Hitting a BRIC Wall

- MIST countries becoming the new BRICs?

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Abstract

The purpose of this study is to examine a completely new phenomenon called the MIST, by two portfolios: the Goldman Sachs Next 11 equity fund, and the Goldman Sachs BRIC fund, in order to establish whether or not the MIST countries are a better investment decision in terms of risk, return and growth. Furthermore, the study examines in which form these emerging markets lies in terms of market efficiency, and if the random walk theory is present. The opportunities and challenges for Mexico, Indonesia, South Korea and Turkey are also brought upon to determine whether these countries have the potential to exhibit the same success as the BRIC countries did for a decade.

Since the growth of the BRIC countries are slowing down, Jim O’Neill, the same founder of the term BRIC, coined the nations MIST. The BRIC countries are facing several difficulties and have led investors to draw out from these countries stocks. Investors that were pouring in money to the BRIC countries during the period 2001-2009, have from 2011, withdrawn 15 billion dollars from the BRIC stocks. Mexico, Indonesia, South Korea and Turkey. Derived from the next eleven countries, these countries have a major effect on the global economy due to their economical and political circumstances. For many investors, the MIST countries that are growing faster than the BRIC are regarded to be the new biggest emerging markets. Investing in BRIC funds are stated to be a disaster today, while on the other hand, the MIST countries are growing and outpacing the BRIC fund.

The methodology used was to compare two different portfolios, Goldman Sachs N-11 equity fund in the period 2011-2013 against the Goldman Sachs BRIC fund in two different periods, 2011-2013 and 2006-2008 with S&P 500 as the market index. In addition, a hypothesis test was carried out for this period to observe whether or not to reject the null hypothesis.

The results of this study shows that the null hypothesis was rejected and that the N-11 equity fund is a better investment decision, in terms of risk, return and growth today. These emerging markets are under the weak form market efficiency and the random walk theory is present in the N-11 equity fund. This makes the authors’ results more of a speculation than a definite conclusion about the future, as one cannot “beat the market”.

Keywords:
Foreword
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1. Introduction

The introduction will give the reader an overview of the authors’ thesis. Initially, the background to the study is introduced, and further on, the field of problem is discussed. Finally, the purpose and the goals of the authors’ study are explained.

1.1 Background

Singh states in his report\(^1\) that in emerging markets, it is fundamental that properly functioning and efficient capital markets exist for their development process. Generally, developing countries can encounter financial constraints such as: limited access to international capital markets and low domestic saving ratios, which developed countries, may not be bound to. If there are market inefficiencies in stock markets, it will discourage potential domestic and foreign investors. Moreover, if an efficient capital market is absent, misallocations of resources can occur, and consequently harming the countries’ economic development.\(^2\)

Therefore, it has been of great interest for researchers to determine whether the stock price movement follows a certain pattern and thus, if it can be used for their own benefit, or if the stock price movement is determined by completely random patterns. If the price movement follows a pattern, there is a possibility to gain profit by predicting future price movements.\(^3\)

When money is invested into a stock market, the goal is to make a profitable return by aiming to generate a return on the capital invested. Furthermore, investors try to surpass the market, resulting in higher returns.\(^4\)

According to Fama\(^5\), a particular market, at any given time, whose prices reflect on all available information, is called an efficient market, formulated from the efficient market hypothesis (EMH). Thus, EMH states that there is no advantage in predicting a return on a stock price for any investor, because there is no access for further information than what has not already been given to everyone.\(^6\)

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\(^6\) Heakal, 2009, op. cit.
In the EMH, there is talk about the “random walk” of prices. This theory says; that in any investment strategy, which tries to outperform the market consistently, results in a failure because of the constant change in the stock price movement. Therefore, an investor, is suggested by the EMH, to invest in an index fund, which is a fund that provides low operating expenses, low portfolio turnover, and is adapted to the market index.

The focus on many discussions has been on the emerging markets, such as the BRIC markets, and whether they are exceptions from the” random walk” theory. Emerging markets are defined by nations whose economy are still growing and developing, as well as lowering their boundaries for the world.

Brazil, Russia, India and China are the four countries merged to form the term BRIC. These four countries combined make up for approximately 40 percent of the world’s population, and also 25 percent of the global land. Furthermore, the extraordinary growth of these emerging markets has attracted and still attracts researchers and investors worldwide. Based on Jim O’Neill’s report from Goldman Sachs, the economic growth of these countries will result in the joint economical wealth of BRIC, surpassing the richest nations by 2050. These optimistic circumstances would offer improved security, as well as growth for investors.

However, the growth of the BRIC countries is slowing down. This slowdown has a probability of being persistent and it is an issue that cannot be taken lightly. The BRIC countries are going through a challenging period, and this leads investors to draw out from these countries’ stocks. The BRIC countries are facing several difficulties, and primary examples are: China’s growth rate dropping down to its lowest since 2004, Russia may be affected badly by the falling oil prices, Brazil has had an expand pace of less than three percent for the second year in a row, and India may be cut off from investment-grade credit rating from a financial service company named Standard&Poor. The same founder that initiated the BRIC investment boom, Jim O’Neill, has been promoting a new term, the MIST countries.

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7 Heakal, op. cit.
9 Misharina, op. cit.
Mexico, Indonesia, South Korea and Turkey. These four countries are derived from the Next Eleven (N11) countries. The Next 11 are identified as the largest populations after BRIC, with countries, apart from the aforementioned MIST are: Bangladesh, Egypt, Nigeria, Pakistan, the Philippines, Iran and Vietnam. Their economic and political circumstances could have a major effect on the global economy. In relation to fund holdings and GDP, the biggest markets from the N-11 are the MIST nations.

In addition, more attention is being received from investors to these nations. The reason for this is due to the fact that this year, BRICs have had a growth of 3.2 percent, compared to the N-11 equity fund that has grown 12 percent, in comparison to the BRICs 3.2 percent growth. This raises the question if the MIST countries can repeat the success of BRIC.

This purpose of this thesis is to research and assess a completely new term and topic, starting with data from end of February 2011 to the beginning of January 2013; a 24-month time span. The authors will achieve this by contributing towards the existing research with the most recent results from the BRICs, and comparing it to the newly found term: the MIST countries. The authors believe that this study could be a guideline to determine whether the MIST nations might be able to replace BRIC in terms of risk, return and growth.

1.2 Field of Problem

According to the Deutsche Bank emerging market equity specialist, John-Paul Smith, the BRIC countries was merely a concept that was marketing-led; a concept that has been an investment disaster. “People were launching BRIC funds three, four, and five years ago. When Jim O’Neill made the call it was a fantastic call for a few years but then, as with these things, it was taken too far. The reason they are uninvestable is because of the extent of state intervention in those markets, which nobody would have foreseen three years ago,” Smith said.

Even O’Neill has noted that investors should adapt to China, which has had, and will have a lower growth than usual. What should be expected is a growth of seven or eight percent each year, and that China’s growth will not be determined by its export-led economy or state investments, but by its

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14 Martin, Bloomberg Businessweek, op. cit.
16 Martin, Bloomberg Businessweek, op. cit.
17 Ibid.
19 Ibid.
consumption being the determinant. However, it is not only China that has lower growth expectancy. O’Neill states that Brazil, India and Russia are expected to have a weaker growth as well.\textsuperscript{20}

These problems that the BRICS are facing, can illustrate the dangers of investing today, even though the early years proved to be a successful investment.\textsuperscript{21}

Brazil, which has been spending big money for a decade, has been benefiting from the boom of the commodities that Brazil possesses. This boom is temporarily capped out. However, even if the commodities were to go through another boom, the Brazilian government is distressing foreign investors and is spending excessively. The biggest trouble for Brazil would be if the prices of the commodities would fall.\textsuperscript{22}

Russia, akin to Brazil, has also been profiting from its commodity boom. Russia is also harassing their foreign investors, and even worse than the case of Brazil. They are said to be running out of money and are the most corrupt country of the BRICs, according to the Transparency International.\textsuperscript{23}

India has a corrupt government and they keep on spending money. Inflation has reached over ten percent and the stock market is likewise inflated.\textsuperscript{24} Instead of a six percent growth that was expected in India for the first three months of 2012, they turned out with 5.3 percent, which is worse than expected.\textsuperscript{25}

China is having a major debt problem in their banking system and furthermore, they are going through a recession and inflation that is closing up to double digits. Money has been invested by China in non-economical “trash” and investing now is a big risk, despite the possibility that the economy might stabilize in the long-term.\textsuperscript{26}

Therefore, for many investors, the MIST countries, growing faster than BRIC, is regarded to be the new biggest emerging markets. The Goldman Sachs N-11 fund (excluding Iran because of a closed market for foreign investors), which was introduced in February 2011, grew by 12 percent this year, compared to the Goldman Sachs BRIC fund, which had a growth of 1.5 percent.\textsuperscript{27}

\textsuperscript{20} Ahmed, op. cit.
\textsuperscript{22} Ibid.
\textsuperscript{23} Ibid.
\textsuperscript{24} Ibid.
\textsuperscript{26} Hutchinson, op. cit.
“We see steady inflows into the Next 11 fund each week, It hasn’t been affected by the disappointment in the US and obviously the European markets especially, and all the disappointment in some of the BRIC markets.” Said O’Neill

The economies of the MIST countries, have this decade doubled its size, and in spite of the global economic issues, have still continued to flow. Mexico is helped by its auto export to overtake the growth of Brazil and China is demanding commodities from South American nations. Although, forecasts deemed an Indonesian slowdown, it grew by 6.37 percent and surprised investors in the second quarter, due to domestic spending and investment.

93 percent of the U.S.-based emerging market equity was beaten by the N-11 equity fund, while the BRIC fund lagged by 89 percent. MSCI BRIC index, a free float equity index, rose by 1.7 percent, as MSCI GDP Weighted Next 11 ex-Iran Index ascended by 17 percent.

Paul Christopher, a chief international strategist stated: “You’ve seen a rotation in the leadership based on rate of economic growth, if you go back as far as just 2009, you’ll find people buying the BRIC story in a big way, and probably over-buying the BRIC story.”

As a result, investors that were pouring in money into the BRIC stocks from 2001-2009, accounting up to 67 billion dollars, has since last year, withdrawn 15 billion dollars. This is, according to Cambridge, the most withdrawn on a yearly basis since 1996.

1.2.1 Problem

BRIC and MIST are in two different phases; where BRIC, as individual countries and as a united group, are currently declining in terms of growth, whereas MIST is currently on its starting phase of its growth and is expected to grow in the upcoming years.

Investing in BRIC funds is stated to be a disaster today. The countries have grown too long and too fast. Investors are now withdrawing money from BRIC funds, and the MIST nations are growing and outpacing the BRIC fund.

By comparing Goldman Sachs BRIC and Goldman Sachs N-11 equity fund portfolios, is it an investment disaster to invest in BRIC, and should investors turn to MIST, as a new source of higher returns?

28 TV-Novosti, op. cit.
30 Ibid.
31 Ibid.
32 Ibid.
1.2.2 Research Questions

Question 1: Is there weak form market efficiency in these emerging markets?

Question 2: Is the random walk theory present in the N-11 equity fund?

Question 3: What are the opportunities and challenges for the MIST countries?

1.3 Purpose

The purpose of this thesis is to study two portfolios, the Goldman Sachs N-11 equity fund and the Goldman Sachs BRIC fund, in order to establish whether or not, the MIST countries are a better investment decision in terms of risk, return and growth.

2. Method

The problem is that the BRIC-market’s investors have shown hesitancy into investing and are either backing out, or not investing due to slower growth and lower returns on equity in these countries at the moment. Hence, the MIST-countries might be a better market to invest in right now. This chapter will present the mode of procedure and the approach for this study will be described.

2.1 Quantitative Research

In the authors’ study, the quantitative research consists of statistics. This is because quantitative research is used for measurable qualities. Criticisms against quantitative research are, for instance that it can be deduced from indications, and that the researchers can limit themselves to only study the positive and disregard the negative points.

2.2 Choice of Method

The authors use quantitative research in the form of statistics. These statistics are found on the Internet and scientific articles. In addition, research that consists of interviews done with experts from for example, Deutsche Bank, is being used. Excel formulae are used to calculate the results.


2.2.1 Secondary Data

The authors are going to use secondary data, since most information are found and collected on the Internet and scientific articles, in addition to books. Furthermore, the authors are going to use data such as interviews found on the Internet with experts from Deutsche Bank.

2.3 Sample of Choice

The samples of choices were BRIC-countries and MIST-countries. This is because the BRIC-countries’ return of equity is lower than in the last decade, and the MIST-countries might be the new BRIC. The four biggest markets in the GS N-11 equity fund are the MIST countries; contributing to approximately 73 percent of the N-11 countries’ GDP, and more importantly, around 80 percent of the GS N-11 equity fund’s assets are invested in the MIST, hence taken out from the N-11 and getting its own term. The authors chose MIST to focus on the biggest markets within the N-11 fund.

The authors then chose to examine two portfolios; the Goldman Sachs N-11 equity fund and Goldman Sachs BRIC fund. The portfolios are both from the Goldman Sachs with the reason being to reduce the risk of this studies results being biased. Also, because this company owns both funds, it would not benefit them to promote one and demote the other as these funds success should be in their best interest. The Goldman Sachs N-11 equity fund has 74 holdings while the Goldman Sachs BRIC fund has 64 holdings. This is important because the risk is spread out through diversification. One might think that the risk is greater within the BRIC fund because it only has four countries comparing to the eleven countries in the N-11 fund, however 80% of the N-11 fund is directed to four countries as well.

