LIQUIDITY AND SOLVENCY FINANCIAL ANALYSIS OF OIL COMPANIES IN BRIC COUNTRIES

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ABSTRACT
The BRIC countries – Brazil, Russia, India and China are experiencing economic setbacks and it might be the time to buy equities in their companies. In recent years these countries were noted because of their rapid economic growth. Between 2000 and 2008, they averaged annual GDP growth expansion of 8%, almost 6% below the average for the G7 countries. Now, slower economic growth is causing their stock markets to tumble, presenting an opportunity for investors to buy what others are fleeing. The BRIC markets now look cheap based on their corporate profits and dividends as will be evident in the ratio table below. Their long term prospects remain bright, however. Russian stocks look remarkably inexpensive at about 6 times forward earnings compared to an average of 16 times for the other BRICs, (S & P 500 is 14). Well known economist Jim O’Neil feels the BRICs will still outperform the more developed nations. China’s growth will slow to 7% from 10%. India is projected to grow more than 10%, Brazil by 5%, and Russia by 4% since its economy is the most dependent on energy production and oil prices have most probably peaked.
Multinational energy companies are some of the largest and most powerful businesses in the world. Historically the largest companies in this field were based in Western Europe or the United States. This is mainly due to the large amounts of capital needed for energy exploration and western countries having more developed capital markets. This has begun to change over the last decade with a number of major energy companies emerging out of Brazil, Russia, India, and China, (BRIC). It is informative to examine the current market leaders, their market capitalization, and profits. It can be seen that Exxon Mobil is still by far the largest publicly traded energy company, though competition is fierce. Besides the publicly traded energy producers, there exists a number of private/government owned oil companies like Saudi Aramco which are likely worth in the trillions. While incredibly powerful government owned energy producers are generally not for sale, they attract less investor interest.

The global oil and gas market had total revenues of $2,642.5 billion in 2010 represented a compound annual growth rate of 3.1% from 2006-2010 (Datamonitor, 2011). The performance of the market is expected to accelerate over the next few years and reach a value of $3,699.4 billion by the end of 2015 (Datamonitor, 2011). Crude oil had 79.7% of the market’s overall value in 2010 (Datamonitor, 2011). The global oil and gas market is characterized by the presence of large, diversified international companies with highly vertically integrated operations throughout oil exploration, production, refining, transportation and marketing (Datamonitor, 2011). Commodities such as crude oil or natural gas are relatively undifferentiated products and the price is set by supply and demand on the exchanges so brand loyalty is not likely to be a significant factor in this industry (Datamonitor, 2011). However, companies in this industry must utilize their economies of scale and have strong research and development capabilities to keep up with the market leaders (Datamonitor, 2011). The production and demand of renewable energy is increasing as climate change becomes a growing issue and the estimation for the next 20-30 years is that there will be a decline in the use of oil and gas due to the migration of consumers to more environmentally friendly alternative sources of energy (Datamonitor, 2011).

The financial ratios for the oil and gas industry reveal a level of profitability as it has a gross margin of 15.3% and it is turning over its receivables and inventory at a more rapid pace during the year which seems as if management is adequately managing its assets. The industry is generating adequate returns on assets and on equity which means that on average in the industry, management is adequately using profits for investments in assets and equity to generate profits for the firm and shareholders. The short term leverage of the industry also indicates that it is fairly healthy. The mean current ratio is 1.9 which is well above 1, which means that the industry will be able to pay their debts as they are due than the actual amount of debt that is currently outstanding. The industry should not have any issues with liquidity as the quick ratio is also above 1. The long-term solvency risk of the industry is also very low as indicated by the debt ratio which indicates that the companies in this industry have an abundance of equity over debt. The PE ratio of the industry indicates that on average companies in this industry are underpriced being that its PE ratio is ~11.

This paper provides a financial analysis of oil companies in the BRIC sector:

- Petroleo Brasileiro (Petrobas)
- Lukoil Oil
- Gazprom
- Indian Oil
- Reliance Industries
- Sinopec
China National Petroleum Co.

