

CHAPTER 2

THEORETICAL REVIEW

A. Literature review

The previous chapter provided the background and the problem discussion of the area of this study, leading down to the specific research questions. In this chapter, we review earlier studies for investment, Asian capital market, and Markowitz efficiency portfolio. The aim of this chapter is to provide relevant literature in the field of Asian capital market and international efficient investment portfolio. First, we will review theories about investment, emerging capital market in Asia, international portfolio and Markowitz efficient portfolio theory describing importance of an Investment portfolio and how Asian capital markets are growing first and catching investor's attention.

1. Investment

Investment is an asset or item that is purchased with the hope that it will generate income or appreciate in the future. In finance, an investment is a monetary asset purchased with the idea that the asset will provide income in the future or appreciate and be sold at a higher price.

The investments in the capital market may be either in the bonds or stocks. Investments in the stocks or bonds may be either investing in the new issues or in the existing securities. The primary capital market handles the trading and investments in the new issues while the secondary capital market takes care of the trading of existing securities.

This paper will give a guideline or an idea where to invest and which emerging capital market is more profitable among selected Asian emerging countries. This study will be based on stock market.

Now if we think why this study is based on capital market not in other sectors? Well as we know “High risk High return”. The conventional reason for investing in the stock market--perhaps offered with a bit less confidence, but “It offers higher returns.” We can learn a lot by taking a couple of steps back and looking first at our financial goals.

a. Endurance of risk and return on investment

Every decision regarding investments is based on the relationship between risk and return. Generally the return on an investment should be as high as possible depending on the risk tolerance of the investor.

1) Calculating return of a security

The field of investments traditionally has been divided into security analysis and portfolio management. The heart of security analysis is the valuation of security analysis. Value, in turn is a function of return and risk. These two components are therefore very important in the study of investment. In fact they are the foundation of investment decision (Jones, 2010).

Returns from investing are crucial for investors; they are what the game of investments is all about. The measurement of realized (historical) returns is necessary for investors to assess how they will have done or how well investment management has done on their behalf. Furthermore, the historical return places a

large part in estimating future unknown return. In investment, it is critical to distinguish between the expected return and realized return (Jones, 2010).

Expected return as the return that an individual expect a stock to earn over the next period. Since expected return is only as expectation, the actual return may be either higher or lower. An individual expectation may simply be the average return per period a stock has earned in the past (Fabozzi and Modigliani, 1992:242)

To find out how much we can get form an investment; It is necessary to calculate the expected value. The expected value of a probability distribution is the weighted average of all possible outcomes, where each outcome is weighted by its respective probability of occurrence. We can call this expected value the expected rate of return. It is calculated as (Jones, 2010:150)

$$E(R) = \sum_{i=1}^n p_i \times R_i \dots\dots\dots (1)$$

Where

$E(R)$ = the expected rate of return on a security

R_i = The i th possible return

P_i = the probability of i th return R_i

n = the number of possible returns

2) Calculating risk of a security

An investor before investing in a stock, he needs to know how much risk involves in. to calculate the total risk associated with the return, the variance or standard deviation is used. The variance and its square root, standard deviation, are measures of the spread or the dispersion in the probability distribution. The larger the dispersion, the larger the variance or standard deviation. The tighter the probability distribution of expected returns, the smaller the standard deviation, and the smaller the risk (Jones, 2010)

To calculate the variance or standard deviation from the probability distribution, first we need to calculate the expected return of distribution using the previous equation. But now the probability associated with the outcome must be included, the variance of returns (Jones, 2010:155)

$$\sigma^2 = \sum_{i=1}^n [R_i - E(R)]^2 Pr \dots\dots\dots (2)$$

And

The standard deviation of returns

$$\sigma = (\sigma^2)^{\frac{1}{2}} \dots\dots\dots (3)$$

3) Types of risks

The risk of any stock can be divided into:

- a) Unique risk
- b) Market risk

Unique Risk (Unsystematic risk) affects only a single stock or a small number of stocks. Unique risk describes a firm's specific risk related to the market. Uncertainties about a firm's labor contracts, suppliers or customers are part of unique risk. Investors can eliminate the unique risk by holding a well-diversified portfolio.

