of death in Nigeria is infectious diseases. The "National Health Policy identified target area for government intervention to include HIV/Aids, malaria, diarrhoea, immunization coverage, onchocerciasis (river blindness), tuberculosis and reproductive health". The major problem with these diseases is that "treatment is unaffordable for the majority of the population" that has these illnesses.

Malaria makes up for about 300,000 deaths yearly. Tuberculosis (TB) ranks 4th among high TB countries. HIV/AIDS accounted for 2, 8020,000 deaths in 2010 with a continually increase throughout the years. The Nigerian government created an National Drug Policy (NDP) to show the "Government's commitment, specific incentives have been approved and implemented, including banning the importation of essential medicines which are produced in adequate volume locally in a move designed to stimulate local

production". The Nigerian Investment Promotion Commission (NIPC) was created in 1995 to "encourage, promote and coordinate investments in Nigeria.

Because the government is committed to achieving national self-sufficiency as defined by the NDP and to implement measures to curb the influx of counterfeit drugs, there encouraging local production. Companies such as Neimeth International Pharmaceuticals PLC have great opportunities ahead. They are a private limited company that is 100% Nigerian and have 279 employees that have made 1.75 billion Naira which is equal to $8,794,132.27 USD in 2009 alone. According to the company site it says "the company had pirated in Nigeria for 40 years, manufacturing, marketing, and distributing Pfizer brands of pharmaceutical and veterinary products.

While the company has great corporate shared values such as teamwork, leadership, innovation, customer focus, integrity, community, responsiveness and God consciousness that makes them a company with great potentials. However their finances are not looking to great mainly due waiting for approval for medication in meeting their standards. The company is working towards increasing equipment and upgrades to meet their standards. And I believe they can meet the 18 month deadline to get certified based on WHO standards, which would make them a leader in their industry. Some of their consumer products are Antimal, NimARTEM, Neimelyn cough syrup, urah, hemafolin, and Pancemol. They have over 43 products and are still developing more hoping to have two new products every quarter. On their site they have proclaimed they are doing that and plans to continue their efforts on staying on that track.

The company does operate in two major cities Nigeria and Ghana. The company makes a bulk of their money in Nigeria. About 80% of the company's profits come from Nigeria and the other 20% remaining comes from Ghana. The foreign currency exchange affect this company because they purchase some of their raw materials from oversees. And while currently $1.00 USD is equal to $299 Naira. That can hurt their economy. Especially since it's a poor economy to start, and paying and paying a portion of the taxes due to the tariffs prices in the country does affect them some. Not as much as others since their producing their products in Nigeria. But since they do have an entity in Ghana the currency rate will affect them there too.

TURKEY - Deva Holding A.S.

Founded in Istanbul, Turkey in 1958, Deva Holding has deep roots in the development of Turkish pharmaceuticals. Deva's main focus covers manufacturing and marketing of medicines for humans as well as animals. In its early years Deva began constructing plants throughout Turkey as well as acquiring plants from smaller companies. In 1986 Deva went public and listed its stock on the Istanbul Stock Exchange and by 2004 Deva was ranked among the top 10 pharmaceutical companies in Turkey. Growing rapidly, ownership was transferred to EastPharma, Ltd in 2006 with Phillip Haas being elected President and CEO. The following year Deva Holding opened additional offices in Georgia, Russia, Azerbaijan, and Uzbektistan.

Having merged with DEVA Ilac Sanayi ve Tacaret A.S. in 2010 they were able to achieve a more efficient business model and take advantage of greater economies of scale. By 2011 Deva's capital increased to 200 million TRY (Turkish Lira). By 2012 Deva was listed at 4th place in the 14.4 billion TRY pharmaceutical industry and maintains approximately a 5.1% market share. The largest portion of Deva Holding's pharmaceutical sales is composed of anti-infection drugs, followed by nutrition and metabolism drugs, and cardiovascular drugs.

MN Pharma is a large, privately held company with multiple production units, focusing mainly on injectable products such as penicillin and other antibiotics. MN does not release any financial information (MN Pharma, 2014). Bilim Ilac is another privately held company that also focuses in anti-infectives, as well as cardiovascular drugs, respiratory drugs, and non-steroid anti-inflammatories. Bilim ranks third in the Turkish pharmaceutical industry with a 5 % market share, and prides itself on its environmentally friendly research, development and production practices. Abdi Ibrahim is as the leader of the pharmaceutical industry in Turkey focusing on oral tablets, syrups, lotions, creams, and sprays. Abdi has the largest research facility in Turkey and also boasts its environmentally friendly practices.