The authors’ decided to observe if the stock price movement for the BRIC funds where the same and not just for the GS BRIC fund. The five different funds observed where GS BRIC, Skandia BRIC, Schroder ISF BRIC, HSBC GIF BRIC & Templeton BRIC. This was done with the intent to investigate whether the news about BRIC being a disaster was biased or not for the personal gains of companies or individuals. As the figure shows, the stock price movement of the five different BRIC funds does not have a significant difference. This tells the author’s that the news reflects on the funds and this is not just the case for the GS BRIC fund. If there had been a significant difference, meaning one or several BRIC funds rising as others are falling, would mean that the situation in the BRIC countries does not affect the funds, and therefore the authors’ would not be able to take use of the information stating that investing in BRIC is a disaster or any other information about the “falling” BRIC. In addition, the authors’ believe the results gathered by studying the GS BRIC fund will display similar results as the other four BRIC funds. Thus, comparing one BRIC fund against one N-11 is considered to be the most reasonable method since there is only one N-11 fund.

BRIC was chosen within this study because it has been growing exponentially since 2001; when it started. These emerging markets have attracted many investors because of the returns. Furthermore, Ruchika Gahlot. and Saroj Kumar Datta states that the BRIC countries will have surpassed the richest nations by the year of 2050. Specifically, the Goldman Sachs BRIC fund that started in July 2006 was chosen. Goldmans Sachs BRIC was chosen in two different periods, one in the same period as the N-11 equity fund, 2011-2013, and the other when the Goldman Sachs BRIC fund was started in 2006-2008.
This is to compare not only today’s N-11 and BRIC fund, but to compare the BRIC’s showing the same growth during its start as emerging markets, as well.

The N-11 equity fund was chosen because it has shown that it could probably exhibit the same potential growth as emerging markets as BRIC has been in the past. Hence, the authors thought that it was the only reasonable competitor to the BRICs. MIST was focused on throughout this entire study, because of the fact that they are the four biggest markets in the N-11, and affects the N-11 equity fund the most, considering that they account for an estimate of 73 percent of the N-11’s GDP.\(^1\)

The authors consider that the BRIC and the MIST should be studied and compared instead of the whole N-11 because MIST, having the majority of the GDP and investments through the fund, should be focused on, rather than writing about seven more countries that share only roughly 20 percent of the remaining N-11 investments. The authors believe that when calculating this study’s result, it is the MIST countries that have contributed the most to the outcome.

Initially, different benchmarks were considered to be used against these portfolios as the MSCI BRIC Index and the MSCI Next 11 ex Iran GDP Weighted Index to analyze the performance of the portfolios against the market. However, information of the MSCI Next 11 Index could only be found in the quotes of Bloomberg and the information available about this index was insufficient for the authors’ to be used as a benchmark. This would mean that one would have to compare the N-11 equity fund against the established indexes of each country. This method was also considered but was disregarded as the S&P 500 index has been used in previous researches and is commonly used as an index for measuring a portfolio performance. Many of the articles concerning BRIC and MIST are compared against the performance of S&P 500 to determine if the portfolios are beating the market or not. World Indexes such as Dow Jones and NASDAQ was also considered but the authors’ decision to use the S&P 500 as benchmark was due to the fact that the S&P 500 consists of 500 stocks\(^2\) compared to the 30 stocks\(^3\) of Dow Jones, and 100 of NASDAQ.\(^4\) In the authors’ opinion, this gives a broader perspective of the market, and other researchers have commonly used the S&P 500 as benchmark for measuring the performance of a portfolio or to test stock market efficiency.

The Standard & Poor 500 index has been chosen to indicate the performance of the two funds. Standard & Poor, owned by McGraw Hill, is a financial service company with total number of companies accounting up to 500, hence the name Standard & Poor’s 500 Index. For the U.S. stock

\(^1\) Martin, Bloomberg, 2012, op. cit.
market S&P 500 Index, S&P 500 has developed to being the leading indicator for managers in
determining how well their mutual funds are doing.\textsuperscript{45}

2.4 Determining What is a “Better” Investment

The authors reasoning for a “better” investment concludes as following; a better investment is when
an investor receives a higher return for a lower risk. In other words: the lower the risk, the better, even if
a higher risk gives a higher return. This risk and return cannot be of significant difference between the
two, as this leads up to the growth rate. A steady growth but slower is better than a fluctuating growth.

These variables will be within the timeframe of the study’s set period. With these variables in mind,
the authors will determine which portfolio is a better investment decision at the moment.

According to Grail Research, MIST is expected a high growth rate for the next 20-30 years.\textsuperscript{46}
Therefore, after conducting the results, the authors believe that if the MISTs are a better investment
decision, it should follow the results in the years to come.

2.5 Determining Form of Market Efficiency

To determine whether a market or inefficient, the authors will look at the stock price movement to
see whether to stock prices reflect the changes in the market immediately. If this is the case, then a
market is determined to be efficient, meaning that if the market goes up, the stock price should exhibit a
similar reaction instantaneously. Hence, there should not be a delayed reaction in the stock price
movement.

The authors will determine the form of market efficiency by calculating the correlation in the market.
A high correlation signifies that the stock prices follow the market. A correlation signifies that the result
of the correlation is between 1 and -1, where 1 is a positive strong correlation, -1 is a negative strong
correlation and 0 shows no correlation. If the stock price movements show no significant difference
between the two portfolios then it should be considered to be in the weak form market efficiency and if
it has a significant difference, then the markets are inefficient.

2.6 Data Gathering

Since the authors are going to determine whether the BRIC portfolio or the N-11 equity fund is a
better investment choice, the authors will use sources such as Yahoo Finance, Bloomberg, Morningstar,
Deutsche Bank and scientific articles.

\textsuperscript{45} Allbusiness, ‘What is the Standard & Poor 500 Index (S&P500)?’, in Allbusiness, retrieved 22 Nov 2012,

\textsuperscript{46} Grail Research, ‘MIST: the next big thing or just hot air?’, in Integreon, retrieved 1 November 2012,
Data from Yahoo Finance are reliable and accurate because it is robust. The data is not meddled with from any outsiders because Yahoo gathers it. It is fast, since everything is within its own website. It provides clear information.\textsuperscript{47}

Bloomberg is the number one source for financial news in the world. There is no one close to the source available in Bloomberg, in terms of comprehension, trustworthiness and reliability.\textsuperscript{48}

Morningstar is a tool for investment decisions and is used for advisors and investors. However, the best information is only available to people who have made a payment.\textsuperscript{49}

Deutsche Bank has a high rating from the leading independent rating agencies.\textsuperscript{50}

The data gathered will then be used to answer a hypothesis through quotes. The authors will use the data to calculate the correlation, returns, standard deviation and the risk factor of each portfolio by the use of investment theories. The authors will then conduct a T-test to see if the result is within the critical value to see whether to accept the null hypothesis, or to discard it.

A data overview of the MIST nations and the BRIC nations will be gathered to strengthen the validity of the results. This information is gathered through secondary data. In addition, the data will be gathered for the use of answering the authors’ research questions throughout this study.

The risk free rate of ($R_f$) will be gathered through the U.S. government treasury bills website.\textsuperscript{51}

\textbf{2.7 Reliability & Validity}

To achieve high validity in the study, one must have high reliability. Therefore, both are important and cannot be distinguished because reliability and validity are instruments, which must be considered, when conducting a study.

Reliability refers to the measure of credibility and integrity of this study. If a study is to exhibit high reliability, it should be able to recreate the same results if the study was to be remade.\textsuperscript{52} Reliability is

something that is of great importance in conducting a study. Reliability is in which degree the source of the measuring instrument is authentic. 53

By studying and comparing two portfolios, the authors chose the use of historical changes in the stock prices and the growth of the respective portfolios. However, if the stock price changes are a reliable measure, is a question the authors have considered. For a study to be reliable, the measuring source must provide the same or close to the same result in any other study of the same kind. 54 The authors have used and applied well-known theories and authors as a reliability source in this study. That this study will provide a reliable result is believed because of the sources being recognized as reliable to the authors. Data that is used throughout the thesis is collected from such sources as Bloomberg, Morningstar, Goldman Sachs, Deutsche Bank and well known scientific articles. Additionally, information is gathered through databases such as JStor. A problem considered is the period of the historical data that is used in this study. The Goldman Sachs N-11 equity fund is considerably new to the market and the historical values may not be reflecting an accurate result of the reality. Since the N-11 equity fund only has one portfolio, questions could be aroused whether one can generalize a conclusion by only comparing two funds. One cannot really generalize due to the subject being new to the market, and a conclusion would have to have some years of data or more funds, to be able to draw an accurate conclusion. However, today, the authors’ way of generalizing and speculating is the only way to give a moderate conclusion and could be used as a guideline towards future studies and/or investors.

Validity is if the study really measures what it is supposed to measure. 55 The authors cannot be 100 percent sure if the empirical values reflect the reality due to that the MIST phenomenon is new, and could be based on speculations. If the fund had been active for a few more years before this study, and if there were more N-11 equity funds or a specific MIST fund rather than choosing MIST within the N-11 equity fund, this study would enhance the validity and the authors’ assurance of the results.

The research’s validity is reliable because of several data suggesting the same outcome. Furthermore, the authors’ uses of interviews with experts, such as experts from Deutsche Bank, further suggest that the data is reliable. However, these data are, as stated earlier, mostly speculations, which make it hard to be definite, if what has been suggested by experts really will be the outcome.

54 Ibid.
55 Eliasson, op. cit.
2.8 Statistical Hypothesis Testing

A statistical hypothesis was conducted to examine whether or not there was a correlation between risk and return. The analysis was formulated with a null hypothesis ($H_0$) and a alternative hypothesis ($H_1$). An accepted hypothesis implies that the other one being rejected. The hypothesis examines the N-11 fund during the period February 28, 2011 to January 4, 2013 meaning there is a 24 month period. To approach this hypothesis, the returns was used as the dependent variable and the risk was used as the independent variable.

**Hypothesis Test**

$H_0$: There is not a correlation between risk and return for the Goldman Sachs N-11 equity fund

$H_1$: There is a correlation between risk and return for the Goldman Sachs N-11 equity fund

2.9 Criticism on Method

Since the Goldman Sachs N-11 equity fund arose in February 2011; there are only statistics from that date. This is a thin margin for the authors to draw a qualified conclusion if the MIST-countries can actually become the new BRIC. Most of the data are speculations, which make it hard for the authors to come to a hard-evidenced conclusion.

The method used to test the market efficiency and the use of a benchmark index could have been done differently by conducting a unit root test through the Augmented Dickey-Fuller Test to examine whether there is a unit root in the lags, an autocorrelation coefficient and an LM-test. Indexes of each country could have been studied instead of two portfolios with exposure in these countries. However, one has to consider the fact that beating the market is out of the question by comparing indexes, rather than funds.

Another source of criticism is that the authors are human, which means that the authors can have made a mistake during the calculations of the numbers to find the results of the different portfolios. Excel was used to calculate this study’s results; however the authors may have had a formula wrong or added another number by mistake.

Criticism against the time frame is also a valid point. Since a study like this should have at least have a few years to collect data, a time span of 24 months is not a high representative of this kind of study. However, one must take into consideration that the term of MIST is only 24 months old.
2.10 Source Criticism

Criticism against our sources could be the usage of Internet sources within this study. To reference to Internet sources could be problematic, because the information available may not be referenced to a reliable source, and therefore it could be difficult to know where the author got the information.

Due to the use of mainly secondary data in this study, as internet based sources and articles, there might still be a risk that the information of the sources does not reflect a correct image of the reality, even though the sources used are considered to be reliable. The information gathered through these sources could have been altered by the journalists to show a certain direction and ideal. This does not necessarily mean that the information is wrong, but more likely that some crucial information is left out, which makes the outcome of the information and opinions gathered different. This is why these sources might have contributed to the authors of this study not receiving the entirety of the case.

Otherwise, the study uses empirical values as a factor in determining results. The sources used for that are not based on opinions but are collected through hard data. This strengthens the results and could be reflected back to see whether the authors received the correct representation of the entirety or not.

One might think that Goldman Sachs is biased by promoting MIST and could therefore “demote” BRIC on purpose because of own interests. However, the authors do not believe that the Goldman Sachs would, due to a new fund, demote the BRIC’s during crucial times. This is improbable as Goldman Sachs still believe in the fact that these markets will surpass the richest countries by 2050. This is the same case for Deutsche Bank as one might think John Paul Smith is calling the BRICs an investment disaster and promoting MIST due to own interests and exposure to the MIST. Deutsche Bank is also exposed to the BRIC countries which mean Deutsche Bank benefits from both the BRIC and the MIST. In spite of these factors, there is still a risk where Deutsche Bank and Goldman Sachs could be biased and this has to be taken into consideration.
3. Theory

The authors’ thesis includes the following theories: portfolio theory, efficient market hypothesis and random walk hypothesis. Thereafter, the risk factor is mentioned. The theories will be explained in full detail about how it has aroused to how it is today, because some theories have been added on since its beginning.