The authors would most likely choose China Petroleum as the preferred investment based on its attractive EPS and low P/E ratio. Given the tenuous situation and conditions in China, the country risk factor is high; although their economy is booming. Studying the economic history of China and being the world’s second largest economy, the risk is probably justified. However, if an investor is risk averse, then Gazprom is the strongest, but with an admittedly higher country risk. Return on Assets and Return on Equity are relatively close in all seven, so that is not a major concern.

KEYWORDS: OIL, GAS, ENERGY, BRIC, RATIO, FINANCIAL, SOLVENCY, LIQUIDITY

LIQUIDITY AND SOLVENCY FINANCIAL ANALYSIS OF OIL COMPANIES IN BRIC COUNTRIES

The goal of this paper is to demonstrate the financial condition and stability of several chosen oil companies in the BRIC group of countries (Brazil, Russia, India and China). Empirical data was obtained as of the last available fiscal years from the company’s web site using select financial ratios to substantiate the results. For the sake of emphasis and brevity all standard ratios were not utilized.

Recently Jack Hough of the WSJ took an eclectic take on the financial health of companies in the BRIC countries. His view is that these countries – Brazil, Russia, India and China are experiencing economic setbacks and it might be the time to buy equities in their companies. In recent years these countries were noted because of their rapid economic growth. Between 2000 and 2008, they averaged annual GDP growth expansion of 8%, almost 6% below the average for the G7 countries. Now, slower economic growth is causing their stock markets to tumble, presenting an opportunity for investors to buy what others are fleeing. The BRIC markets now look cheap based on their corporate profits and dividends as will be evident in the ratio tables below. Their long term prospects remain bright, however. Russian stocks look remarkably inexpensive at about 6 times forward earnings compared to an average of 16 times for the other BRICs, (S & P 500 is ~17). Well known economist Jim O’Neil feels the BRICs will still outperform the more developed nations. China’s growth will slow to 7% from 10%. India is projected to grow more than 10%, Brazil by 5%, and Russia by 4% since its economy is the most dependent on energy production and oil prices have most probably peaked.

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Datamonitor in 2011 revealed the following statistics. The global oil and gas market had total revenues of $2,642.5 billion in 2010 represented a compound annual growth rate of 3.1% from 2006-2010. The performance of the market is expected to accelerate over the next few years and reach a value of $3,699.4 billion by the end of 2015. Crude oil had 79.7% of the market’s overall value in 2010. The global
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The financial ratios for the oil and gas industry reveal a level of profitability as it has a gross margin of 15.3% and it is turning over its receivables and inventory at a more rapid pace during the year which seems as if management is adequately managing its assets. The industry is generating adequate returns on assets and on equity which means that on average in the industry, management is adequately using profits for investments in assets and equity to generate profits for the firm and shareholders. The short term leverage of the industry also indicates that it is fairly healthy. The mean current ratio is 1.9 which is well above 1, which means that the industry will be able to satisfy their debts as they are due than the actual amount of debt that is currently outstanding. The industry should not have any issues with liquidity as the quick ratio is also above 1. The long-term solvency risk of the industry is also very low as indicated by the debt ratio which indicates that the companies in this industry have an abundance of equity over debt. The PE ratio of the industry indicates that on average companies in this industry are underpriced being that its PE ratio is ~11.