Within the worldwide pharmaceutical industry, Deva Holding is a small fish in a very large pond. Although maintaining subsidiaries and offices in several foreign countries, Deva Holding is nowhere near becoming an international pharmaceutical giant such as Novartis, Merck, or AstraZeneca. While Deva Holding's revenue and profit financials are reported in millions of dollars, the above companies report in billions.

Theoretical Framework And Methodology

The methodology for this study is derived from positivist theories of financial planning analysis that suggest a measurable relationship exists between financial and accounting ratios and company performance. Such ratios can represent the relative effectiveness of a company as it attempts to operate in an efficient manner while also maximizing profits (Jahankhani & Sohrabi, 2010). Although financial and accounting ratios are just one set of tools to assist in the measurement of a company's performance they remain as a traditionally accepted and important element to any practical financial analysis approach

The collection of financial accounting data can be used as a measure of the fundamental characteristics of a company and may be employed to help predict future outcomes (Grimsley, 2014). For the purpose of this study, the following financial accounting data variables were utilized: Return on Assets (ROA); Debt to Equity (DTE), Current Ratio (CR), and Quick Ratio (QR). These variables were derived (or calculated where appropriate) from publicly available data (2009 to 2015) for the companies of Genomma Lab Internacional, P T Kalbe Farma, Neimeth International Pharmaceuticals, and Deva Holding A.S. Data were collected from individual sources for each company and then compiled into an ancillary data set in Microsoft Excel. This ancillary data set was then imported into SPSS (version 23) and used as the source of input for all statistical testing.

This study employed an evaluation design and involved a descriptive ex post facto analysis that attempted to derive conclusions from quantitative data. It followed a deductive research process and involved the collection of financial and accounting data from mixed sources in order to identify possible statistical relationships between the variables. The data utilized for this study was secondary data because it had been compiled and collected in databases of publicly available information. All data was coded into the Statistical Package for the Social Sciences (SPSS) version 23. SPSS was then utilized to investigate any potential correlations between or among the variables. There are varied methods available to measure correlation with the most prevalent being linear correlation, or, as it is more widely labeled, "Pearson Product Moment Correlation Coefficient" (PPMCC). The PPMCC measures the strength (magnitude) and direction of a linear relationship between variables.

Results

Genomma Lab Internacional - A PPMCC was completed with the variables of Quick Ratio and Current Ratio to determine if a statistically significant relationship existed ($H_{0(QR/CR)}$; $p = 0$: $H_{1(QR/CR)}$; $p \neq 0$). This procedure showed a weak almost perfect positive correlation ($r = .998$).

A PPMCC was completed with the variables of Return on Assets and Current Ratio to determine if a statistically significant relationship existed ($H_{0(ROA/CR)}$; $p = 0$: $H_{1(ROA/CR)}$; $p \neq 0$). This procedure showed a moderately positive correlation ($r = .593$).

A PPMCC was completed with the variables of Return on Assets and Quick Ratio to determine if a statistically significant relationship existed ($H_{0(ROA/QR)}$; $p = 0$: $H_{1(ROA/QR)}$; $p \neq 0$). This procedure showed a moderately positive correlation ($r = .640$).

A PPMCC was completed with the variables of Debt to Equity and Current Ratio to determine if a statistically significant relationship existed ($H_{0(DTECR)}$; $p = 0$: $H_{1(DTE/CR)}$; $p \neq 0$). This procedure showed a moderately positive correlation ($r = .574$).

A PPMCC was completed with the variables of Debt to Equity and Quick Ratio to determine if a statistically significant relationship existed ($H_{0(DTE/QCR)}$; $p = 0$: $H_{1(DTE/QR)}$; $p \neq 0$). This procedure showed a moderately positive correlation ($r = .623$).

A PPMCC was completed with the variables of Debt to Equity and Return on Assets to determine if a statistically significant relationship existed ($H_{0(DTE/ROA)}$; $p = 0$: $H_{1(DTE/ROA)}$; $p \neq 0$). This procedure showed an almost perfect positive correlation ($r = .997$).

P T Kalbe Farma - A PPMCC was completed with the variables of Quick Ratio and Current Ratio to determine if a statistically significant relationship existed ($H_{0(QR/CR)}$; $p = 0$: $H_{1(QR/CR)}$; $p \neq 0$). This procedure showed a weak almost perfect positive correlation ($r = .965$).