3.1 Portfolio Theory

Portfolio theory was introduced in a journal released in 1952’s Journal of Finance by Harry Markowitz. Before Markowitz work, another form of “portfolio” was used, which was not nearly as effective and secure as Markowitz’s portfolio theory. The previous method was to analyze individual stocks and bonds’ risk and rewards, making it an individual security, not a portfolio, and then make an investment, after identifying the risks and rewards, on the highest profit and the least risks. 56

Markowitz realized this and proposed that the investors should not only focus on the individual securities, but the whole portfolio. This would make them assess not only the individual risk but the overall risk-reward possibilities, thus, making it suitable to invest not only in one stock, but in different stocks; namely diversification through mathematics. 57

Standard deviation, expected values and correlations form when a combination between the single-period returns on the individual securities is treated as random variables. Risk and reward can then be associated with volatility and expected return. Moreover, an assessment of portfolios can be made with the values of the individual securities. Markowitz states that there are several different portfolios, of among which many can balance the risk and reward, which are called an efficient frontier of portfolios. These are the portfolios, which Markowitz suggests that investors should invest in. 58

In 1958, in addition to Markowitz’s portfolio, James Tobin added a risk-free asset to the analysis. This analysis made it possible for portfolios to outperform other portfolios in the efficient frontier. These portfolios, that could outperform another portfolio in the efficient frontier, were something called super-efficient portfolio and were based on the capital market line. In short, it meant to either leverage or de-leverage portfolios on the efficient frontier. 59

The financial risk management is determined by portfolio theory. It is also used as a prelude for the present’s value-at-risk measures. Passive investments are often used because of the understanding of the portfolio theory. How institutional portfolios are shaped is also determined by this theory. All in all, the

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57 Ibid.
58 Ibid.
59 Ibid.
understanding of expected return and volatility of a couple of securities put together, is what portfolio theory presents.\(^\text{60}\)

In the authors’ thesis, portfolio theory will be brought upon when comparing the two terms, BRIC and MIST. By using the different portfolios, the authors will come to a conclusion about which of the two terms will be the wisest to invest in. The authors will use the portfolio theory to find the correlation between the risk and return. The mathematical model builds a portfolio that is ideal for an investor that gives the best return by taking the risk into consideration. Considering that MIST and BRIC are several countries, there are a number of securities within each portfolio to be able to diversify, hence reducing the risk through diversification.

### 3.1.1 Capital Asset Price Model

Capital Asset Pricing Model (CAPM) was given form by Sharpe in 1964. CAPM is a market portfolio, which is the super-efficient portfolio that Tobin added. Beta was introduced by CAPM and it was linked to an asset’s expected return. CAPM states that all portfolios should be in the risk-free asset; be it a leveraged or de-leveraged portfolio.\(^\text{61}\)

CAPM is widely used by researchers who study the stock exchange efficiency and CAPM is the best-known model to evaluate risk and return.\(^\text{62}\)

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**Figure 3.1 - Risk and Return**

![Risk and Return Diagram]

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\(^{60}\) Holton, 1996 & 2011, op. cit.

\(^{61}\) Ibid.


\(^{63}\) Brealey & Myers, op. cit. p. 195.
To fully show what CAPM states is to look at this figure. Beta, which in CAPM’s case is the risk, is directly related to the return. The higher the beta, the higher the expected return. An investor will expect a higher return for an investment made with higher risk. As figure 3.1 shows, a risk with a beta of 0.5 will have half of the risk the market portfolio has and a beta of 2 will have twice as much risk.

The formula for CAPM is as follows;

\[
\text{Expected risk premium on stock} = \text{beta} \times \text{expected risk premium on market}
\]

\[
R - R_f = \beta (R_m - R_f)^{64}
\]

In order to see which portfolio is to exhibit the best-expected return, the authors use CAPM to calculate the risk and return of each portfolio; the BRIC fund and the N-11 equity fund.

Beta shows the risk a portfolio takes within a market. If the portfolio has a beta of 1, then it is consistent with the market. If it is less than 1, then it takes less risk but gains less in return. If it is more than 1, it takes a larger risk than the market but receives higher returns. For example, if a portfolio has a beta of 1.5 while the market is at 1; and the expected return is 8 percent: then the expected return would be 12 percent (1.5*8 percent). If the return does not look that way, then it is not a good portfolio to invest in. However, it is the same if the market falls. The portfolio with the higher beta will fall the most.\(^{65}\)

The measurement of risk in CAPM is \(Beta (\beta)\). The market volatility and sensibility of a stock is measured through beta by comparing the returns of a stock to a market index. It is essential to identify hot different portfolios are affected by betas as the risk influences stock returns. Assumed that one portfolio has higher beta and better stock price development than the other, it would give, at the expense of a higher risk, give higher return. Thus, higher risk could in a way explain a stocks higher return. The portfolio of all stocks is the market, and a beta of 1.0 is the average stock beta.\(^{66}\)

A stock would react more to market changes if the beta is larger than 1.0, compared to an average stock.\(^{67}\) If a market index would rise by 10 percent, a stock having a beta of for example 1.5, would rise additionally by 50 percent. In the reverse situation, if the beta is less than 1.0, for example 0.5, means that the stock will fall and rise, by 50 percent of the market index change. Thus, betas lower than 1.0 usually movies as the market and stocks with betas higher than 1.0 has a more intense movement of the market.\(^{68}\) The formula of beta shows the weighted average of the stocks beta.\(^{69}\) The formula for the beta of the stock is defined by the following:

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\(^{64}\) Brealey & Myers, op. cit. p. 195.


\(^{67}\) Ibid.

\(^{68}\) Ibid.
\[
\beta_i = \frac{\text{Covariance (Market return, Stock return)}}{\text{Variance (Market return)}}
\]

Beta Formula\textsuperscript{70}

The demanded compensation for taking risk of investing in a stock market by investors is called the *risk premium*. The expected return in surplus of the risk free rate of return is the risk premium which is calculated by opinions and judgments of market actors or historical values. Hence, the (Rf, risk free rate of return, is what an investor can be certain to receive on an investment of capital.\textsuperscript{71}

The beta in CAPM will be used by the authors to measure the risk of the two different portfolios in order to determine how the portfolios would react to market changes. This is essential to know as if there is a significant difference in the betas of a portfolio to the same market index, to know which portfolio is safer in its volatility and sensibility.

Criticism towards CAPM is that CAPM uses proxies to find values and these proxies can be insufficient. CAPM is usually good with past data, but can be unreliable with new data. Also, it is suggested that some trials should be calculated beforehand. CAPM can also use data which have no theoretical base.\textsuperscript{72}

There are eight different criticisms on CAPM. This is mainly because there are researchers with different ideas of how a risk-based calculation should be done.\textsuperscript{73}

1) Critique on the equality between interest rate on borrowing and lending
2) Critiques on investors’ ability to borrow and lend at a risk free rate.
3) Critique on the consistency between investors’ expectations of risk and return
4) Critiques on the absence of taxes on profits.
5) Critiques on the factors in a market portfolio.
6) Critique on the rate of return investment which is risk free. (Considering the impact of inflation)
7) Critique on the investors’ risk.

\textsuperscript{70} Brealey & Myers, 2000, op. cit.
8) Critique on the absence of information which is not available for all and the absence of cost.

3.2 Efficient Market Hypothesis

The efficient market hypothesis (EMH) is more of a model of how the market performs. A particular market, at any given time, whose prices reflect on all available information, is called an efficient market, formulated from the EMH. Thus, EMH states that there is no advantage in predicting a return on a stock price for any investor, since there is no access for further information than what has not already been given to everyone.74

Fama wrote on his paper “...a situation where successive price changes are independent is consistent with the existence of an "efficient" market for securities, that is, a market where, given the available information, actual prices at every point in time represent very good estimates of intrinsic values...”75

Fama also wrote in another journal, Financial Analysts Journal, in 1965, a journal which was an abbreviated version, the following: “An "efficient" market is defined as a market where there are large numbers of rational, profit-maximizers actively competing, with each trying to predict future market values of individual securities, and where important current information is almost freely available to all participants ... on the average, competition will cause the full effects of new information on intrinsic values to be reflected "instantaneously" in actual prices.”76

In the 1960s, the random walk hypothesis was found by assessing time-series analyses of past prices. The results acted like geometric random walks, and it was a result made from observations and/or experiments. This suggested that foreseeing price patterns was not possible for technical analysts; this does not include fundamental analysts.77

However, in the 1970s, when more work was done on the random walk hypothesis, there were literature, which not only stated that the technical analysts were wrong, but also the fundamental analysts. Alfred Cowles’ work on the performance of investment managers and investment newsletter was one of them. In early 1970s, Eugene Fama’s work on the EMH discredited all form of analysis on the EMH. Fama stated: “... the existence of many sophisticated analysts helps make the market more efficient which in turn implies a market which conforms more closely to the random walk model. Although the returns to these sophisticated analysts may be quite high, they establish a market in which fundamental analysis is a fairly useless procedure both for the average analyst and the average

75 Ibid.
76 Ibid.
77 Ibid.
investor."

Fama was working under a professor to help him pay for his university fees. The professor had him work on finding profitable trading systems by studying past prices. He learned that the data he gathered worked only on the system he worked with, but when he tried to implement them in another system, it did not work. Later, he took a PhD in finance in the University of Chicago and published his thesis in *Journal of Business*, in 1965, with the title “Behavior of stock market prices”. Using Fama’s own empirical studies, he elaborated, on his thesis, about the random walk hypothesis and why a price should follow the random walk hypothesis. Despite the fact that there were flaws in the random walk hypotheses, it would not harm the investors with any means within trading opportunities.


**Weak efficiency** is when a particular market, at any given time, whose prices reflect on past price data. This is basically the random walk hypothesis, except that it lacks the stochastic process, which explains the price behavior. In this market, the technical analysis is rejected.

If information within the weak form efficiency would be able predict the future performance of a stock price; then investors would already have learned to utilize the information. Thus, it would result in the information losing its value when for example a sell signal would affect the stock outcome with an instant price decrease.

**Semi-strong efficiency** is when a market has prices which fully reflect information which are available to the public, such as economic news, past prices, earnings reports etc. These do not include privileged information and are tested through declarations. Two examples are stock splits and/or earning announcement.

A market that has a **strong efficiency** is a particular market, at any given time, whose prices reflect on all available information. This includes privileged information. Privileged data is the information, which can be called “insider information”. This data is typically the data set aside for investment managers who have invested into getting this information.

Fama’s work stated that the studies showed that the weak efficiency market was the best for the random walk hypothesis. However, with Sharpe’s and Lintner’s capital asset price model (CAPM), published in 1964 & 1965 respectively; the semi-strong and the strong market could be studied through
empirical means. Finally, the semi-strong efficiency market was the most supported one. Fama’s, Fisher’s, Jensen’s and Roll’s work enhanced this, in 1969, which was about the announced stock splits. Ball’s and Brown’s work in 1968 made the same study, but with quarterly earnings announcements. Scholes work about selling common stocks and bringing forth new stocks also supported the semi-strong efficiency market. This is made by disaggregating specific security’s returns, and links it to specific securities through market moves.  

Fama stated that the strong efficiency market was not a realistic model since the privileged information would only suffice the people whom already had power and money. His question was rather “How strongly efficient are they?” instead of “Is the market strong efficient?” A quote from Fama: “Since we already have enough evidence to determine that the model is not strictly valid, we can now turn to other interesting questions. Specifically, how far down through the investment community do deviations from the model permeate? Does it pay for the average investor (or the average economist) to expend resources searching out little known information? Are such activities even generally profitable for various groups of market "professionals"? More generally, who are the people in the investment community that have access to "special information"?  

Mutual fund managers were the next focus. Inside information made it possible to outperform the market consistently. CAPM became the new structure used for risk-adjusted basis. The method used to do this was to increase the beta of their portfolio. Treynor ratio, Sharpe ratio and Jensen’s Alpha were three works which used to increase their risk-adjusted performance. Fama focused more on Jensen’s Alpha.  

With the EMH, it has been shown that outperforming a market consistently is exceptional. Hedge funds replace old hedge funds due to bankruptcy each year. 

Since the authors are discussing about the BRIC and the MIST countries, which are emerging markets, it is essential for this study to know which efficient form the markets lay on. The efficient market hypothesis will help the authors with their analysis of why their results would not be as accurate as one might hope it would be. It will also help the authors to help solve their research question in the way that the authors want to know which market efficiency stage the markets are in.

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83 Holton, Efficient Market Hypothesis, op. cit.
84 Ibid.
85 Ibid.
86 Ibid.
Criticisms against the efficient market hypothesis are that critics states that one can make a pattern of the market and analyze the market thoroughly to foresee the price changes. Then one could increase their expected return without having to add additional risk.  

Some studies have shown autocorrelation, even though Fama stated that autocorrelation does not necessarily mean that there is no random walk or efficient market hypothesis present. A positive autocorrelation means that the new information has been underestimated and can also mean that investors have influenced the new information in an irrational. This is the opposite of the efficient market hypothesis, as it states that the entities are rational.

Negative autocorrelation means that new information has been overestimated. This means that the information has made the price either over or under its usual value and will then slowly move towards its actual price.

### 3.2.1 Random Walk Hypothesis

Random walk originated from 1900 by Luis Bachelier’s Théorie de la Spéculaion. He stated: “The influences that determine the movements of the exchange are innumerable; past, current and even anticipated events that often have no obvious connection with its changes ... it is thus impossible to hope for mathematical predictability.” - “The mathematical expectation of the speculator is zero”. Bachelier studied the French governments bonds for forward and options, which is a stock/bond debt. Through this, he found the mathematics behind Brownian motion, which is a continuous hypothetical process, where modeling of random behavior develops through time.

The random walk hypothesis is rather a model that is used to evaluate the behavior of prices in markets. According to the random walk hypothesis, it rejects technical analysis, which means that the price series do not follow any pattern, but instead it is random, through effects of information available and changes in information.

Holbrook Working and Maurice Kendall were two economists who added to the random walk hypothesis, as most economists ignored the work by Bachelier. In 20th century, Kendall was considered as one of the greatest statisticians. He tried to find an autocorrelation, but was shocked to find only

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89 Malkiel, The Efficient Market Hypothesis and its Critics, op. cit.  
92 Holton, Random Walk Hypothesis, op. cit.  
93 Ibid.
random elements of prices. In the end, he stated the following; “The series looks like a wandering one, almost as if once a week the Demon of Chance drew a random number from a symmetrical population of fixed dispersion and added it to the current price to determine the next week's price.” They concluded that there could be no technical analysis through random walk hypothesis, but there could be fundamental analysis, such as basing their investments through a company’s P/E ratio, experience of the company, earnings growth etc.  