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**Petrobras**

1.1 Petrobras was formed in 1953 by Brazilian President Getulio Vargas after a long campaign to nationalize oil production. The company would remain government owned until 1997 when a constitutional amendment made it a public company. In its early days Petrobras was primarily an oil refiner of imported oil as it was thought the country’s oil supplies were too difficult and expensive to access. Interestingly this is a major reason for Brazil’s advanced bio-fuels industry as they wished to reduce their demand on imported oil. The majority of the country’s hydrocarbon deposits are in off shore fields which are complex to explore and develop. In 1997 the government began to allow foreign companies to take part in off shore exploration and their expertise led to very significant oil discoveries. In a few short years Brazil, largely led by Petrobras, went from insignificant oil production to expectations of adding more than 3 million barrels per day of production by 2035 (US Dept of State, 2011 Brazil). Put into perspective, only Saudi Arabia and Iraq are expected to add more in that time. In 2010 Petrobras proceeded with the largest public stock offering in history selling shares equivalent to 69.9 billion USD.
“Petroleo Brasileiro S.A (Petrobras) is a Brazilian national oil company; an integrated energy company. The company engages in the exploration and production, refining, transport and trading of oil, natural gas and other fluid hydrocarbons. The company also performs other energy related activities” (Global Data, 2011a). They have operations in 28 countries, their current reserves are around 14 billion barrels of oil, and their daily production is over 2.5 million barrels per day.

As of 2010 Petrobras’ proven reserves increased 8% to 15.2 billion. An increase in proven reserves means that the company is discovering oil faster than they are pumping it. In a world where many worry we have reached peak oil output, this is a positive sign for the company. The majority of Petrobras reserves, 12.91 billion are in oil with the reminder consisting of natural gas. While most of Petrobras reserves are in Brazil they have made a point to diversify internationally and 4% of their reserves are overseas. Petrobras has production in Nigeria and the Gulf of Mexico and has exploration projects in a number of other countries ongoing. The company has, by necessity, gained much expertise in off shore drilling; this is a skill that could be valuable in the future as most major fields still available for development are in difficult offshore areas. (Petrobras Co. website)

Government involvement with Petrobras may be hindering its stock valuation. As of 2010 the Brazilian government retains control of 63.6% of the company’s voting stock. (Petrobras Annual Report 2011). This means that if it so chooses the government can exercise significant control over the company and minority investors would be powerless. As with other companies (like Gazprom), this makes Petrobras less attractive to investors in comparison to a purely public company like ExxonMobil or Royal Dutch Shell. A prime example of the Brazilian government promoting policies not consistent with profitability is their policy of fixing domestic fuel prices regardless of crude oil costs. This policy resulted in a loss in Petrobras refining business in the 3rd quarter of 2011.

The rarity of untapped reserves in the present environment is reason enough to examine these companies stocks closely. The main risk is their government control and it seems unlikely that a corporation under effective government control will ever be as efficient as an independent multinational like Exxon Mobil.

Lukoil Oil Company

1.2 Lukoil Oil Company (Lukoil) is a vertically integrated oil and gas company, engaged in the exploration, production, refining and marketing of oil and gas, petroleum products and petrochemicals. The company also engages in power generation, banking, finance and other activities” (Global Data, 2011b). Lukoil was established in 1993 and currently has 4 refineries and 2 mini-refineries in Russia and 3 refineries in Ukraine, Bulgaria and Romania (Lukoil Company Website, 2011). The company has operations in 12 countries and annual oil production is 71.5 million tons. Lukoil is the only privately owned Oil Company in Russia and is mainly owned by minority investors. The company is also the largest privately owned oil and gas company in the world ranked by oil reserves which amount to 17.3 billion barrels of oil. As of 2010, Lukoil had 39,300 Russian employees (Lukoil Annual Report, 2010). The company’s stock is traded on the Moscow Inter-bank Currency Exchange and the RTS Stock Exchange in Russia under the ticker LKOH, on the London Stock Exchange under the ticker LKOD, and in the US on the OTC Market under the ticker LUKOY. The price of Lukoil’s stock in the US over the past several years has ranged from $43.74 to $75.98 per share (BNY Mellon, 2011). Dividends on the company’s common stock were paid at a rate of 59 rubles
per share or $1.94 per share using an average 2010 exchange rate of 30.37 rubles per $1. (Lukoil Company Website, 2011 and Lukoil Annual Report, 2010).