A PPMCC was completed with the variables of Return on Assets and Current Ratio to determine if a statistically significant relationship existed ($H_{0(ROA/CR)}$; $p = 0$: $H_{1(ROA/CR)}$; $p \neq 0$). This procedure showed a very strong positive correlation ($r = .829$).

A PPMCC was completed with the variables of Return on Assets and Quick Ratio to determine if a statistically significant relationship existed ($H_{0(ROA/QR)}$; $p = 0$: $H_{1(ROA/QR)}$; $p \neq 0$). This procedure showed a very strong positive correlation ($r = .859$).

A PPMCC was completed with the variables of Debt to Equity and Current Ratio to determine if a statistically significant relationship existed ($H_{0(DTECR)}$; $p = 0$: $H_{1(DTE/CR)}$; $p \neq 0$). This procedure showed a weak negative correlation ($r = -.150$).

A PPMCC was completed with the variables of Debt to Equity and Quick Ratio to determine if a statistically significant relationship existed ($H_{0(DTE/QCR)}$; $p = 0$: $H_{1(DTE/QR)}$; $p \neq 0$). This procedure showed a very weak positive correlation ($r = .062$).

A PPMCC was completed with the variables of Debt to Equity and Return on Assets to determine if a statistically significant relationship existed ($H_{0(DTE/ROA)}$; $p = 0$: $H_{1(DTE/ROA)}$; $p \neq 0$). This procedure showed a moderate positive correlation ($r = .353$).

Neimeth International Pharmaceuticals A PPMCC was completed with the variables of Quick Ratio and Current Ratio to determine if a statistically significant relationship existed ($H_{0(QR/CR)}$; $p = 0$: $H_{1(QR/CR)}$; $p \neq 0$). This procedure showed a moderate negative correlation ($r = -.373$).

A PPMCC was completed with the variables of Return on Assets and Current Ratio to determine if a statistically significant relationship existed ($H_{0(ROA/CR)}$; $p = 0$: $H_{1(ROA/CR)}$; $p \neq 0$). This procedure showed a strong negative correlation ($r = .634$).

A PPMCC was completed with the variables of Return on Assets and Quick Ratio to determine if a statistically significant relationship existed ($H_{0(ROA/QR)}$; $p = 0$: $H_{1(ROA/QR)}$; $p \neq 0$). This procedure showed a very strong negative correlation ($r = .482$).

A PPMCC was completed with the variables of Debt to Equity and Current Ratio to determine if a statistically significant relationship existed ($H_{0(DTECR)}$; $p = 0$: $H_{1(DTE/CR)}$; $p \neq 0$). This procedure showed a weak negative correlation ($r = -.112$).

A PPMCC was completed with the variables of Debt to Equity and Quick Ratio to determine if a statistically significant relationship existed ($H_{0(DTE/QCR)}$; $p = 0$: $H_{1(DTE/QR)}$; $p \neq 0$). This procedure showed a very strong negative correlation ($r = .880$).

A PPMCC was completed with the variables of Debt to Equity and Return on Assets to determine if a statistically significant relationship existed ($H_{0(DTE/ROA)}$; $p = 0$: $H_{1(DTE/ROA)}$; $p \neq 0$). This procedure showed a very strong positive correlation ($r = .840$).

Deva Holding A.S.- A PPMCC was completed with the variables of Quick Ratio and Current Ratio to determine if a statistically significant relationship existed ($H_{0(QR/CR)}$; $p = 0$: $H_{1(QR/CR)}$; $p \neq 0$). This procedure showed a very strong positive correlation ($r = .818$).

A PPMCC was completed with the variables of Return on Assets and Current Ratio to determine if a statistically significant relationship existed ($H_{0(ROA/CR)}$; $p = 0$: $H_{1(ROA/CR)}$; $p \neq 0$). This procedure showed a weak positive correlation ($r = .142$).

A PPMCC was completed with the variables of Return on Assets and Quick Ratio to determine if a statistically significant relationship existed ($H_{0(ROA/QR)}$; $p = 0$: $H_{1(ROA/QR)}$; $p \neq 0$). This procedure showed a moderate positive correlation ($r = .395$).

A PPMCC was completed with the variables of Debt to Equity and Current Ratio to determine if a statistically significant relationship existed ($H_{0(DTECR)}$; $p = 0$: $H_{1(DTE/CR)}$; $p \neq 0$). This procedure showed a very strong positive correlation ($r = -.803$).

A PPMCC was completed with the variables of Debt to Equity and Quick Ratio to determine if a statistically significant relationship existed ($H_{0(DTE/QCR)}$; $p = 0$: $H_{1(DTE/QR)}$; $p \neq 0$). This procedure showed a very strong positive correlation ($r = .867$).