Alfred Cowles the 3rd launched Cowles Commission, which sponsored researchers to follow through the random walk hypothesis. This commission found the journal Econometrica and published various studies. However, only academics took notice of this. In 1965, Paul Cootner published “The Random Character of Stock Market Prices”.  

This book took all of the afore-mentioned researchers, as well as Osborne, Moore, Alexander, and Granger & Morgenstern, work and put it into one. Bachelier’s random walk hypothesis was outdated, since it stated that it went through an arithmetic random walk with zero drift. The new random walk hypotheses stated that prices pursue a geometric random walk with drift.

The random walk states that the prices follow empirical observations. This means that any new pieces of information will change the price, be it negative or positive. This information can be anything from announcements, indicators and earning reports. It also means that the previous news has no correlation with the present news. For instance, even if the present news is negative, there is no predicting if the future news is going to negative or positive, and also, if the news is negative, the price will be affected in a negative way, and the other way around.

There were two paths of random walk hypothesis; one would lead to an efficient market hypothesis, the other would lead to the flaws in the random walk hypothesis. The authors’ thesis is on the two terms, MIST and BRIC, and these two terms are countries, which reside in different efficient form markets. This leads to different theories to adapt in different markets. The Random Walk theory is applied in markets, such as the BRIC and MIST countries are in, as new information surrounding and including these countries change their prices through positive and negative news.

Since the 1970s, there have been evidence of that the stock price do not follow the random walk theory because it is not completely random and also that the markets are not perfectly efficient. Studies in international stock data and in the U.S. advised the stock price movements can be predicted through

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94 Ibid.
95 Holton, Random Walk Hypothesis, op. cit.
96 Ibid.
97 Ibid.
98 Ibid.
accurate analytical skills and that it is correlated with price indicators. Hence, the critics states that the random walk theory show failed responses to the market. These researchers states that such examples as failed questions about price patterns brought upon the random walk theory.\footnote{Andrew W. Lo and Archie Craig MacKinla, A Non-Random Walk Down Wall Street, NJ: Princeton University Press, 1999, retrieved 6 January 2013.}

### 3.3 The Risk Factor

All theories mentioned have one thing in common; risk. This is due to the fact that these theories are all correlated with market efficiency and the returns of these markets through risk. The future returns are volatile, investing in a stock market provides a higher return due to a higher risk compared to investing in, for example, Treasury bills. If an investor invests in a high-risk stock market, the return should be of equivalent amount: meaning that the higher the risk, the higher the return.\footnote{Brealey & Myers, op. cit. p. 153-210.} In most cases, past data is used to measure the new variable of risk. Risk is measured through standard deviation ($\sigma$); the higher the number, the higher the risk. There are two types of risk; unique risk and market risk. The unique risk consists of the risks that are surrounding one particular company and possibly its competitors. The market risk is what applies to all companies in a certain market. In addition, the unique risks are usually high, which is why portfolios of different stocks are made; through diversification. This reduces the risk because the different stocks do not affect the other.\footnote{Ibid.}

Nevertheless, even though the risk can be reduced through diversification, the risk does not reach zero. As Sharpe stated; “Diversification provides substantial risk reduction if the components of a portfolio are uncorrelated. In fact, if enough are included, the overall risk of the portfolio will be almost (but not quite) zero!”\footnote{De Ridder, A, Access to the Stock Market – an Empirical Study of the Efficiency of the British and the Swedish Primary Markets, Federation of Swedish Industries, Stockholm, 1986, p. 225.}
Figure 3.2 - Portfolio

Diversification reduces risks\textsuperscript{103}

\begin{tabular}{|c|c|}
\hline
\textbf{Number of Stocks} & \textbf{Total Risk} \\
\hline
\end{tabular}

\textsuperscript{103} Brealey & Myers, op. cit. p. 168
3.4 Previous Research

In this subsection, previous researches which are important to the authors study will be presented.

3.4.1 Campbell R. Harvey: Predictable Risk and Returns in Emerging Markets

In this research by the author, Campbell R. Harvey, the predictable risk and returns of emerging markets in Latin America, Europe, Asia, Africa and the Mideast are studied. Harvey means that these emerging markets provide investors with new opportunities, because these markets are displaying high volatility and high-expected returns. Furthermore, Harvey states there may be a possibility that a world investor can reduce the portfolio risk, by investing in these emerging markets, because the correlations between these markets equity returns, with developed countries equity returns are low.

In the research, the goal was to study the average or unconditional risk of the equity returns and to test if by adding emerging market assets to the portfolio problem, if it would then alter the portfolio opportunities. The reasons as to why emerging markets are expected to exhibit high returns are also researched. Also studied by the author, is the time variation in the emerging markets returns.

The study’s analysis shows that the predictable returns of the emerging markets are more likely to be influenced by local information, than in developed countries.\(^{104}\)

3.4.2 Burton G. Malkiel: Returns from Investing in Mutual Funds 1971-1991

In this research by the Princeton professor Burton G. Malkiel, the relationship between equity mutual funds and the S&P 500 benchmark index during 1971-1991, was studied. The primary goal of this study was to see whether the American market was efficient or not and if there is any value to active portfolio management. If the market would result to be seen as strong efficient, it would be impossible for portfolio managers to outperform the comparable index. The study showed that there is clear evidence that the funds tend to underperform the corresponding index, both before and after management fees. The study also indicated that there is no evidence concerning where the CAPM-model means that increased risk means improved results. The research even showed that there is no evidence that there is a correlation between risk and returns. The study concludes with stating that it is more beneficial for investors to invest in low cost index instead of the equity funds with expensive management expenses.\(^{105}\) This study still applies for the authors’ paper even today in 2013, as the

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authors are using S&P 500 as benchmark index for the portfolios, and to see whether the markets are
efficient or not.

3.4.2.1 Burton G. Malkiel: A Random Walk Down Wall Street

The same author has in his book “A Random Walk down Wall Street” presented a similar comparison
between top American mutual funds and the benchmark index S&P 500. The mutual funds had until
2005 underperformed the index by 1.4 percent every year in both 10 and 20-year terms. This research
adds to his previous one made in the Journal of Finance mentioned above.106

3.4.3 Christopher L. Culp, J.B. Heaton: Returns, Risk and Financial Due Diligence

In 2009, these two authors together carried out a research about the risk and returns of stocks. The
purpose of the study was to investigate if there is any correlation between stocks risk and returns, and
how the factors related to each other. Through quantitative and qualitative methods, the research tried to
ensure that a stock generates a reasonable return for a certain risk. The result of showed that in relation
to the risk, the return varied vastly. Consequently, the authors concluded that there is no dependable
relationship between the factors of risk and returns. This is because the returns achieved through the
calculations, showed that the returns were considerably higher than the risk, also known as excess
returns in relation to the risk. However, the authors were critical towards their calculations and pointed
out the deficiency that may have caused the result and said that their choice of method and calculations
may not show the social reality to give a certain conclusion.107

3.4.4 Grail Research: Mist: The Next Big Thing or Just Hot Air?

Grail Research, a division of Integreon, is a company that conducts researches in over a hundred
countries and is specialized in emerging markets such as Africa, China, India, Middle East and Russia.
Integreon conducted a study about The MIST countries and whether they really can be, or are as big as
they are made out to be. This research examines the factors that relates to a potential growth that can be
compared to the growth of the BRIC countries. They look at the benefits and disadvantages by investing
in these countries, and if they are closing in to BRIC. By carefully examining several factors of each
country, they conclude that they are still unsure whether or not the MIST can see the same growth and
success as the BRIC. However, even if there are similarities between these countries, there are
significant differences, and the volatility in the world makes it difficult to forecast if the MIST will

107 Christopher Culp & James Heaton, 'Returns, Risk, and Financial Due Diligence’, in Finance Ethics, Miley, New York,
chapter 5, retrieved 10 October 2012.

32
follow the same path. They agree that the MIST nations have the potential to surpass the current large economies and follow closely to the BRIC. They mean that it is an area of interest for businesses that are planning for market entry, expansions and upcoming market strategies. 108

3.4.5 Summary of Previous Studies and Filling in the Gap

The previous studies chosen are each related to our field of study; however, it also shows the controversy and difficulties that can occur conducting such a research. Some authors imply there is a relationship between risk and returns, and some falsify that statement from being true. This depends on whether the risk and return are dependent on the random walk theory or the portfolio theory and CAPM in the authors’ study. The dependent variable is the different form of efficient markets where the terms BRIC and MIST resides in. Some portfolios are managed by taking the lowest risk, hence, having a low return, which is an example where risk has a correlation with return. Whilst in a random walk market, any kind of news can affect the return either negatively or positively, and the risk will still be the same.

For this study, all of these previous researches apply due to the MIST and the BRIC being such emerging markets that both the portfolio theory and the random walk theory are complied. However, because the topic chosen by the authors is so recent, there are not any studies comparable, despite some researches predicting the potential of the MIST countries, compared to the BRIC. The authors strongly believe they will contribute towards the gap in this area by clarifying the speculations of the MIST countries with empirical values, achieved through calculations and by the careful use of the theories and the previous studies mentioned.

108 Grail Research, op. cit.
4. Empirical Evidence

This section will include the empirical data from research about each country, providing a good foundation for the authors study to further strengthen their results. The situation in BRIC and the MIST will be covered in the following sections.

4.1 What’s Wrong With The BRICs?

Brazil, a commodity exporter, proved that their economy is not diversified enough as their growth dropped 2.7 percent, because of the commodity price drops. In 2010, Brazil had 7.5 percent growth in 2010, and it all seemed to be a success until the commodity price drop. Other reasons for the drop are due to high inflation, which drove up the wage and energy costs, high interest rates dragging the economy and underinvestment in the infrastructure.

Russia does not differ too much from Brazil either, as they too are a commodity exporter. Being the world’s second largest oil producer and a declining export of oil, Russia could experience a growth rate of 3.5 percent next year, rather than 4.3 percent last year. Russia is also under the threat of the Eurozone crisis. The financial crisis of 2008 hit Russia quite hard, as its economy fell by 8 percent, and in case of the euro-zone crisis turning worse, the economy of Russia will fall with it if the demands for its commodities continue to fall.

India’s economy, which is comparable to China in terms of high growth, had last year, its weakest growth in a decade. Down from 8.4 percent, India displayed at the end of the fiscal year in March, a growth of 6.5 percent, which was even worse than expected. The agricultural, manufacturing and mining industry performed poorly as their economic activity in the first three months of 2012, showed a drop from 9.2 percent last year, to 5.3 percent. However, among the BRICs, India is the most probable to show stability in the long term. A favorable demography and a relative balance between domestic consumption and export, it seems as if India could be more resilient to global uncertainties.
Structural weaknesses in China have begun to be exposed, as the exceptional growth rate has decreased as they struggle to sustain it. The export and investment driven country has been dependent on these factors as the core for their growth. As the financial crisis reduced the world demand, the Chinese growth fell and composition imbalance of China’s growth now exists. Hence, shifting their economy from export driven to integrating domestic consumption should be of great interest for Chinese policy makers. \(^{116}\) China also experiences reduced competitiveness in manufacturing, as wages increases and also having an absence of skilled labor. \(^{117}\)

**Figure 4.1 Goldman Sachs N-11 equity fund (GSYAX) vs Goldman Sachs BRIC fund (GBRIX)**

As this study is comparing the two portfolios, Goldman Sachs N-11 equity fund and Goldman Sachs BRIC fund, the stock price movement comparing these two portfolios show that the BRIC fund has had some massive falls in the stock prices since February 28, 2011 whereas the N-11 fund is showing quite stable stock price movement and surpassing the BRIC fund in terms of positive percentile change. These variables of N-11 could be due to speculations, and the fund being compiled by the same founder of the BRIC, hence showing great results at the moment. This could also be a matter of the “random walk” of prices, as news about the MIST could change the stock price either negatively or positively.

However, what is certain through analyzing the graph is that the BRIC fund is exhibiting negative movement. This could be because of the slowdown in all the BRIC countries and the challenges. Additionally, because of investing in BRIC can be seen as an investment disaster, as stated by John-Paul Smith, an emerging market equity specialist in Deutsche Bank. \(^{119}\) Investors are also pulling from

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116 Alpha, op. cit.
117 Forbes, op. cit.
119 Ahmed, op. cit.
their investments to the BRIC stocks as 15 billion dollars were withdrawn last year, which is since 1966, the most withdrawn on a yearly basis.\footnote{Martin, \textit{Bloomberg}, op. cit.}

There is no denying of the success the BRIC fund has exhibited until 2009. However, with the economic overview today, BRIC can be an investment disaster given the situation of the countries. The growth may continue at high rates, although, whether it is a better option than the MIST countries, and whether the MIST countries have the potential to succeed as the BRIC, will be calculated and discussed with empirical evidence, and with the support of the economic overview of the MISTs.

4.2 MIST – Economic Outlook, Opportunities and Challenges

This part will describe the MIST countries in more depth to fully understand their potential as emerging markets or whether it is just a new acronym. The population, GDP, age structure and corruption of each country will be displayed as these factors are referred to throughout the text.

These countries have share a couple of similarities such as being a members of the G20 which is a group of central bank governors and finance ministers from the 20 major economies, being large economies that each contributes more than one percent of global GDP, having the inflation is relatively controlled, a stable and fast economic growth and combined, these countries expects to display high growth for over 20-30 upcoming years.\footnote{Grail Research, op. cit.}

The authors believe that because of the N-11 equity fund being so new to the market, this kind of analysis is required to establish a more qualified conclusion. This due to the high growth of this fund may be the result of speculations and the belief that Jim O’Neill, the founder of BRIC, may be right again as he was with the BRIC’s successful boom. Therefore, the authors wonder if the MIST countries have the potential, and will therefore address the issue by going in depth.