There are a few issues that should be noted for Lukoil. First, the company only spent $120 million on research and development in 2010 that was going to be focused on creating new technology that would help to make the best use of its reserve base in the future (Lukoil Annual Report, 2010). Second, ConocoPhillips decided to sell its shareholding in Lukoil in which Lukoil reacted by carrying out the largest buyback transactions ever seen on the Russian market in excess of $3.4 billion. Third, Lukoil released $1.5 billion of convertible bonds during year that will mature June 2015. The last issue is that the majority of Lukoil’s oil and gas operations takes place in Russia and most of its sales are to Russian companies which increases the country risk because its operations are not diversified as much as other companies. This affects earnings because most of the company’s costs are in Russian rubles but it reports most of its income in US dollars (Lukoil Annual Report, 2010).

Gazprom

1.3 In 1988 Gazprom State Gas Concern was formed from the assets of the Soviet Gas Ministry. Over the course of 10 years it went through several organizational changes until it became a joint stock company in 1998. Gazprom’s focus remains on natural gas but their holdings also include oil reserves, refining and storage facilities, pipelines, and electricity production.

Natural gas is generally transported via pipelines as it is more difficult than oil to be transported by ship. Historically this meant that Gazprom’s main international customers were European and so their distribution focus has been to the west of Russia. More recently Gazprom has attempted to enter the Liquefied Natural Gas (LNG) market which is more easily transportable via ship and expands their customer base considerably. Thus far financial results from this venture are negligible but could become important in the future.

Besides Western Europe, many of the former Soviet Union countries remaining major customers. The most significant customers among this group are Belarus and the Ukraine the latter market being of similar size to Germany’s economy.

Gazprom’s electric power division is somewhat unusual for an oil and gas supplier. This is largely because electric power and oil and gas use quite different business models. Electric power generation is not as volatile a business as gas production and makes their stock more difficult to value. In 2010 electricity production was up to 175.1 billion kwh’s, which a significant increase is over output in 2009. Overall Gazprom accounts for 17% of all Russian electricity production. Gazprom has a number of new power plants under construction in Russia and neighboring Armenia. While electricity production is unlikely to have as high of a return on investment as gas and oil production it will be a more reliable cash flow during periods of low gas and oil prices. Despite its value, it is likely that in a Western country this division would be sold or spun off as a separate company in order to increase shareholder value. This may be less likely in Gazprom’s case because significant government ownership reduces pressure to divest. (US Dept of State, 2011 Russia)
Indian Oil

1.4 Indian Oil (IOCL): IOCL is one of India’s largest oil companies. IOCL is involved in petroleum refining, crude oil and petroleum products pipelines, marketing the petroleum products along with research and development. IOCL is also the India’s largest company by sales when compared to others in the fiscal year of 2010 – 2011. Currently IOCL is working on becoming a huger player in the petrochemicals market and looking to expand further abroad. IOCL is a pioneer in their pipeline transportation and being a frontrunner in India. “Indian Oil's capabilities in the downstream sector of operations in the oil sector include: Technical and Consultancy Services, Operation & Maintenance, Techno-Economic feasibility/special studies, Turnaround Maintenance – planning, monitoring & execution, Inspection, Quality Control: benchmarking, Shipping and Commercial, Logistics, Research & Development, Safety and Industrial hygiene, Quality Auditing/ Management, Materials Management, Training” (Indian Oil Co. website).

Reliance Group

1.5 The Reliance Group, founded by Dhirubhai H. Ambani, is India's largest private sector enterprise, with businesses in the energy and materials value chain. Group's annual revenues are in excess of US$ 58 billion. The flagship company, Reliance Industries Limited, is a Fortune Global 500 company and is the largest into textiles in 1975. Exploration and production of oil and gas is critical for India's energy security and economic growth. Reliance's oil and gas exploration and production business is therefore inexorably linked with the national imperative. Exploration and production, the initial link in the energy and materials value chain, remains a major growth area and Reliance envisions evolving as a global energy major.” There are some significant contributions this company makes to the Indian economy. Reliance is responsible for 13.4%of India’s total exports; it is responsible for 6.9% of the government of India’s indirect tax revenue; and this company has 4.8% of the total market capitalization in India. As far as its global impact on oil refining, Reliance has the largest refining capacity in the world of any single location.