A PPMCC was completed with the variables of Debt to Equity and Return on Assets to determine if a statistically significant relationship existed ($H_{0(DTE/ROA)}$; $p = 0$: $H_{1(DTE/ROA)}$; $p \neq 0$). This procedure showed a moderate positive correlation ($r = .343$).

Discussion

The goal of this study was to investigate possible relationships between and among the variables to better inform the investment decision. The results of the data analysis indicate that Deva Holding A.S. and Neimeth International Pharmaceuticals are investing a high amount of capital into the production/research and development of new products while, at the same time, taking in little income. It appears that the negative ROAs are not associated with high levels of debt which could be a positive indicator, at least this fact does not serve as a magnifier of the potential effect of negative ROA.

It is unclear from the data if the results of the analysis in general, and with regard to the negative correlations in specific, for Deva Holding A.S. and Neimeth Inernational Pharmaceiticals if there is a cause

and effect relationship between poor management strategy and company performance. At minimum, the results indicate a risk strategy. Potential investors interested in these companies would need to obtain additional clarification from upper management related to the long-term ROA growth strategy.

Too often, measures of statistical significance can be used as a poor substitute for careful thought and a common sense. Although an attempt was made to control for intervening variable (company size), there are, in fact numerous potential unaccounted for variable that may or may not be affecting an individual company at any given time.

Conclusion

Based on the Balance Sheet ratios all four companies are relatively stable with minor differences. But as for profitability Neimeth stands out from the rest with solid and growing Earnings Per Share. However Kolbe's ROE and ROA stand out among the others as well as a consistent dividend payment and history. Our current choice ultimately would be a split between Neimeth and Kalbe to mitigate the greatest amount of risk.

Table 1

	Mexico		**Indonesia**		**Nigeria**		**Turkey**	
Amounts in $	Genomma 2013	2012	BT Kalbe 2012	2011	Neimeth Pharm 2014	2013	Deva Holding A.S. 2013	2012
Current Ratio	3.17	3.12	3.41	3.67	2.91	2.52	1.8	1.3
Quick Ratio	2.71	2.73	2.24	2.58	1.11	1.04	1.1	0.83
Return on Assets	10.6	16.4	18.41	17.91	-0.04	0.16	0.03	0.05
Return on Equity	20.1	22.5	23.52	23.85	-0.6	2.66	0.06	0.09
Debt to Equity	49.1	85.1	2.77	2.7	0.92	5.62	1.05	0.91
Earnings per Share	1.37	1.49	0.0032	0.0136	9.98	-14.56	0.0010	0.0017
Book Value per Share	0.33	0.38	0.0123	0.05	0.99	0.97	0.02	0.02
Dividends Yield	N/A	n/a	2%	14%	n/a	n/a	0.00	0
Price Earnings Ratio	12.76	17.81	40.81	4.3	11	-0.07	1483	1236
Price to Book Value Ratio	1.86	1.95	10.4	1.06	0.58	0.67	88.33	110.93
5 yr stock price range	5.44 -2.13		0.04 - .09		1.83 - .89		.80 – 1.16	

References

Abdi Ibrahim. Retrieved from www.abdiibraim.com/en April 14, 2014

Bilim Parmaaceuticals. Retrieved from http://bilimilac.com.tr/en/ April, 2014

Bloomberg Business. (2015, April 26). *Genomma Lab Internacional-B*. Retrieved April 26, 2015, from Bloomberg Business: http://www.bloomberg.com/research/stocks/financials/financials.asp?ticker=LABB:MM&dataset=balanceSheet&period=A&currency=US%20Dollar

Cacheaux, Chavez, & Newton. (2010). Comparative Advantages of Mexico's Automotive Industry | Mexican Automotive. Retrieved December 3, 2015, from http://mexicanautomotive.com/en/home/86-december-2012/373--comparative-advantages-of-mexicos-automotive-industry

Deva, Retrieved from www.deva.com.tr/en/ April 2014

Deva Holding A.S. IST:Deva Quotes & News – Google Finance. April, 2014 http://www.goodle.com/finance?q=IST%3ADEVA%ei-yixUU8jYLtON6AHH8QE>.