\footnote{Martin, \textit{Bloomberg}, op. cit.}
\footnote{Grail Research, op. cit.}
4.2.1 Mexico

Population: ~ 114,975,406

Age Structure:
- 00-14: 27.8%
- 15-65: 65.5%
- 65+: 6.7%

GDP: $1.231 trillion nominal

Corruption ranking: 105

Ease of doing business: 53

What Mexico and the other MIST nations share is its strong demographic base for economic growth in the future as can be seen on the overview of the country. With its population, Mexico exhibits a large pool of labor and also, this pool as shown on the facts, is very young. Mexico’s population is continuously growing compared to the developed countries, which are reported to have a growth rate that exceeded one percent last year.

Since 2010, Mexico has exhibited remarkable growth in GDP. From year to date in November 2011, Mexico announced their economy to grow at a rate of 3.75 percent and in the third quarter of 2011, the rate increased to 4.5 percent. Moreover the GDP rate, Mexico’s Foreign Direct Investment also increased for a total of 31 billion dollars in 2010, which is a 1 billion dollar increase from 2009.

Mexico also surpassed Brazil in terms of economic growth last year. Brazil’s economic growth being 2.7 percent and Mexico’s increasing to 4.5 percent.

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123 Ibid.
However, Mexico has a persistent corruption and also intense drug wars which may threaten its economic potential.\textsuperscript{130} Even though the drug wars is between Mexican security forces and rival cartels, this reputation Mexico suffers from are quite likely to discourage foreign investors and makes it harder to attract them.\textsuperscript{131} Despite their bad reputation, investors see Mexico as a fantastic opportunity due to the propinquity to the U.S., Canadian, South and Central American markets.\textsuperscript{132}

For approximately ten years ago, the Chinese labor wages for manufacturing were 300 percent cheaper than Mexican wages, which gave the Chinese manufacturing a massive advantage. It did not look better for Mexico when China officially joined the WTO in 2001. Mexico lost a vast amount of the U.S. market share to China because the U.S. companies started to relocate their businesses from Mexico to the cheaper China, causing Mexican jobs to suffer and become destroyed.\textsuperscript{133}

However, as of 2011, the Chinese labor wages rose by an incredible 22 percent in 2011 alone.\textsuperscript{134} As wages in China rises, it reduces its competitiveness in terms of the low value-added production field. Mexico is placed in a geographic location that is likely to cover up for the sagging global manufacturing caused by China. Mexico’s average manufacturing wage was surpassed by China in the beginning of this year, and this also benefits Mexico, by the reduced shipment costs to the U.S market due to its NATO membership and geographical location. These advantages of manufacturing have made the U.S import more from Mexico, going up from ten percent in 2009, to twelve percent of the U.S total imports last year.\textsuperscript{135} The rise of wages has both positive and negative aspects. They have started to transform their economy to consumer-based, rather than export-based. Although this transformation will not be completed in the near future, they now have to compete with countries as Mexico.\textsuperscript{136}

It is not only the U.S. that sees Mexico as a possible option to relocate their companies’ operations. Mazda, a Japanese car company, proclaimed in 2011 that investments would be made to a car-assembly plant that would produce 100,000 units per year, costing them 500 million dollars. Bombardier and Goodrich, two aerospace companies also recognized the advantages of cost by opening substantial plants in Mexico. Other mid-sized aerospace companies have also followed Bombardier and Goodrich by relocating to Mexico such as Southwest United (Oklahoma-based metal processor company) and Heroux Devtek (Quebec-based aerospace industrial products manufacturing company).\textsuperscript{137}

Apart from the advantage of low labor costs that was mentioned earlier, Mexico has a skilled labor. They have what many companies desire when it comes to labor system and skills. They have an

\textsuperscript{130} Fillingham, op. cit.
\textsuperscript{131} Leff, op. cit.
\textsuperscript{132} Monteleagre, op. cit.
\textsuperscript{133} Monteleagre, op. cit.
\textsuperscript{134} Ibid.
\textsuperscript{135} Fillingham, op. cit.
\textsuperscript{136} Monteleagre, op. cit.
\textsuperscript{137} Ibid.
improved technology and innovation, automated manufacturing, the labor is precise and has high skill sets. This affordable skilled labor has been recognized by the auto industries such as Volkswagen, Ford, and Toyota, which has taken this opportunity to either expand, or open new plants in Mexico.

Mexico has some good opportunities and some hard challenges. If one is to analyze the opportunities of Mexico, there is great potential in the Manufacturing & Chemical industry, Travel & Tourism industry, Energy industry and the Retail industry.\(^{138}\)

As mentioned previously, due to location, cost, labor and demographic advantages, Mexico’s manufacturing sector has been very attractive for FDI. The 19.44 billion dollars in FDI for Mexico from the U.S., was to the manufacturing sector, mostly for automobiles and food.\(^{139}\) The travel & tourism industry is expected from 2012-2016, to grow 5.78 percent at a compound annual growth rate. This is due to the growing economy middle class rising and growing number of tourists.\(^{140}\) By 2026, to encounter the energy demand growth, Mexico has set a goal to increase their gas production by 94 percent, and oil by 32 percent.\(^{141}\) In the retail industry, because of the middle class growing, this sector is expected to grow at a compound annual growth rate of 3.8 percent from 2011-2016. Mexico is also the aim of the retail expansion where Wal-Mart, in terms of supermarket sales has 30 percent of the market share.\(^{142}\)

Mexico has challenges in terms of their corruption, organized crime, and also the labor market. In terms of organized crime, Mexico is ranked the 4\(^{th}\) worst country and is also having problems with the organized crime that affects the business costs of crime and violence, ranking 9\(^{th}\) worst in that aspect.\(^{143}\)

The labor market is considered to be inflexible being in the lowest 15 percent of the world in terms of the practices of firing and hiring. Mexico is also ranked at the lowest 25 percent, when it comes to the firmness of employment.\(^{144}\)

Considering all the facts, opportunities and challenges, Mexico is today the 13\(^{th}\) largest economy in terms of nominal GDP. Mexico has great potential but is, nevertheless, quite dependent on the U.S. economy, due to the fact that the U.S. is Mexico’s biggest partner. The situation in China might be to an advantage for Mexico at the moment, but Mexico, with this great opportunity ahead of them, must use it in the best way possible. The corruption needs to be reduced and the security needs to increase if Mexico wants the optimal gains of their truly great potential.\(^{145}\)

\(^{138}\) Grail Research, op. cit.
\(^{139}\) Grail Research, op. cit.
\(^{140}\) Ibid.
\(^{141}\) Ibid.
\(^{142}\) Ibid.
\(^{143}\) Ibid.
\(^{144}\) Ibid.
\(^{145}\) Montealegre, op. cit.
4.2.2 Indonesia

**Population:** ~ 248 645 008

**Age Structure:**
- **00-14:** 27%
- **15-65:** 66.6%
- **65 +:** 6.4%

**GDP:** $832.9 billion nominal

**Corruption ranking:** 118

**Ease of doing business:** 129

Similar to Mexico, a key factor to the fast economic growth is the demographic distribution. Because of its working population exceeding the elder population by far, for the next periods of years, Indonesia will have a demographic surplus.

Indonesia, being the leading economy of Southeast Asia, will have great benefits through its geographical location. Their geography gives them an advantage of the ASEAN-China Free Trade Area., which Indonesia actually has taken advantage of, exhibiting a 6 percent GDP growth rate from 2009-2012. Indonesia has been displaying unexpected rapid growth, even though reports stated the growth would slow down. In the second quarter of 2012, the GDP rose 6.37 percent when economists expected 6.1 percent. In the first quarter, Indonesia displayed a growth of 6.32 percent.

Among the G20 countries, Indonesia is the fastest growing, behind China, despite there being uncertainty of the global recovery and the slowed growth of Singapore to Taiwan. The highest share of investments since the Asian financial crisis, accounting for 32.9 percent of the GDP of Indonesia has been exhibited. These investments were driven by low interest rates and strong business confidence. These record low interest rates are expected to remain for the current year and the upcoming year, assumed that the Euro zone’s probability to worsen again.

Compared to the other MIST countries, Indonesia is distinctive in terms of the high level of domestic consumption. 60 percent of the GDP of Indonesia is accounted by Indonesian consumers whereas China, for example, has 35 percent. This domestic consumption has contributed in the steady growth and

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146 Indonesia, ‘Indonesia’, in *Central Intelligence Agency*, November 2012, retrieved 5 December 2012
147 Ibid.
148 Indonesia, op. cit.
149 Transparency International, op. cit.
150 World Bank, op. cit.
151 Fillingham, op. cit.
152 Fillingham, op. cit.
154 Ibid.
helped Indonesia be resilient through recessions. The debt problem of the world has little impact due to the growing consumer class.

However, given that their exports are primarily natural resources and commodities, and is exported to China, a slowdown in the Chinese economy would also make the Indonesian economy suffer. The corruption of Indonesia is also a major problem for its economy, ranked worse than Mexico by the Transparency International.

As well as Mexico, Indonesia faces opportunities and challenges as a country. Indonesia’s opportunities are in the finance, energy and retail sector, and their challenges being corruption, their infrastructure and regulatory environment.

Indonesia is considered to be a hotspot for global investment banks. Fitch and Moody’s investment grade credit rating is the cause of this assumption. Credit Suisse, Deutsche Bank, Citigroup already exists in the equity market and Goldman Sachs was competing against Morgan Stanley in the beginnings of 2012 to buy a brokerage firm in Indonesia. Indonesia is investing in geothermal power, prepared to invest 367 million dollars towards constructions of these geothermal power plants. The initiation of this is due to the increasing demand of electricity and to reduce the CO₂ output. Indonesia is also expected to exhibit high retail growth in the sales of food, electronics and automotive. During 2009-2011, Indonesia has displayed solid growth, 14 percent in average in the retail sector. This is due to the low interest rates that Indonesia has and the increasing buying power.

Indonesia is facing a similar challenge as Mexico, which is corruption. Ranking 118 in the corruption perception index, by Transparency international, Indonesia had in 2011, an estimated 238 million dollar loss, related to corruption in the bureaucracy. The regulatory environment is another challenge confronted by Indonesia. The regulatory environment is complex and in terms of ease of doing business, Indonesia is ranked in the lowest 20 percent, on the 129th place. Indonesia is also in the lower 50 percent in the dealing with registering property and construction permits. The infrastructure of Indonesia is insufficient, which is another challenge for this country. Somewhat exceeding India in the quality of infrastructure, Indonesia is still ranked in the lower 50 percent of 142 countries. After the Asian financial crisis, investments to infrastructure were reduced which has been a factor to the low rank.

155 Ibid.
157 Fillingham, op. cit.
158 Grail Research, op. cit.
159 Ibid.
160 Ibid.
Considering the potential opportunities, challenges and facts, Indonesia has great potential to become the economic powerhouse of South East Asia. Resilient against recent economic crisis, due to its domestic consumption, makes Indonesia less volatile to changes in the world economy.

With a huge population, Indonesia is evidently a significant market for consumption and production, due to its rich natural resources. Together with the other noticeable strengths being the ASEAN association and the growing middle class, that builds the foundation of their economic growth, displays many positive aspects of Indonesia’s true potential which can turn them into being a huge market for human and natural resources.161

4.2.3 South Korea

Population: ~ 48 860 500 162
Age Structure:

00-14: 15.1%
15-65: 73.0%
65+: 11.9% 163

GDP: $1.098 trillion nominal 164
Corruption ranking: 45 165
Ease of doing business: 8 166

Compared to the rest of the MIST countries, South Korea differs a great deal. South Korea is measured to be a developed country, rather than emerging because of its per capita income, mature political institutions, high-value added manufacturing and its export driven economy.167

The population of South Korea is also different. It is the lowest populated country of the MIST, and is quite older than the other countries in terms of age structure and therefore, a smaller domestic market. South Korea also has very low population growth rate being 0.2 percent, which is ranked 176th in the world, and very strict immigration laws.168 It is believed by economists that the economic growth

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163 Ibid.
164 Ibid.
165 Transparency International, op. cit.
166 World Bank, op. cit.
167 Fillingham, op. cit.
168 Fillingham, op. cit.
potential of South Korea has dropped mainly due to its aging population, which is a major concern together with the structural problems that are appearing progressively.\textsuperscript{169}

In the third quarter, South Korea’s GDP grew by 0.10 percent in comparison to the second quarter of 2012. However, historically from 1970-2012, South Korea has shown some incredible growth rate which averaged 1.7 percent, peaking at 6.8 percent in March 1988, and hitting the bottom at -7 percent in March 1998 caused by the Asian financial crisis.\textsuperscript{170} In the 1960’s, South Korea was devastated after the Korean War, having a GDP per capita comparable to the GDP per capita of the poorest countries of Asia and Africa.\textsuperscript{171} South Korea, together with its motivated and skilled labor, exceptionally competitive education system were the key elements the unbelievable growth rate, which by any means would seem impossible.\textsuperscript{172} The high technology industrialization and global integration allowed South Korea to become, in 2004, among the world’s 20 biggest economies and joining the trillion-dollar “club” of the economies of the world.\textsuperscript{173} South Korea has the lowest unemployment within the G20 group, as low as 3.4 percent.\textsuperscript{174}

