CHAPTER I

INTRODUCTION

A. Background of the research

Investment throughout diversification while building portfolio, follows the well-known rule of not putting all eggs in one basket. Yet, the concern arises alongside international line in term of stock market facet; it might not be beneficial if the selected markets are inappropriate. For that point, the degree of integration among the international and domestic market returns should not to be significantly positive (highly co-integrated) if to optimize profit. Hence, investors, whether risk taker or averse, are requested to take into consideration to this mechanism. Therefore, stock market co-movement becomes more and more interesting for policy makers due to its impact on monetary policy actions (Harrison and Moore, 2010)

Co-movement resulting from the correlation or long-run equilibrium relationship among yields of different market; in other word, the existence of synchronization long-term trend movement is viewed (Xiang, Wang and Hao, 2009). Asimportant the concern is, investors need then to proceed with the selection of market lines.

Selection or alternative lies then on reasonable facts by considering countries economic conditions. Nevertheless, crisis affects the state of economies in all over the world. Asian crisis 1997/98 illustrated the some typical economic turning point. For the some other countries in the western, global financial crisis started from the middle

of 2007 and 2008 that begins in the US, impact from the subprime mortgage crisis in 2008. US banks loose the credit policy, and its debt leads downgrade from AAA to AA+ by Standard and Poor's. Besides, in the Eurozone due to insufficient tax revenue, excessive spending that leads to budget deficit is known as sovereign debt crisis, mostly some countries suffer which are Portugal, Italy, Greece and Spain as named PIGS (Gutpa, 2011). Ireland also included. However, some other countries remain survived or even flourish during this worst financial crisis or the global recession. In order to facilitate the alternatives; two different groups of countries are created resulting from the crisis impacts and the state of survival or almost positive economic growth and the suffering economic countries.

On one hand, Portugal, Italy, Ireland, Greece and Spain, known as PIIGS, are then the European sovereign debt crisis states that are more serious in the Economic Monetary Union (EMU). Greece internal crisis such as budget deficit and public debt come from the financial crisis 2007 and the bank bailout in 2008. Moreover, lower tax revenues with lack of fiscal adjustment, increase of unemployment and inflation rate worsen the economic climate as economic government. This situation has impact towards the Union making European crisis much more considerable (Adel and Salma, 2012)

On the other hand, Jim O'Neil tries to represent the world fastest growing economies in his report in 2011 stating that the big four including Brazil, Russia, India and China that perform BRIC combined economies will transcend the

combined economies of the current well established countries of the world by 2050. BRIC countries, including Brazil, Russia, India and China through their tremendous growth rate higher than those of the industrial countries like US, Europe and Japan; become one of the strongest economies in the world. India for instance, could reach 8 percent per year growth whereas China until 10 percent by the year of 2002 and 2008 despite the crisis was in its era (Gupta, 2011). Later on, Indonesia is added to the BRIC becoming BRIIC as this latter has a more domestically oriented economy. The BRIIC has their central bank's policy rate including India's (RBI, 2011)[1]

Thus, co-movement analysis while considering the option put on those groups is worth to be discussed. Furthermore, growing market is generally asserted much more risky than the well-established one. Co-movement of stock and bond persists but the relationship varies in time (Ammer, Cai and Scotti, 2010).

As co-movement lies on integration of stocks in the market that move or shift together that are more discussed in details in chapter II, its concept is often views in the well-known stocks like in the US Gupta (2011) tries to explain that there is relationship between US and the whole world. The subprime crisis started from US and research is made with the interrelationship with US and the rest of the world. There is not so much study that is done concerning this interconnection between the new leading economic countries themselves. Though US has bilateral partnership

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[1] RBI, or Reserve Bank of India analysis on October 21, 2011 in New Delhi, states the BRIIC countries bank policy rate and highlights the case of Indonesia as a member of BRIIC that recognizes the change in the group becoming the four to five best economic leading economies.

among these clusters like BRIIC (table of export/import could give clarification) in terms of trade. Nevertheless, BRIIC still has positive growth during the turmoil period. Co-movement between European countries also is common, as what has already done Patricia, Steeley et al. (1999) but it concerns with UK, Germany, Switzerland, France and Italy, the only element of PIIGS. Other study on the impact of the Greek financial crisis co-movement that affects the European Monetary Union or EMU is maintained to explain the financial distress occurred in the European world (Adel, 2012). It then shows the economic suffering of the PIIGS that makes Europe Union still has difficulties in light of the Greek case that is again worsened by the situation of the recent case about Cyprus crisis 2013.