Market (Systematic) risk affects a large number of assets in the economy and is generally market wide. Uncertainties about the general economy, such as GDP, interest rates, inflation, etc. all affect systematic risk. Firms that produce for example goods with a long life expectancy, such as aircraft, are highly sensitive and thus have a high market risk. Conversely, firms that produce goods for daily needs have a lower market risk. Market risk cannot be eliminated by holding a well-diversified portfolio; it is non-diversifiable.

4) Sources of risk

What makes a financial asset risky? Traditionally, investors have talked about several sources of total risk, such as interest rate risk and market risk, which are explained below, because these terms are used so widely, Following this discussion, we will define the modern portfolio sources of risk, which will be used later when we discuss portfolio and capital market theory.

a) Interest Rate Risk

The variability in a security's return resulting from changes in the level of interest rates is referred to as interest rate risk. Such changes generally affect securities inversely; that is, other things being equal, security prices move inversely to interest rates. Interest rate risk affects bonds more directly than common stocks, but it affects both and is a very important consideration for most investors.

b) Market Risk

The variability in returns resulting from fluctuations in the overall market that is, the aggregate stock market is referred to as market risk. All securities are exposed to market risk, although it affects primarily common stocks. Market risk includes a wide range of factors exogenous to securities themselves, including recessions, wars, structural changes in the economy, and changes in consumer preferences.

c) Inflation Risk

A factor affecting all securities is purchasing power risk, or the chance that the purchasing power of invested dollars will decline with uncertain inflation, the real (inflation-adjusted) return involves risk even if the nominal return is safe (e.g., a Treasury bond). This risk is related to interest rate risk, since interest rates generally rise as inflation increases, because lenders demand additional inflation premiums to compensate for the loss of purchasing power.

d) Business Risk

The risk of doing business in a particular industry or environment is called business risk. For example, AT&T, the traditional telephone powerhouse, faces major changes today in the rapidly changing telecommunications industry.

e) Financial Risk

Financial risk is associated with the use of debt financing by companies. The larger the proportion of assets financed by debt (as opposed to equity), the larger the variability in the returns, other things being equal. Financial risk involves the concept of financial leverage, which is explained in managerial finance courses.

f) Liquidity Risk

Liquidity risk is the risk associated with the particular secondary market in which a security trades. An investment that can be bought or sold quickly and without significant price concession is considered to be liquid. The more uncertainty about the time element and the price concession, the greater the liquidity risk. A Treasury bill has little or no liquidity risk, whereas a small over-the-counter (OTC) stock may have substantial liquidity risk.

g) Exchange Rate Risk

All investors who invest internationally in today's increasingly global investment arena face the prospect of uncertainty in the returns after they convert the foreign gains back to their own currency. Unlike the past when most U.S. investors ignored international investing alternatives, investors today must recognize and understand exchange rate risk, which can be defined as the variability in returns on securities caused by currency fluctuations. Exchange rate

risk is sometimes called currency risk. For example, a U.S. investor who buys a German stock denominated in marks must ultimately convert the returns from this stock back to dollars. If the exchange rate has moved against the investor, losses from these "exchange rate" movements can partially or totally negate the original return earned.

h) Country Risk

Country risk, also referred to as political risk, is an important risk for investors today probably more important now than in the past. With more investors investing internationally, both directly and indirectly, the political, and therefore economic, stability and viability of a country's economy need to be considered. The United States arguably has the lowest country risk, and other countries can be judged on a relative basis using the United States as a benchmark. Examples of countries that needed careful monitoring in the 1990s because of country risk included the former Soviet Union and Yugoslavia, China, Hong Kong, and South Africa. In the early part of the twenty-first century, several countries in South America, Turkey, Russia, and Hong Kong, among others, require careful attention.