South Korea still has some potential opportunities, being their medical services, manufacturing, energy and retail and luxury goods. South Korea’s manufacturing sector has its strengths of being knowledge intensive, highly skilled and inheriting industry expertise. Their manufacturing is supported by the foreign direct investment regulations that are improved; tax incentives and having a credit rating forecast upgrade that attracts increasing investments from China, the United Arab Emirates and developing economies. The medical service sector is also of great potential for South Korea because of the increased medical tourism industry, and aging population. The renewable energy demand and preparations for nuclear power plants accidents, have initiated South Korea to invest in large amounts in the energy industry, which is expected to be around 1 billion dollars that will go in to the research and development in 2012. The luxury goods growth has been growing at an average of 12 percent per year, surpassing the 10 percent growth of Europe and 5 percent of Japan. The retail sales are also exhibiting stable growth from companies such as Tesco.\textsuperscript{175}

In 2011, a Free-Trade Agreement was signed by the U.S. and South Korea, and went into effect in March 2012. This is a very new topic and what the effects of this FTA would mean for South Korea is still to be seen in the upcoming years.\textsuperscript{176}

\textsuperscript{170} Ibid.
\textsuperscript{171} South Korea, op. cit.
\textsuperscript{172} Trading Economies, op. cit.
\textsuperscript{173} South Korea, op. cit.
\textsuperscript{174} TC, op. cit.
\textsuperscript{175} Grail Research, op. cit.
\textsuperscript{176} South Korea, op. cit.
Moreover the potential opportunity, South Korea faces serious challenges. As mentioned earlier, South Korea’s demographics, more specifically their aging population is one of the biggest challenges. Having 11.9 percent of the population over 65, and a median age of 39,\textsuperscript{177} gives them a considerably older population than the rest of the world that averages 7.9 percent of the population over age 65 and 28.4 years being the average age.\textsuperscript{178}

South Korea has, similar to Mexico, an issue of having an inflexible labor market, where they are lower 33 percent for employment rigidity, lower 20 percent for their firing and hiring practices and said to be one of the worst countries for their corporation on employer-labor relations.\textsuperscript{179}

Being export driven, South Korea is highly dependent on its export that accounts for around 50 percent of the country’s GDP. Therefore, South Korea is very vulnerable to global uncertainties.\textsuperscript{180}

Compared to the other MIST countries, South Korea is the country known to be the only developed country amongst this grouping. However, it is the slowest growing one and has challenges in the long term, with the rapid growth of the aging population, dependency on their exports and inflexible labor market. This does not mean that South Korea has no potential. As they have shown historically, they can overcome obstacles that seem to be impossible with their extremely competitive education, technology and global integration. This country also shows very low unemployment rate and potential in the medical, manufacturing, energy and retail industry but nearly as much in terms of growth compared to the other MIST countries.

### 4.2.4 Turkey

**Population:** ~ 79,749,461 \textsuperscript{181}

**Age Structure:**

- **00-14:** 26.2%
- **15-65:** 67.4%
- **65 +:** 6.4% \textsuperscript{182}

**GDP:** $761.9 billion nominal \textsuperscript{183}

**Corruption ranking:** 54 \textsuperscript{184}

**Ease of doing business:** 71 \textsuperscript{185}

\textsuperscript{177} Ibid.
\textsuperscript{178} Grail Research, op. cit.
\textsuperscript{179} Ibid.
\textsuperscript{180} Ibid.
\textsuperscript{181} Ibid.
\textsuperscript{182} Ibid.
\textsuperscript{183} Ibid.
\textsuperscript{184} Turkey, op. cit.
\textsuperscript{185} Transparency International, op. cit.
In the last 15 years, that Turkey has become one of the world’s biggest emerging markets is undeniable. Comparable to the two other MIST countries, Mexico and Indonesia, Turkey has a very young population and perfect demographic distribution, exceptionally advantageous for growth. With a quite large population, except from it being young, Turkey will in the near future enjoy the dividend profit as China and Brazil did.\(^{186}\)

Turkey has around 40 percent in debt-to-GDP ratio, which is comparatively small to other economic powers. Leading up to the 2008 financial crisis, Turkey generated 22 billion dollars in foreign direct investment given the factors mentioned. This is not considered to be unusual because of Turkey’s potential economic power.\(^{187}\) According to UNCTAD (United Nations Conference on Trade and Development) Turkey’s FDI had a growth of 20.8 percent in the initial half of 2012, for more than 8 billion dollars. As the FDI inflow during January-June had a descent of 8 percent, Turkey, was one of the few emerging countries that experience this outstanding growth increase.\(^{188}\)

Furthermore, UNCTAD reports that Turkey had ranked the 9\(^{th}\) highest global growth rate, compared to BRIC that had an FDI inflow drop at around 40 percent. Turkey followed Portugal, France and Spain as the fourth in the increase of the FDI rate, in Europe.\(^{189}\)

In 2011, Turkey attracted 15.9 billion dollars, which is a 74 percent increase since 2010. Additionally, it is expected that the credit rating will be upgraded which will enhance Turkey’s attracting of foreign investment.\(^{190}\)

For the last eight years, Turkey has exhibited steady and extraordinary growth. Since 2002, Turkey has made structural major reforms to its macroeconomic strategies and fiscal policies. Turkey has been transformed and integrated into the global economy while becoming one of the biggest FDI attractors. The real GDP growth rate averaged a 5.2 percent growth rate over 9 years, during the periods 2002-2011.\(^{191}\)

In 2002, the GDP level was 231 billion dollars and GDP per capita was 3,500 dollars. These values increased in 9 years, to the GDP almost tripling to 772 billion in 2011 and the GDP per capita rose to 10,444 dollars. This substantial progress has allowed Turkey, in a short amount of time, to be recognized in the world economy and also becoming one of the 16\(^{th}\) largest economies of the world, and also 5\(^{th}\) largest in Europe, based on GDP in 2011.

\(^{185}\) World Bank, op. cit.
\(^{186}\) Fillingham, op. cit.
\(^{189}\) Ibid.
\(^{190}\) Ibid.
\(^{191}\) Ibid.
The Turkish economy have further improved their foreign trade, where in late 2011, Turkish exports accounted up to 135 billion dollars, comparable to 36 billion dollars in 2002. Growth in tourism revenues also increased since 2002, increasing from 8.5 billion dollars to 23 billion dollars in 2011.\textsuperscript{192}

The Turkish economy is one of the fastest growing economies of the world, and hence, also Europe. Turkey’s economy grew by 9.2 percent in 2010 and 8.5 percent in 2011, while the global financial recessions made many economies struggle and unable to recover.\textsuperscript{193}

\textbf{Figure 4.2 - Real GDP growth (%)}

\begin{center}
\includegraphics[width=\textwidth]{figure42.png}
\end{center}

\textit{IMF World Economic Outlook April 2012, Turkish Statistical Institute (Turksat)}\textsuperscript{194}

This graph shows the real GDP growth compared to other emerging countries, where Turkey is clearly one of the fastest growing. Indonesia, South Korea and Mexico are showing relatively high growth in real GDP, surpassing to unchanged Russia and Brazil, which has had a huge drop in real GDP growth from 2010 to 2011.

There are many reasons to why investors might be attracted to invest in Turkey, being their geographical location, young population, successfully growing economy and more. Unassailably, Turkey has great opportunities, especially within their tourism, energy, financial service and retail...
sector.\footnote{Grail Research, op. cit.}

Turkey has set a goal to become one of the top five tourist destinations by 2023, with a doubled increase of arrivals, resulting in 63 million. The Turkish government is also issuing visa-free agreements to promote tourism. Turkey wants to reduce its reliance on importing natural gas for electricity by initiating renewable energy projects. The reason for these decisions is the expected demand of electricity from 2009-2023 is to grow by 6 percent each year. Another project, called the “Istanbul Financial Center Project” has the goal to develop the regulatory framework, legal and fiscal environment and also the tax system. Turkey wants to transform Istanbul into a financial center within ten years, and aiming even higher by turning it into a global financial center within decades. Additionally, the retail industry sales are expected to grow by 12 percent, reaching 272.18 billion dollars by 2016, which is better than the average of EU. Even stronger growth rates are predicted in the electronic and food sector.\footnote{Ibid.}

However, this bright future of Turkey, even with all the success does not come without challenges. There are negative aspects to Turkey, especially within the cost of labor, inflation and their current account deficit.\footnote{Ibid.}

In the labor-intensive manufacturing industry, Turkey’s high cost of labor would affect their competitiveness, if compared to other emerging economies in for example, Asia and Central European countries. As a result, the youth unemployment rate has reached 25 percent, and female unemployment rate 22 percent. Turkey has through history, also had problems with high inflation levels. The average inflation during 2006-2011 was ranked in the upper 25 percent of 181 countries and since 2011; Turkey’s inflation has been beyond 10 percent. Turkey also has challenges, looking at their current account deficit in 2011; it was more than 10 percent of the GDP, and the therefore the government constricted their policies. Morgan Stanley predicts that it has since then been reduced, and will in 2012 be 6.9 percent and will continue to be reduced to 6.5 percent in 2013. With the Euro-zone debt crisis, uncertainty is aroused around this topic if this is possible or not.\footnote{Grail Research, op. cit.}

Turkey’s has great potential as an emerging market to become one of the strongest economies in Europe and the world. Showing steady growth, attracting substantial FDI inflow and favorable demographics towards growth, it is clear that Turkey inherits a bright future. However, Turkey also has some challenges in the current account deficit, cost of labor and inflation but the government is striving to improve them.
4.3 Concluding Segment of the MIST

Uncertainty still exists in whether the MIST can be the new BRIC and exhibit the same success as the BRIC had for a decade.

The MIST shows great extraordinary good potential considering the growth, demography and opportunities. Mexico having lower cost of labor increases their manufacturing competitiveness whereas China loses competitiveness. This has made the U.S. and other countries transferring their companies’ operations to Mexico. Indonesia with their remarkable growth highly populated and favorable demographic distribution could as well become the new powerhouse of Southeast Asia. South Korea, the only country described as being a developed country, rather than emerging, shows potential, despite the slower growth and aging population. South Korea has an advanced economy and is likely to surpass their rivals. Given their historical economical background, one cannot disagree with the fact that South Korea, can overcome and grow with an exceptional rate even in the worst circumstances. Turkey is also exhibiting major growth and advantageous demographic distribution. They are attracting significant amount of FDI inflow and they could as well as the other MIST countries, become one of the strongest economies in the world.

With the amount of uncertainties and volatility, it is hard to predict whether the MIST will sustain their growth. Nonetheless, the grouping of the MISTs long term potential cannot be ignored, as they combined, at this pace, will surpass most of the current large economies. Hence, narrowing down the gap they have behind BRIC. Given the facts, the authors believe that the MIST countries have the potential to show similar results to BRIC and those investors should consider this market as a potential new entry.
5. Results

In this section, the results from the authors’ calculations will be presented as well as some assumptions about the results.

5.1 Goldman Sachs N-11 Equity Fund

By using the arithmetic standard deviation, a more accurate overview is created to picture the asset mix. It helps the authors to estimate a growth of the portfolio. Arithmetic mean is used to measure the risk, for example the standard deviation. 199

As the result shows, the authors’ beta is 0.9862. This means that the portfolio’s beta is almost at the same point as the market’s portfolio, meaning that it has a safe environment. If the market falls by 2 percent, it falls almost with 2 percent as well, etc. However, as shown in table 5.1, the N-11 fund has been rising with an average of 0.59 percent every month from February 2011. This shows the authors that while the N-11 equity fund has a low beta risk, it is still rising.

<table>
<thead>
<tr>
<th>Table 5.1 - N-11 equity fund 2011-2013</th>
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<tbody>
<tr>
<td>T</td>
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<tr>
<td>24</td>
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</tbody>
</table>

The standard deviation tells the authors how spread the data is. A high standard deviation shows a lot of dispersion, but a small standard deviation shows that the data is close to the mean. 200

Correlation ranges from -1 to 1. The closer to -1 it is, the stronger negative correlation it has; the closer to 1, the stronger positive correlation. If the correlation is 0, then it has no correlation with the index market. The result for the correlation is 0.7996 in the author’s paper. This shows a high positive correlation with the market.

<table>
<thead>
<tr>
<th>Table 5.2 - N-11 equity fund 2011-2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Std Dev N-11</td>
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<tr>
<td>---------------</td>
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<tr>
<td>4,9397</td>
</tr>
</tbody>
</table>

The standard deviation of N-11 is a lot higher compared to the mean. The results show the mean to be 0.59, and the standard deviation to be 4.9397. This means that the stocks are diversified and that if the market goes down by the mean, 0.59 percent then the N-11 equity goes down by 4.9397 percentage points.

A strong correlation with the market can also be linked to the random walk theory. As the authors have mentioned under the thesis section in this paper, the random walk theory is when the prices cannot be foreseen, and is changing everyday because of news. This can also be linked to the efficient market hypothesis. The weak-form efficiency market is also based on the random walk theory, where the prizes can change due to unexpected reasons.

Hence, the authors can make the assumption that since the N-11 equity fund has a strong correlation with a beta a little bit below the market beta, and an average of 0.59 percent increase every month, that the N-11 equity fund is in a weak–form efficiency market, and is thoroughly affected by the random walk hypothesis while rising every month.

As shown in the table 5.2, the expected return is around 11.51 through the use of CAPM. This shows the return an investor deserves for the money they put on risk. This theory can show whether to choose one stock over another.