Sinopec

1.6 Sinopec Corp is a listed company on domestic and international stock exchanges with oil & petrochemical being its core businesses. The Company was incorporated on February, 2000 by China Petrochemical Corporation (Sinopec Group) as the sole initiator, pursuant to the Company Law of the People's Republic of China. Sinopec issued 16.78 billion H shares in Hong Kong, New York and London Stock Exchanges in October, 2000. The Company floated 2.8 billion A shares in Shanghai Stock Exchange in July, 2001. As of end 2010, the Company's total numbers of shares were 86.7 billion, of which 75.84% were held by Sinopec Group, 19.35% were shares listed overseas and 4.81% were domestic public shares.

Sinopec is striving to become a multinational energy and chemical company. To make them a strong international company and maintain its competitiveness, Sinopec Corp. has implemented a strategic plan including marketing and integration with more focus on innovation of science, technology and management, as well as improvement of employee quality.

In 2010, the Company made quite a number of achievements in oil and gas exploration and production. In exploration, basing on resource strategy of “stabilizing output in east mature fields, accelerating development in the western frontier areas, developing the southern China and making breakthrough on offshore”, the Company advanced the exploration in frontier areas, added new reserves to mature fields, stressed on technological breakthrough, strengthened fine management, and carried out integration of E&P (Sinopec Annual Report 2012). In production, through strengthening control of investment and cost,
adhering to rational development and technical innovation, the Company continuously focused on increasing reserves development ratio, oilfield yield and single-well capacity with the core of adjusting structure and focusing on operational optimization and investment return. Oil and gas production maintained a sound momentum.

**China National Petroleum**

1.7 Peoples’ Republic of China has the largest world population with > 1.5 billion citizens. Since the 1970’s China has moved from a closed, centrally planned economy to a more market oriented economy that plays a major global role. In 2010 China became the world’s largest exporter and has renewed its support for state-owned enterprises in sectors it considers important to its economic security. Some interesting stats: GDP of $10.9 trillion with a growth rate of 10.3% and per capita GDP of $7,600. In 2010 China’s inflation rate was 3.2%. It has exports of ~ $1.5 trillion and imports of ~ $1.3 trillion.

CNPC is a private company and is China’s largest oil and gas producer/supplier in China. It’s has a large world presence and is known for being a provider of oilfields and contracting in regards to engineering construction. Currently CNPC is in approximately 70 countries worldwide and continuing on expansion. The company also stresses their responsibilities both to society and the environment.

Their mission is “Caring for Energy, Caring for You” and “Energize – Harmonize – Realize” (CNPC.com.cn). According to their website, they strive for “harmonious relationships between operations and safety, energy and the environment, corporate and community interests, and employers and employees”. They also claim a commitment for protection to the environment along with resources. They promote research, development and applications that are environmental friendly in regards to their products (Research Bank).

**Discussion**

2.0 When making a decision whether or not to invest in a company it is important to take a look at its past performance as well as analyze its current financial standing. Although there are no “sure things” and nobody can peer into the future with absolute certainly, we can utilize financial ratios to summarize the large quantities of data with the goal of better understanding a firm’s performance. There are four main groupings of financial ratios: leverage ratios, liquidity ratios, profitability/efficiency ratios, and market value ratios. For the purposes of this study liquidity ratios (Current, Quick), profitability/equity ratios (Return on Assets, Return on Equity), leverage ratios (Debt to Equity), and market value ratios (Price Earnings Ratio) will be utilized to investigate the general financial health of the seven companies.