5) Risk and return relationship

The first and most important step to beginning an investment plan understands your tolerance for risk. Some level of risk is an inherent factor with all types of investments. A simple relationship exists between risk and return – the higher the potential return, the higher the level of risk involved.

Some investments are very volatile; their value shifts up and down quickly. Another type of potential risk stems from the quality of the investment, or the stability of the issuer in the case of bonds. Even shying away from risk and focusing on the lowest risk investments can present a problem. If investments don't earn enough to keep pace with inflation, investors are actually losing buying power. First task is to determine how much risk is willing to take with investment dollars.

The fact that investors do not hold a single security which they consider most profitable is enough to say that they are not only interested in the maximization of return, but also minimization of risks. The unsystematic risk is eliminated through holding more diversified securities. Systematic risk is also known as non-diversifiable risk as this cannot be eliminated through more securities and is also called 'market risk'. Therefore, diversification leads to risk reduction but only to the minimum level of market risk.

The investors increase their required return as perceived uncertainty increases. The rate of return differs substantially among alternative investments, and because the required return on specific investments change over time, the factors that influence the required rate of return must be considered.

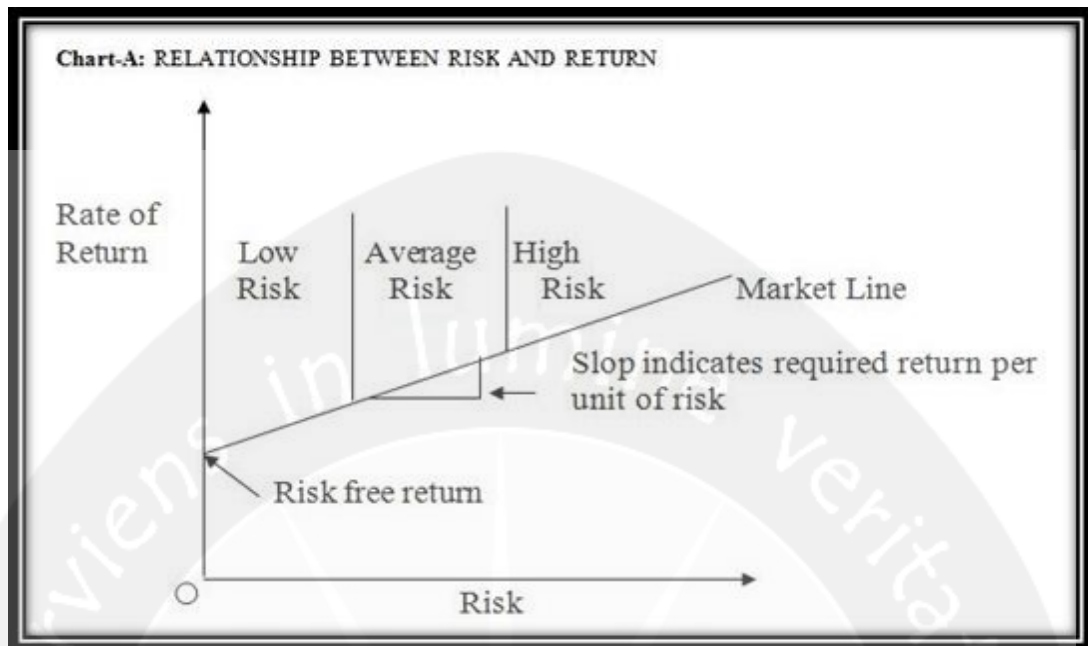


Figure 1: relationship between risk and return

[<http://www.mbaknol.com/investment-management/risk-return-relationship-in-investments/>]