**Figure 5.1 - N-11 equity fund compared to S&P 500 market index**

This figure shows how the N-11 equity fund follows the market index S&P500. This can be drawn to the theory of the efficient market hypothesis, random walk and also the calculated beta in CAPM. The figure 5.1 clearly shows that after the launch of the N-11 equity fund, it rises and falls as the market rises and falls, for most of the time. This shows that an entity, which affects the market, also affects the N-11 equity fund in the same way. The stock price movement shows no significant difference to the

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201 [Yahoo Finance](http://finance.yahoo.com/echarts?s=GSYAX+Interactive#symbol=gsyax;range=20110228,20130103;compare=%5Egspc;indicator=volume;charttype=area;crosshair=on;ohlcvalues=0;logscale=off;source=undefined;)
market index, and if this also true when comparing the N-11 equity fund with the GS BRIC fund, the authors can conclude that these markets are efficient in the weak form whose prices reflect on past price data on any given time and a technical analysis cannot be made through only past price data. The changes in the market display for the most of the time an immediate reaction in the stock price movement of the N-11 fund. The beta and correlation shown on table 5.2 further strengthens the visible evidence from figure 5.1. There is a random walk in the stock price movement because any information affecting the market, affects the N-11 equity fund. If this was not the case, the authors’ result would have had low correlation to the market, meaning that the stock price movement is not following the particular market, and hence is not in a random walk or weak form efficient.

Since the MIST countries have the majority of the GDP and the investments of the N-11 equity fund, it follows the same curve as well, but with a lower percentage disposal. Issues brought up in the beginning of research were whether the stock prices reflected only speculations, if speculations were the reason for the high rise and the surpassing of the BRIC fund. That is why this research accounted the economic overview, opportunities and challenges for the MIST countries. This analysis is essential in the authors’ final decision about whether to invest in the N-11 equity fund or GS BRIC fund. Without this analysis, one would merely rely on the empirical values, given by stock prices that could be reflected on speculations. The authors wanted to know whether the MIST were just a new acronym, or if they really have potential as countries; to be as successful as the BRIC’s have been for more than a decade. The results of this research show that the MIST has extraordinary good potential considering their demography, opportunities and growth. Mexico’s lower labor costs than China, Indonesia with the potential of becoming the new powerhouse of Southeast Asia, South Korea with its high technology and economical background and determination and Turkey, which displays high growth and advantageous demographic distribution. The potential is clearly there for the MIST. With the current pace of growth both economical and geographical, they will surpass most of the current large economies and narrow down the gap between BRIC and MIST. As mentioned earlier in this study, the authors believe that MIST could show similar results as the BRIC in the upcoming years, and if the empirical value results would show to invest in the MIST, it is not only based on speculations, but with a careful analytical view of the situation in each country.

5.2 Goldman Sachs BRIC Fund

As the BRIC countries are on a different phase compared to the MIST’s, who are on the beginning of being emerging markets, the authors compared the Goldman Sachs BRIC fund during 2011-2013 and also 2006-2008. This is due to the fact that the authors believe that comparing BRIC vs. MIST today will only show results on the situation today, while comparing today’s newly started MIST with the
newly launched GS BRIC fund in 2006, will allow the authors to draw a more definite conclusion whether the MIST can be as successful as the BRIC.

Table 5.3 - GS BRIC fund 2011-2013

<table>
<thead>
<tr>
<th>Std Dev BIRC</th>
<th>Std Dev S&amp;P</th>
<th>Beta</th>
<th>Correlation</th>
<th>CAPM (Ri)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7,50290</td>
<td>3,9158</td>
<td>1,5265</td>
<td>0,8329</td>
<td>17,740545</td>
</tr>
</tbody>
</table>

Table 5.4 - GS BRIC fund 2011-2013

<table>
<thead>
<tr>
<th>T</th>
<th>avgS&amp;P</th>
<th>avgBRIC</th>
<th>(avgS&amp;P)^2</th>
<th>(avgBRIC)^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>0,51</td>
<td>-0,21</td>
<td>0,26</td>
<td>0,05</td>
</tr>
</tbody>
</table>

The correlation of the results gathered from 2011-2013 show that the GS BRIC fund is linked to the market as it has a strong positive correlation of 0.8329. This means that if the market falls then the GS BRIC fund falls and vice versa. This is linked to the random walk theory, in the way that if the market falls by any variable, then the fund falls with the same variable and vice versa; if the market rises then the fund rises. This is on a daily basis as the market and the fund is affected by any positive or negative information. As the authors mentioned under the thesis section in this paper, the random walk theory is when the prices cannot be foreseen and is changing everyday because of news. This can also be linked to the efficient market hypothesis. The weak-form efficiency market is also based on the random walk theory, where the prices can change due to unexpected reasons.

The standard deviation compared to the mean is significantly different. As the mean growth the BRIC fund is -0.21 and the standard deviation is around 7.5, it means that investing in BRIC today is very risky, as for example if it the market falls by 0.21 percent then, the BRIC fund will further fall by 0.21 percent and an additional 7.5 percentage points.
Figure 5.2 - GS BRIC fund 2011-2013 compared to S&P 500 market index

Figure 5.2 further shows that the authors calculated variables are true. As the result shows in table 5.3, the authors’ beta is 1.5265. This means that the portfolio’s beta is a lot higher than the market’s portfolio, meaning that investing in this portfolio means a high risk, but also includes a high return. If the market falls by 2 percent, it will fall with almost with 3.2 percent, and so on. However, as shown in table 5.4, the BRIC fund returns have been decreasing with an average of 0.21 percent every month from February 2011. This shows the author that while the BRIC fund has high risk and a high return, there is not always a guarantee that one will receive more money.

Hence, the authors can make the assumption that since the BRIC fund has a strong correlation with a beta above the market beta and an average of 0.21 percent decrease every month, the BRIC fund is in a weak –form efficiency market and is thoroughly affected by the random walk hypothesis, while falling every month.

Table 5.3 shows an expected return of 17.74 and this is what an investor deserves for the money put in, considering the risk. This is because the GS BRIC fund has a high beta value, which also means that if the market falls, then the fund will fall by a high percentage.

The authors consider both the GS BRIC fund from 2011-2013 and the GS BRIC fund from 2006-2008 to be important to this study.

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202 Yahoo Finance g, ‘Goldman Sachs BRIC Instl (GBRIX)’, in Yahoo Finance, January 2013, retrieved 6 January 2013, <http://finance.yahoo.com/echarts?s=GBRIX+Interactive#symbol=gbrix;range=20110228,20130104;compare=%5Egspc;indicator=volume;charttype=area;crosshair=on;ohlcvalues=0;logscale=off;source=undefined;>.
Table 5.5 - GS BRIC fund 2006-2008

<table>
<thead>
<tr>
<th>Std Dev BRIC</th>
<th>Std Dev S&amp;P</th>
<th>Beta</th>
<th>Correlation</th>
<th>CAPM (Ri)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6,88478</td>
<td>2,9493</td>
<td>1,4664</td>
<td>0,6567</td>
<td>9,807928</td>
</tr>
</tbody>
</table>

Table 5.6 - GS BRIC fund 2006-2008

<table>
<thead>
<tr>
<th>T</th>
<th>avgS&amp;P</th>
<th>avgBRIC</th>
<th>(avgS&amp;P)^2</th>
<th>(avgBRIC)^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>0,32</td>
<td>2,90</td>
<td>0,10</td>
<td>8,40</td>
</tr>
</tbody>
</table>

As the table 5.5 shows, that the standard deviation and the mean show no significant difference, the mean being 2.9 percent and standard deviation 6.88 comparing to MIST in its starting period. The stock price returns are not so diversified meaning that there is higher risk since if one holding falls, it will mean a greater loss for investors rather than having a more diversified investment. However, this could be positive too as if the particular less diversified holdings rises, the returns will rise with it.

The results show that the correlation with the market was not strong. A correlation of 0.6567 shows a positive correlation with the market, which means that if the market falls, then the fund falls, however it does not have to mean that every time the market falls, so will the funds. This shows that the GS BRIC fund did not follow the market and hence, is not under random walk, as it can ignore the market indications.

As John Paul Smith, Deutsche Bank emerging market equity specialist, said that the BRIC countries were marketing led, and is a concept that is an investment disaster today, the authors researched the problem concerning the BRIC to see what the cause of this issue is. One could see that today, each country is going through difficult times as for instance, the falling commodity prices in Brazil, high inflation causing wages and energy costs to increase together with high interest rates has caused Brazil to display lower growth than what it has done for a long period. Russia, under the threat of the Euro-zone crisis, and one of the most corrupt countries in the world, has a declining export of oil. Also, if the Euro-zone crisis worsens, Russia’s economy will fall, as demand for its commodities will fall with it. India has had the weakest growth in a decade, down to 6.5 percent at the end of the fiscal year in March from 8.4 percent. This has been due to the agricultural, manufacturing and mining industries performing poorly compared to other years but India however, is within the BRIC, the country most probable to show long term stability as they have an advantageous demography, and could be more resilient to global uncertainties. Weaknesses in China have been exposed in its structure as their exceptional growth rate for a decade has decreased, and they are now under struggle to maintain it. The financial crisis

203 Martin, Bloomberg Businessweek, op. cit.
reduced the world demand and caused consumption imbalance in China. Today, switching their export led economy to the integration of domestic consumption should be of great interest for Chinese policy makers, and investors should take into account, and get used to the new growth of China. Reduced manufacturing competitiveness is caused by increase of wages and the absence of skilled labor.

This has to be taken into account when determining which portfolio to choose. One can clearly see that the BRIC countries are under issues that will probably continue and be persistent in the upcoming years, while the MIST countries are in the initial stage as emerging markets. However, the power of BRIC as a united group can not under any circumstances be ignored, as they account for 40 percent of the world population and 25 percent of the world land. The MIST is far behind considering these points. Goldman Sachs also stated that BRIC will be surpassing the richest nations by 2050.

The results conducted through empirical values further strengthen the fact of the slowing economy of the BRIC’s. This helps the authors to be sure of the situation today and therefore, can base their decisions on a strong base of knowledge.

Figure 5.3 - GS BRIC fund 2006-2008 compared to S&P 500 market index

![Figure 5.3 - GS BRIC fund 2006-2008 compared to S&P 500 market index](http://finance.yahoo.com/echarts?s=GBRIX+Interactive#symbol=gbrix;range=20060705,20080602;compare=%5Egspc;indicator=volume;charttype=area;crosshair=on;ohlcvalues=0;logscale=off;source=undefined; >)

Yahoo Finance h

Figure 5.3 promotes the fact that the GS BRIC ignored market indicators as of August 2007 and rose while the market index was stable and barely fluctuating. Still, simply because it did “beat the market” this time, would not mean it would continue to do so as evidence has shown from recent years. Figure 5.3 also shows how low diversified portfolios at this time can result in high returns, even though it had a high risk.

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204 Yahoo Finance h, ‘Goldman Sachs BRIC Instl (GBRIX)’, in *Yahoo Finance*, January 2013, retrieved 6 January 2013, <http://finance.yahoo.com/echarts?s=GBRIX+Interactive#symbol=gbrix;range=20060705,20080602;compare=%5Egspc;indicator=volume;charttype=area;crosshair=on;ohlcvalues=0;logscale=off;source=undefined; >.
A beta of 1.4664 is considered high since it will rise and fall with 46.64 percent compared to the market. For example, if the market rises by 1, then the fund will rise by 1.46 and vice versa. The expected return conducted through the CAPM was at around 9.81 percent. Despite the fact that the beta value was high, the expected return is low considering the BRIC fund today and the N-11 equity fund today. This is due to the market risk premium being low.

5.3 N-11 Equity Fund vs. GS BRIC Fund

To finalize the result, a comparison between the two funds is made including the GS BRIC from 2006-2008.

Table 5.7 - Results: N-11 Equity Fund, GS BRIC 2011-2013 & GS BRIC 2006-2008

<table>
<thead>
<tr>
<th>Portfolio</th>
<th>Correlation</th>
<th>St.D</th>
<th>Beta</th>
<th>CAPM(Ri)</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-11 (MIST)</td>
<td>0.7996</td>
<td>4.9397</td>
<td>0.9862</td>
<td>11,51089</td>
<td>0.59</td>
</tr>
<tr>
<td>BRIC2013</td>
<td>0.8329</td>
<td>7.5029</td>
<td>1.5256</td>
<td>17,740545</td>
<td>-0.21</td>
</tr>
<tr>
<td>BRIC2008</td>
<td>0.6567</td>
<td>6.8847</td>
<td>1.4664</td>
<td>9,807928</td>
<td>2.9</td>
</tr>
</tbody>
</table>

The low beta of N-11 (MIST) equity fund makes it a wiser choice to invest in N-11 equity fund today because it has a lower risk, a lower return, but a better growth. As shown in table 5.7, the N-11 equity fund has had an average monthly growth rate of 0.59 percent while the GS BRIC fund has had an average decrease of 0.21 percent every month during the same period of time.

On the basis of risk and return, investors should decide to invest in N-11 (MIST) equity fund because despite having a lower return, it has a lower standard deviation and a higher average monthly growth rate. Having a lower standard deviation means that it decreases lower than GS BRIC, since it has a higher standard deviation, if the market falls. However, it gives a lower return when the market rises. Although, the GS BRIC fund has an expected return, which is approximately 6 percent higher than the N-11 equity fund, the difference from the mean and the standard deviation is too high and too diversified. The beta in CAPM also suggests the same outcome. The BRIC will rise higher if the market rises, but it will also fall lower if the market falls.

When N-11 equity fund is compared to the GS BRIC fund in the period 2006-2008 (when it was started), the results show that the N-11 equity fund is a safer choice to invest in because of its lower beta. However, since the GS BRIC fund has a lower correlation to the market, it will not be as affected as the N-11 equity fund by the market. Table 5.7 shows that the N-11 equity fund has a higher expected return than what the GS BRIC, however the GS BRIC had a higher average return with a 2.9 percent growth of return compared to N-11 equity fund’s 0.54 percent monthly growth.
The GS BRIC fund from the period 2006-2008 had a higher growth, a higher risk and a higher return in this period. Considering today’s GS BRIC; it has a higher risk, a decrease in growth and a lower return than the N-11 equity fund, even though the expected return is higher.