Financial and accounting data for all seven of the countries identified in this study was collected from the company annual reports and the appropriate financial ratios were determined. The ratios were then analyzed using descriptive statistics. The results of this analysis were then converted to histogram (chart) format using Microsoft Excel to provide a basis for discussion. In the following sections, each variable will be explored and discussed in more detail beginning with the current ratio analysis. It is important to note that, taken individually, no one variable should be utilized as a comprehensive signal of a company’s relative economic viability and that the best investment options occur as a result of an overall reflection of many different aspects of a company.
Liquidity Ratios

3.0 The current ratio is a measure of liquidity and represents a company’s general ability to turn its product or service into cash. It is calculated by dividing current assets by current liabilities. A ratio under the value of 1 suggests that the company would be unable to pay off its obligations if they came due at once. Because of the ability to finance, this does not mean a company with a current ratio score under 1 is a bankrupt company but it is general considered a poor sign of performance. As can be witnessed from Table 1, all but one of the companies (China National Petroleum) exhibit current ratios above one (ranging from .98 to 2.11). This indicates that, in general, these companies have current abilities to pay back their short-term liabilities with short-term assets – a sign of economic strength.

Table 1

<table>
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<tr>
<th>Company</th>
<th>Current Ratio</th>
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<tbody>
<tr>
<td>Gazprom (Russia)</td>
<td>2.11</td>
</tr>
<tr>
<td>Sinopec China National Offshore Oil (China)</td>
<td>2.07</td>
</tr>
<tr>
<td>Lukoil (Russia)</td>
<td>1.84</td>
</tr>
<tr>
<td>Petrobras (Brazil)</td>
<td>1.70</td>
</tr>
<tr>
<td>Reliance Ind. (India)</td>
<td>1.36</td>
</tr>
<tr>
<td>Indian Oil (India)</td>
<td>1.03</td>
</tr>
<tr>
<td>China National Petroleum (China)</td>
<td>0.98</td>
</tr>
</tbody>
</table>

Results of the Current Ratio can be misleading when considered in isolation because the ratio is subject to manipulation. For instance, if the firm borrows a large amount of money and then invests that money in securities, *ceteris paribus*, the current ratio will change. In addition, a limitation of the Current Ratio is that it does not consider the makeup of a company’s current assets and it is then insufficient in determining the relative ability of a company to pay its current liabilities. Because of the possibility the Current Ratio can present a less than accurate picture, we can use the Quick Ratio to help provide more clarity.

Not all assets a firm holds are equal in terms of their level of liquidity – some assets are closer to cash than others. In times of stress, a company may not be able to convert its less-liquid assets to cash. For instance, a company may not be able to sell its inventory when consumer choices change or when the macro-economic picture deteriorates. Because of this, we need to consider the most liquid of a firm’s assets
when making an investment decision. The Quick Ratio is one way to determine this and it is calculated by adding a company’s cash, marketable securities, and receivables and then dividing by its current liabilities.

Because the Quick Ratio excludes the use of inventories as liquid assets it is a more conservative measure of a firm’s financial health than the Current Ratio. In general, we would like to see a Quick Ratio of 1:1 and the higher the ratio, the greater the company’s ability to meet all current obligations with liquid assets (thus making it a possibly good firm to invest in). As can be witnessed in Table 2, three of the companies of this study reveal low to very low Quick Ratios (Reliance Ind., Indian Oil, and China National Petroleum).

Table 2

<table>
<thead>
<tr>
<th>Company</th>
<th>Quick Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gazprom (Russia)</td>
<td>1.64</td>
</tr>
<tr>
<td>Sinopec China National Offshore Oil (China)</td>
<td>1.56</td>
</tr>
<tr>
<td>Lukoil (Russia)</td>
<td>1.28</td>
</tr>
<tr>
<td>Petrobras (Brazil)</td>
<td>1.27</td>
</tr>
<tr>
<td>Reliance Ind. (India)</td>
<td>0.57</td>
</tr>
<tr>
<td>Indian Oil (India)</td>
<td>0.42</td>
</tr>
<tr>
<td>China National Petroleum (China)</td>
<td>0.29</td>
</tr>
</tbody>
</table>

Although the Current Ratio and the Quick Ratio can help to guide the investment decision, they also have characteristics that are less than perfect. One such drawback of these measures of liquidity is that they are based upon assets that are, by definition, liquid so the ratios can be quickly/easily changed and/or outdated. Thus to further inform the investment decision we must look at other measures of a firm’s performance. One such set of measures are profitability/efficiency ratios which allow us to examine the efficiency by which a company is using its assets.