Deva Pharma Annual Report. Retrieved from http://deva.com.tr/assets

Deva Pharma Financial Statement http://deva.com.tr/assets

Economy of Indonesia. (n.d.). Retrieved November 26, 2015, from http://www.indonesia-investments.com/culture/economy/item177

Embassy of the United States Mexico City, Mexico. (2014). Retrieved December 3, 2015, from http://mexico.usembassy.gov/eng/ataglance/foreign-direct-investment-fdi.html

Export.gov - doing business in turkey. Retrieved from http://www.export.gov/turkey/doingbusinessinturkey/index.asp

FDI in turkey - invest in turkey. Retrieved from http://www.invest.gov.tr/en-US/investmentguide/investorsguide/Pages/FDIinTurkey.aspx

Genomma Lab. (2013). *Annual Report 2012*. Mexico City: Genomma Lab Investor Relations.

Indonesia Investments. (n.d.). Retrieved December 2, 2015, from http://www.indonesia-investments.com/news/todays-headlines/budget-deficit-of-indonesia-safe-on-non-optimal-government-spending/item6252

Indonesia Overview. (n.d.). Retrieved November 7, 2015, from http://www.worldbank.org/en/country/indonesia/overview#1

Indonesia | Economic Indicators. (n.d.). Retrieved December 1, 2015, from http://www.tradingeconomics.com/indonesia/indicators

Doing Business in Indonesia - Work and employment resources for expatriates and multinational companies. (n.d.). Retrieved December 3, 2015, from http://www.expat.or.id/business/business.html

Kayam, S. S., & Hisarciklilar, M. (2009). *Determinants of turkish FDI abroad* Loyola University. Retrieved from http://www.econis.eu/PPNSET?PPN=620644435

KPMG. (2012). The new investment incentives in turkey. Retrieved from https://www.kpmg.com/TR/en/IssuesAndInsights/ArticlesPublications/Documents/The-New-Investment-Incentives-in-Turkey.pdf

Mexico Country Profile | Country Profile of Mexico | Striving for Sustainable Growth. (2015). Retrieved December 3, 2015, from http://www.thomaswhite.com/world-markets/mexico-striving-for-sustainable-growth

MN Pharmaceuticals, Retrieved from http://www.mn.com.tr/default_en_aspx

Neimeth Pharmaceuticals. http://www.neimethplc.com.ng.

Nigeria 2014: Retrieved from www.africaeconomicoutlook.org

Economy of Nigeria-Wikipedia, the free encyclopedia: Retrieved from https://en.wikipedia.org/wiki/Economy-of-Nigeria

African Center for Economic Transformation I Nigeria Transformation Profile: Retrieved from http:africantransformation.org/2014/02/07/Nigeria

OECD economic outlook no 97, june 2015 - knoema.com. Retrieved from http://knoema.com/OECDEO97Jun/oecd-economic-outlook-no-97-june-2015

Pharmaceutical-Technology. (2013, March 26). *Mexico: growing South America's pharmaceutical industry*. Retrieved April 26, 2015, from pharmaceutical-technology.com: http://www.pharmaceutical-technology.com/features/featuremexico-drugs-pharmaceutical-brazil-south-america/

Televisa Consumer Products. (2013, January 18). *Walgreens Engages Hispanic Customers with Health and Wellness Products from Televisa Consumer Products*. Retrieved April 26, 2015, from PR Newswire: http://www.prnewswire.com/news-releases/walgreens-engages-hispanic-customers-with-health-and-wellness-products-from-televisa-consumer-products-187435801.html

Trading Economies. 2015. Mexico Exports | 1980-2015 | Data | Chart | Calendar | Forecast | News. (2015, December 1). Retrieved December 3, 2015, from http://www.tradingeconomics.com/mexico/exports / from http://www.tradingeconomics.com/mexico/imports / from http://www.tradingeconomics.com/mexico/foreign-direct-investment

Turkey. investment country profile : Investment country profiles;2012 IIS 4050-S48.13;UNCTAD/WEB/DIAE/IA/2012/6 (2012). Retrieved from http://search.proquest.com/statisticalinsight/result/pqpresultpage.previewtitle?docType=PQSI&titleUri=/content/2012/4050-S48.13.xml

Turkey's Pharmaceutical Sector. Retrieved from http://www.turkishreview.org/tr/news

Unido. http://www.unido.org

World Development Indicators| World DataBank. (2015). Retrieved December 3, 2015, from http://databank.worldbank.org/data/reports.aspx?source=2&country=MEX&series=&period

The world factbook. Retrieved from https://www.cia.gov/library/publications/the-world-factbook/geos/tu.html

Zazueta, G. P. (2013). *The Pharmaceutical Industry.* Mexico City: ProMexico