**Figure 5.4 - Comparison: GS BRIC 2011-2013, N-11 Equity Fund & S&P 500 Market Index**

![Graph showing comparison between GS BRIC, N-11 Equity Fund, and S&P 500 Market Index]

The results show that the BRIC fund has a higher risk and a higher return but is not as safe as the N-11 equity fund. In fact, the BRIC fund has been steadily decreasing in value since February 2011 while the N-11 equity fund has been increasing steadily. This tells the authors that while a higher risk gives a higher return, it does not necessarily mean that the portfolio has a positive return.

In the method section, the authors wrote that if the stock price movements show no significant difference between the two portfolios, then it should be considered to be in the weak form market efficiency and if it has a significant difference, then the markets are inefficient. Figure 5.4 shows that there are no significant difference in the stock price movement in consideration with the market index, and that the N-11 equity fund has a higher growth rate than the GS BRIC fund. This figure also shows that while the N-1 equity fund is growing steadily while the GS BRIC fund has had a decreasing stock price movement. Furthermore, there is no significant difference between the stock price movement between the N-11 equity fund and the GS BRIC fund even though the two portfolios follow two different paths.

Both the BRIC and the MIST can be linked to the weak-form efficiency market within the efficient market hypothesis since both of these funds are affected by the news in either a positive or a negative

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205 Yahoo Finance i, ‘Goldman Sachs N-11 Equity Fund A (GSYAX)’, in Yahoo Finance, January 2013, retrieved 6 January 2013, <http://finance.yahoo.com/echarts?s=GSYAX+Interactive#symbol=gsyax;range=20110228,20130104;compare=gbrix+%5Egspc;indicator=volume;charttype=area;crosshair=on;ohlcvalues=0;logscale=off;source=undefined;>.
way. The former means that it follows the random walk theory, as these markets are not predictable.

BRIC’s monthly average decrease by 0.21 percent can be compared to N-11 equity fund’s monthly increase by 0.59 to show which portfolio is the more efficient. Figure 5.4 shows an increase in percentage change, showing that the gap between BRIC and N-11 has grown further apart, with that the N-11 has been rising and BRIC has been falling.

As BRIC is steadily decreasing in value, and MIST is steadily increasing, Jim O’Neill said that in spite of global economical issues, the MIST countries has this decade doubled its size and is continuing to flow.

5.4 T-Distribution

To be able to either accept the null hypothesis or reject it, the authors need to make a T-test. This T-test is to measure if the T-distribution value is within the critical value to be able to accept the null hypothesis.

Figure 5.5

\[
T_{(n-2)} = \frac{b - 0}{\frac{S_r}{S_x} \sqrt{\frac{1 - r^2}{n - 2}}}
\]

Figure 5.5 is the formula for the T-distribution test. The authors used a 5% significance level. The numbers represent the N-11 equity fund and the S&P 500 market index.

Figure 5.5 shows that the authors’ T-distribution resulted in a 6.1076. The critical value of a two-legged T-distribution with a degree of freedom of 22 is 2.074. This means that the authors should reject the null hypothesis and accept the second hypothesis. Furthermore, the following is recognized:
There is not a correlation between risk and return for the Goldman Sachs N-11 equity fund.

There is a correlation between risk and return for the Goldman Sachs N-11 equity fund.

The authors’ results show that it is profitable for an investor to invest in the Goldman Sachs N-11 equity fund.

6. Conclusion

This chapter will present the conclusions this study has conducted through the results. The conclusions are based on the empirical evidence and the results.

✓ Is there weak form market efficiency in these emerging markets?

Yes there is. The prices reflect past price data and the authors cannot predict the future by a technical analysis. The changes in the market reflect on the funds instantaneously in a similar direction without any longer delay. The funds underperform the market and therefore one cannot beat the market by trying to predict the future with a technical analysis. There is no significant difference in the stock price movement between the N-11 equity fund and GS BRIC fund compared to each other and the market. There is no way to “beat the market”, since one only can speculate through past data and cannot foresee the future stock price movement. The correlations of the two portfolios tell the authors that they are strongly positively correlated with the marked index, and hence, if the market falls or rises, the portfolios will fall and rise with it. This speaks for these emerging markets to be market efficient as they follow the changes in the market.

Being in the weak form market efficiency, the authors cannot determine what will be better investment decision for the future, but can only base their decisions on the past data, and only speculate about the future.

✓ Is the Random Walk Theory present in the N-11 equity fund?

The random walk theory is present in the N-11 equity fund. The prices reflect past data on any given time and according to this studies results the fund is strong positively correlated with the market. This means that any information on the market in a daily basis can affect the stock price movement either positively or negatively. Hence, the authors cannot beat the market by concluding what will be better for the future, but only speculate about it. Since the authors can only use past data, it is concluded that the random walk is present in the N-11 equity fund as well as the weak form of market efficiency. This is essential for the authors’ study, since the authors wanted to evaluate the behavior of the stock prices to be able to conclude whether the N-11 equity fund is a better than the GS BRIC fund, but since the fund is in a market where the random walk is present, the authors can only speculate whether which portfolio is the better investment choice in terms of risk, return and growth through past prices.
What are the opportunities and challenges for the MIST countries?

As it can be seen in the empirical evidence section of this study, the MIST countries have a lot of opportunities and challenges as countries, and as a group.

Mexico has good opportunities due to their location, cost of labor, and demographic advantages. Globalization has increased the production level in Mexico and is expected to have an annual growth rate of 3.8 percent from 2011-2016. However, Mexico has challenges concerning the organized crime, corruption and the labor market in the country.

Indonesia is considered to be a hotspot for global investment banks and has opportunities in the finance, energy and the retail sector, along with their demographical advantages. They have the potential to become the economical powerhouse of South East Asia and become a huge market for human and natural resources. Their challenges are similar to Mexico, having issues surrounding corruption and infrastructure and regulatory environment.

South Korea has potential in their medical services, manufacturing, energy and retail and luxury goods. However, they challenges they must face are: their aging populating, this being the biggest challenge, and an inflexible labor market.

Turkey has shown an economic growth rate that is one of the fastest in the world, and has good potential because of its geographical location, successful growing economy and additionally to that, has potential in the tourism, energy, financial services and in the retail sector. The challenges for Turkey are the cost of labor, inflation and their current account deficit.

This is a crucial factor in determining what fund to invest in if the authors is to make a decision between the two portfolios in this study. As the results show that these markets are weak form efficient and the N-11 is under random walk, the authors have to base their conclusion on solid grounds as past data does not only reflect if the MIST are a good investment decision. The countries’ health and environment are also major issues when conducting a thorough investigation, to be able to understand if one should invest in these countries or not. If there was no potential in these countries to have any success comparable to the BRIC’s, the authors would not be able conduct a confident decision. Two years of stock price data can lure one to think that the countries might be a good investment decision; however, this might not reflect the reality but only speculations. Therefore, the opportunities and challenges give the authors a better foundation to base their decision on and could speculate about the future as there is potential. The research shows clearly that the MIST countries have potential to be leading economies, and therefore, the authors can compare it to the BRIC.

Apart from the research questions, the results show that the N-11 equity fund has better growth today, having an average monthly increase of returns, accounting for 0.59 percent while the GS BRIC fund has an average monthly decrease of 0.21 percent in returns. The risk, measured through beta, is
higher in the GS BRIC fund, being 1.5265 and the N-11 having a beta of 0.9862. The N-11 equity fund is closer to an average portfolio beta than the BRIC fund. The BRIC fund is very volatile and an increase in the market exhibits higher returns, and decreases, would result in higher fall. As it has a monthly average decrease of 0.21 percent in returns, it will much more likely to continue to fall. Since random walk is present, the authors can only speculate if it is still going to fall or a random event will make the stock price movement rise. Concluding through past data, the N-11 equity fund is showing lower risk with a better growth rate of returns. However, the GS BRIC fund has higher expected return even though they have a decrease in the stock returns throughout the period. This is due to the beta being higher than the market, which results in that the expected return being higher. The research purpose was to determine which portfolio is a better investment decision, considering risk, return and growth. The GS BRIC fund in 2006-2008 would be preferred over the current N-11 equity fund. However, by the results conducted over the period 2011-2013, investors should invest in the N-11 equity fund, rather than the GS BRIC fund.
7. Reflections

In this section, the authors will decide upon any discussion that were made during the writing of this study and also have criticism against the study.

7.1 Discussion

The reason why the N-11 equity fund was compared to a BRIC fund in two different stages was for two reasons; the first reason was to determine whether the N-11 equity fund was a better investment decision today, and the second reason was if the N-11 equity fund had the same growth spur as the BRIC fund when it started.

The results show that the BRIC fund had much higher average growth rate than the N-11 equity fund, but had a lower expected return and a lower correlation with the market, as well as a higher risk. The authors thought that the BRIC fund could have risen more since it did not have as strong correlation with the market, as the N-11 equity fund has in its start. Also, having a higher risk on the portfolio should give a higher return, while the expected return was lower in the early BRICs than the N-11 equity fund, it might not have not been the case with the actual return.

The authors could see the BRIC fund spike in growth, during the start of the GS BRIC, albeit, the BRIC fund today was compared with the newly started N-11 equity fund. Despite the fact that there is not such a spike in the N-11 equity fund growth rate, it is speculated that the N-11 equity fund could be the new investment decision rather than BRIC. However, Goldman Sachs still states that the BRIC fund will surpass the richest nations by the year of 2050. This does not affect the authors’ conclusion about investing in the N-11 equity fund today, because what the authors’ results state is that investing in the N-11 equity fund is a better investment decision in terms of risk, return and growth today, and results gathered by investigating the potential of the MIST countries. This could change in the next month because of the effects of the random walk theory and is a topic that has to be studied in the upcoming years.

7.2 Criticism on the study

Choosing a completely new subject made it hard for the authors to be able to have a conclusion based on more definite facts. Since the N-11 equity fund started only two years ago, it is still very new considering these kinds of markets and stock price movements. This made the results even harder to interpret, and the results are mostly just what it is on this specific day. The results do not tell the authors what it will be in the near future, or maybe even two-three years from now. The authors can only
speculate into what is going to happen in the future, hence, the results can only be taken into consideration today, and maybe a week forward to invest in.

Discussions arose between the authors concerning how to bring forth the market efficiency hypothesis. By looking at the results and the information the authors had, it was concluded that the N-11 equity fund was in the weak form market efficiency, as it only had past data to look upon to find a decision whether to invest or not. Moreover, while it could be calculated out how much one stock could rise, there is no path to actually determine a stock price movement; for a longer future.

This study should have been about the MIST and the BRIC; however, since MIST does not have its own portfolio and stock price movement, the authors had to use the N-11 equity fund, as the base for the MIST. Nevertheless, since MIST accounts for the majority (approximately 73 percent) of the N-11 countries’ GDP, and that seven other countries account for the rest (about 27 percent): the authors decided that the study was still meant for the MIST, rather than the N-11 countries. Consequently, this study can be regarded as if the N-11 countries are, compared to one portfolio of BRIC. If there was a fund specific to the MIST or several funds specifically to MIST, then this study could be more accurate and a better generalization of the reality could be made, as one then could have compared MIST to BRIC with several portfolios rather than the whole N-11 equity fund towards only one portfolio of BRIC.

There is also the problem of how one can generalize through two portfolios. The N-11 equity fund is so new that there is only one stock price movement for the portfolio today. Hence, the authors decided to only compare the one N-11 equity fund with one BRIC fund. The chosen funds were picked because both these funds were from Goldman Sachs. Therefore, the authors approached this issue by not only basing their results on stock price movements, but also if there really is potential in these countries to exhibit the same success, given if the results was to show that the N-11 equity fund is a better investment decision in terms of risk, return and growth.

There were more discussions about whether the sources would be reliable or not. To exclude the insecurity of the sources validity and reliability, the authors chose to find information about the authors of the articles and books. This made the authors sure about which sources to use.

The authors realize that the whole theory chapter is solely based on one source. This would in normal cases be a bad move; however, this study’s authors researched information about the author of the source and found out that the author of the source is well known within the field of business and investing. In fact, Glyn A. Holton has published several books about it. Thus, the authors still used the same source for most part of the theory section.
Also, the theories are written elaborately, to be able to explain how it has developed into the theory or hypothesis it is today. For example, the portfolio theory was not founded as it is today, but has been added on to by different researchers and it has been altered in that way.
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Yahoo Finance g, ‘Goldman Sachs BRIC Instl (GBRIX)’, in *Yahoo Finance*, January 2013, retrieved 6 January 2013, <http://finance.yahoo.com/echarts?s=GBRIX+Interactive#symbol=gbrix;range=20110228,20130104;compare=%5Egspc;indicator=volume;charttype=area;crosshair=on;ohlcvalues=0;logscale=off;source=undefined;>.

Yahoo Finance h, ‘Goldman Sachs BRIC Instl (GBRIX)’, in *Yahoo Finance*, January 2013, retrieved 6 January 2013, <http://finance.yahoo.com/echarts?s=GBRIX+Interactive#symbol=gbrix;range=20060705,20080602;compare=%5Egspc;indicator=volume;charttype=area;crosshair=on;ohlcvalues=0;logscale=off;source=undefined;>.

Yahoo Finance i, ‘Goldman Sachs N-11 Equity Fund A (GSYAX)’, in *Yahoo Finance*, January 2013, retrieved 6 January 2013, <http://finance.yahoo.com/echarts?s=GSYAX+Interactive#symbol=gsyax;range=20110228,20130104;compare=gbrix+%5Egspc;indicator=volume;charttype=area;crosshair=on;ohlcvalues=0;logscale=off;source=undefined;>.  
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## APPENDIX 2

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209 Yahoo Finance d, op. cit.
## APPENDIX 3

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\(^1\) Yahoo Finance d, op. cit.
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