Profitability/Efficiency Ratios

3.1 Although profitability/efficiency ratios contain more ambiguity than liquidity ratios they are still a good means to help determine how efficiently a firm is using its assets. These ratios represent an internal measure of a company’s efficiency and are thus a proxy measure for the quality and effectiveness of management. When considered in isolation these ratios may not tell us much but when compared to similar companies operating within the same industry they can provide hints as to a firm’s profitability. For the purposes of this study the efficiency ratios of Return on Assets and Return on Equity will be utilized.

One measure of the relative performance of a firm is to focus on the ratio “Return on Assets”. To calculate this ratio “Net Income” is typically divided by the average level of total assets (average from the beginning of the year to the end of the year since assets tend to change during the year). The value of this
ratio is a relational one (relative to past performance or as a comparison to other companies operating in similar industries) so there is no standard benchmark ratio that is preferred, other than wanting the outcome to be as high as possible.

The Return on Equity ratio represents the relative level of profit generated with the money that has been invested by shareholders. It is calculated by dividing net income by shareholder’s equity. Similar to the Return on Assets ratio, the Return on Equity ratio is best utilized when compared with historical results of the same company or when compared to other similar firms in the same industry. Table 3 represents the results of the Profitability/Efficiency ratio analysis for the seven companies in focus for this study.

Table 3

<table>
<thead>
<tr>
<th>Company</th>
<th>ROA</th>
<th>ROE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sinopec China National Offshore Oil (China)</td>
<td>0.14</td>
<td>0.21</td>
</tr>
<tr>
<td>Lukoil (Russia)</td>
<td>0.12</td>
<td>0.16</td>
</tr>
<tr>
<td>China National Petroleum (China)</td>
<td>0.12</td>
<td>0.34</td>
</tr>
<tr>
<td>Gazprom (Russia)</td>
<td>0.07</td>
<td>0.10</td>
</tr>
<tr>
<td>Reliance Ind. (India)</td>
<td>0.04</td>
<td>0.08</td>
</tr>
<tr>
<td>Petrobras (Brazil)</td>
<td>0.03</td>
<td>0.07</td>
</tr>
<tr>
<td>Indian Oil (India)</td>
<td>0.02</td>
<td>0.07</td>
</tr>
</tbody>
</table>

The Return on Assets ratio and the Return on Equity ratio have a number of limitations. First, as was previously mentioned, profitability/efficiency ratios are more ambiguous than liquidity ratios. So, instead of being a direct measure of efficiency they are better viewed as a sign of efficiency, helping guide the potential investor to ask other important questions (rather than to answer them). For this reason, an investment decision should not be made based solely on the results of these ratios. One reason efficiency/profitability ratios are more ambiguous is that assets are valued on the basis of their original cost less any depreciation. So, these ratios tell us little, if anything, about the ability of the company to purchase or sell those assets in today’s market (or if those assets could be better served in a different capacity).

And the value of assets is an important concern because it is with these assets a company covers its liabilities. So, profitability/efficiency ratios help us peer into part of the story that involves the use of assets but they do not tell us much about the use of a firm’s financial leverage (debt obligations). To gain some understanding of a firm’s debt obligations the investor can utilize leverage ratios.

Leverage Ratios
Leverage ratios help us to determine the amount and duration of long-term and short-term debt obligations. In particular, long-term debt obligations tend to commit the company to a set of fixed payments over a specified period of time. So, a leverage ratio (such as Debt to Equity) can help us to better understand the “mix” of a firm’s operating costs. The Debt to Equity ratio is determined by adding all long-term debt obligations to all short-term debt obligations (total liabilities) and then dividing the sum by a company’s equity. This ratio then helps us understand the extent to which the assets of a company are financed by its debts. Table 4 depicts the results of the Debt to Equity analysis for the seven companies of this study.