Attempts to view the global stock market contagion during the 2008 crisis shock has done but it still highlights the interrelationship with the common leading countries like US, UK, some European countries and Latin America (Ohlsen and Skarholt, 2010). Some of the studies enhance the clustering of PIIGS but the connection is still within the European Union (Tatomir and Alexe , 2012) concluding that Italy is still with no progress. Similarly on the same group (Baskaran and Hessami, 2011) in their working paper no 45. Other research on the international scene tries to evoke the co-movement between these markets though the specification concerning the PIIGS and BRIIC is not so stressed on. In the global market integration and the determinants of co-movements; evidence from other classification of countries by Mobarek only deals with BRIIC but then only Italy is included for the

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European suffering countries. The most global co-movement and correlation research including 33 stocks (Evans and McMillan, 2006) is more near to the reflection but the group is not highlighted itself only in general. Yet PIIGS are included BIIC are also, that means Russia is not as part of the 33 stocks. It is often one country or more among this group is excluded and the group is not the focus of discussion in term of co-movement.

B. Problem formulation

Known now the importance of contagion between stock market for portfolio diversification while investing in the international field that deviated by crisis threatening any financial investment domain like the asset capitalization. Problems that rise questions as such; are stock markets among the selected groups[2] co-integrated mostly focused on PIIGS and BRIIC? What is the specification of the co-movement alongside the series of time within these stock markets?

C. Scope of the study

In order to more focus on the main concern, some limitations are made as the topic concerning co-movement deals with various and large domain. In this research, samples and period of analysis are defined as the following.

Not all existed country groups are studied but only the two main created groups resulting the global recession which means the PIIGS and BRIIC countries.

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[2] The new leading economies and the suffering economic countries stock market exchange, BRIIC and PIIGS.

Even the number that performs the group also somehow becomes subject of discussion, concerning PIGS, it became the focus on the financial market especially within the global crisis (October 2009), here PIGS[3] members are; Portugal, Ireland, Greece and Spain (Andenmatten and Brill, 2001). Others classified them by replacing Ireland with Italy.

Newly leading economies groups were created by Jim O'Neill in 2001, while he defined the shift from G7 to BRIC. The letter "I" here mentions India that excludes Indonesia; these are known as the "Big Four". Later on, some views tries to add another country as the criteria is the economic booming condition and also the size of the country itself, thus South Africa[4] is included.

As a matter of fact, the sample used in this research remains the recent groups which are PIIGS representing the suffering economic countries including, Portugal, Italy, Ireland, Greece and Spain as the most hit by the European sovereign debt crisis (Baskaran and Hessamib, 2011). The other five countries; Brazil, Russia, India, Indonesia, and China compose the actual BRIIC viewed as most leading economies and Indonesia has a potential[5]to be classified. Besides, Indonesia follows the central

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[3] Some website like BBC news, enhances the term PIGS though remarking that some analysts uses PIIGS including Italy by entitling the news with "Europe's PIGS: Country by country, PIGS is a horrible acronym" from http://news.bbc.co.uk/2/hi/8510603.stmPage last updated at 13:55 GMT, Thursday, 11 February 2010

[4] In Globalization and Emerging Economies, South Africa is dealt similarly with the other members.

[5]Demographic, and regional criteria, Indonesia represents the middle-income country with 223 million population that are enormous. http://globalconditions.wordpress.com/2008/02/29/briics-in-the-global-economy/.

bank policy that is shared with the members of the motley crew of BRIIC countries (RBI, 2011).

The period of the time frame focuses within the series of ten years but not all the time while these countries started emerged in the international scene. This limit emphasizes the actual economic conditions of these countries before and after the global financial recession.

Since the data are depicted alongside the period of time and vulnerable to the change or turning point in period, hence, time series using some different contagion or co-integration methods enhancing by the error correction practice is adopted. Apart from being suitable for the topic analysis, approach like error correction helps to highlight the importance of deviation between the empirical study and the real world. Besides, by analyzing the relationship of the error; it underlines the effect of the variables (Freedman).

D. Motivation for the research

Apart from the international economic trend as globally viewed through the new leading economies, at a glance like China (almost every countries exists China's control not only in economic trade but also in human resources), and for Indonesia where the author lives now and experienced the actual economic condition as middle-income country. Co-movement analysis is interesting as the result that will be yield becomes vital for taking decision while investing short or long-term as well. The

author already follows some companies dealing with securities such as the stock market especially the international trade as forex that tremendously relies on the international news from countries to others. The methodology used is not only exciting but also challenging.

E. Benefits of the research

A research provides special advantages to everyone concerned. It could serve people directly or indirectly and enriches the acquired know-how for humanities. Some might be cited as the following; for:

1. Investors and managers

As mentioned above, while investing internationally, not only for trading but also for investing long or short term, information is important. This research then tends to offer them knowledge and information about these countries and their relationship in order to assure the decision in an efficient way.

Opportunities for new markets traders on commodity, money especially stock market, through this research, it may be revealed as the trend converges to the BRIIC countries. Therefore, this topic is expected to facilitate the investors' or managers' way of selecting the adequate alternatives while building portfolio. For this point, it helps them to broaden the criteria required to formulate the distribution of the studied efficient percentage of investment portfolio. Thus, the indices gained from this study may renew their point of view and attitude to face the international economic trend in a better way that is to minimize the risks.

2. Researchers

For those who investigate or do their research on international stock market may have a better understanding on PIIGS and BRIIC relationship and interdependence in term of markets volatility and the movement aspect of these exchanges. It is expected to represent a kind of model or outline to deal with some similar domain of research. In other words, may this study lead to open and attract their attention to open some analysis for further discussion.

3. Author

Alongside the research, it allows to discover something new that the researcher has not yet experienced such as the methodology applied, the detailed information concerning the topic. Only in the history or just heard on the news that the information about BRIIC and PIIGS is often dealt with and in general, throughout this work, the reality could be seen in term of global economic interdependence.

It highlights the importance of the lecture, the theories that have been taught mostly its application in the field of research that is viewed through reality in the studied stock markets. Besides, it helps the ability to analyze, to create, to relate, to seek for, to think, to use the situation in a motivated purpose that concern the field of co-movement. Therefore, it increases the intellectual capacity and the knowledge as well. Last but not least, to fulfill the academic requirement in order to obtain the grade of master's degree in finance management through the examination.

4. Others like readers

Information on co-movement becomes more familiar for them to improve general knowledge that might be useful in their daily life at the present or for the future. May it increase or stimulate their curiosity on the field of international investment as well.

F. Objectives of the research

The aim of this research is to identify the existence of co-movement between the ten selected and grouped countries (growing and suffering countries), BRIIC and PIIGS from 2002 to 2012. By doing so, analysis of the dynamic relationship (short or long term) is made as an indication to know the interdependences or the correlation implying the contagion existing among these international stocks. In other words, this research tends to analyze the movement pattern of these international stock markets whether co-integrated or not.

This work then tends to shape the trend of the market shift represented by the monthly indexes in its volatility. Some approaches are used to specify the time series, amongst them to determine the condition of the data if indexes are stationary on not alongside the time. Furthermore, causal relationship between the time series of PIIGS and BRIIC countries indexes confirms the stage to scrutinize the actual link that may influence the other market.

Thus, the topic deals with the interrelationship of indexes variables that involves the importance of their effect if some are eliminated. Besides, worldwide view on stock market dynamism makes it important.

G. Writing structure

Systematic writing of this research outlines the following steps by which contents are linked chronologically.

CHAPTER I: INTRODUCTION

This first chapter deals with the basic information to bring out to the main co-movement topic with some particular points starting from the background of the study, problem formulation for defining the research. Motivation follows to enhance the benefit and the objective of the study by adjusting them with the systematic writing or the structure.

CHAPTER II: THEORITICAL REVIEW

It consists of some basic related theories definitions and literature review to facilitate the understanding of the topic. Hypotheses are formed as well so that theorem or methodology testing are appropriate with the concept and tools available in the field.

CHAPTER III: RESEARCH METHODOLOGY

The academic methodology followed to tackle this co-movement topic is explained in this phase to outline the steps of analysis. Technical data analysis

becomes the main focus that concerns the sample, the variable, and the data processing.

CHAPTER IV: FINDINGS

It describes the result of the analysis, the hypothesis testing by some clarification. Using the methodology findings summarize the results of proceeding the data, treating them with the theory and tools used in order to reap a concrete finality.

CHAPTER V: DISCUSSION AND CONCLUSION

This last stage provides a brief description of the findings and answers the problematic query. Then, it states the limit of the research ending by suggestions.