Table 4

<table>
<thead>
<tr>
<th></th>
<th>China National Petroleum (China)</th>
<th>Gazprom (Russia)</th>
<th>Lukoil (Russia)</th>
<th>Reliance Ind. (India)</th>
<th>Petrobras (Brazil)</th>
<th>Sinopec China National Offshore Oil (China)</th>
<th>Indian Oil (India)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt/Equity</td>
<td>0.34</td>
<td>0.42</td>
<td>0.47</td>
<td>0.83</td>
<td>0.97</td>
<td>0.99</td>
<td>2.70</td>
</tr>
</tbody>
</table>

Market Value Ratios

3.3 A wise investor makes use of all information available – information that exists outside of the firm’s accounting records. External signs of a company’s relative strength can be witnessed using market value ratios. For the purposes of this study the market value ratios of Earnings per Share and Price Earnings Ratio will be provided for the seven companies.

Earnings per Share is calculated by subtracting dividends on preferred stock from net income and then dividing the result by the average number of outstanding shares. This ratio then represents a general indicator of a company’s level of profitability. Earnings per Share is considered by many as the most important element when attempting to assign value to a share price and it is used to calculate the Price Earnings Ratio.

The Price Earnings Ratio (P/E) is calculated by dividing the stock price by earnings per share. A high P/E is an indication that the market is expecting either a high growth in dividends in the coming years, that the stock represents a company with low risk for which investors are at ease with a low rate of return, or the market expects the company to achieve an average growth rate but while it does so to pay out a large
portion of its earnings. The results of the analysis of Earnings per Share and Price Earnings Ratio are represented in Table 5. It is important to note that this data was not available for Reliance Ind. (India) so it has been excluded from the histogram.

Table 5

<table>
<thead>
<tr>
<th>Company</th>
<th>EPS</th>
<th>P/E</th>
</tr>
</thead>
<tbody>
<tr>
<td>China National Petroleum (China)</td>
<td>$70.65</td>
<td>$11.76</td>
</tr>
<tr>
<td>Indian Oil (India)</td>
<td>$18.22</td>
<td>$12.20</td>
</tr>
<tr>
<td>Lukoil (Russia)</td>
<td>$13.59</td>
<td>$4.53</td>
</tr>
<tr>
<td>Petrobras (Brazil)</td>
<td>$1.66</td>
<td>$6.50</td>
</tr>
<tr>
<td>Gazprom (Russia)</td>
<td>$1.47</td>
<td>$2.70</td>
</tr>
<tr>
<td>Sinopec China National Offshore Oil (China)</td>
<td>$1.43</td>
<td>$16.80</td>
</tr>
</tbody>
</table>

Conclusion

Investors can have extremely rewarding experiences investing in stocks of emerging markets because they are vibrant economies. The MSCI Emerging Markets index has gained ~250% in the past decade vs. ~100% for the S & P stock index, reinvesting dividends. Are these types of investments volatile? You bet they are. More volatile than developed nations? Yes. Their economies are unstable and fragile and their politics sometimes unsettled. In Russia, financial and economic data such as the GDP is what the government stipulates. Also, their markets tend to be unpredictable. The political risk is probably one factor for the P/E of the MSCI index to be ~ 11 in contrast to the P/E of the S & P 500 to be ~17.

However, an educated investor is your best customer. Based on the data above, if we were to choose one investment out of the seven companies it would depend on the investor’s preference and risk tolerance level. The authors would most likely choose China Petroleum based on its attractive EPS and low P/E ratio. Given the tenuous situation and conditions in China, the country risk factor is high; although their economy is booming. Studying the economic history of China and being the world’s second largest economy, the risk is probably justified. However, if an investor is risk averse, then Gazprom is the strongest, but with an admittedly higher country risk. Return on Assets and Return on Equity are relatively close in all seven, so that is not a major concern.
References