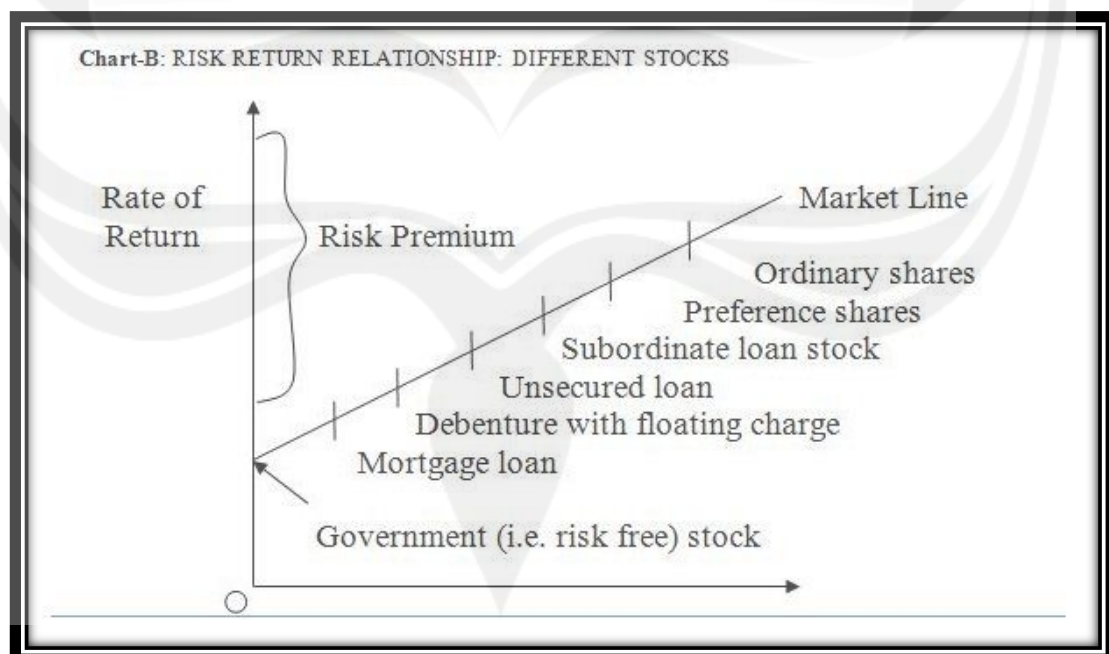


Figure 2: risk, return relationship: different stocks

[<http://www.mbaknol.com/investment-management/risk-return-relationship-in-investments/>]

Above Figure 1 represent the relationship between risk and return. The slope of the market line indicates the return per unit of risk required by all investors highly risk-averse investors would have a steeper line, and Yields on apparently similar may differ. Difference in price, and therefore yield, reflect the market's assessment of the issuing company's standing and of the risk elements in the particular stocks. A high yield in relation to the market in general shows an above average risk element. This is shown in the Figure 2.

2. Capital market investment

The capital market is a place where investors buy and sell securities in the capital market. The stock market and bond market are types of capital markets where investors can trade in stocks and bonds.

People have many wishes or wants. Like replacing the old car, buying a house, giving your kids a good education system, and so on. Philip Brewer suggests that, "Most people's wants, if you list them all out like that, will exceed their expected lifetime earnings (even before including the Ferrari, apartment in Paris, yacht, and private jet). And that's why people so automatically shoot for investments that offer the maximum returns--outsized returns are their only hope of satisfying all their wants." (Brewer, 2008, October 27)

He also suggests that, "Stocks are the classic investment. Prices are down right now, but the looming recession will probably mean that profits will be low as well. If you've got a 10-year time horizon, stocks are a good choice" (Brewer, 2008, October 27)

3. Why invest in Asian capital market

The paper will be based on Asian capital market because Asian capital market has experienced a higher growth. And this research will focus on developing countries capital market to know the chance of making the return of investment.

According Hsu, (November 2000), Asian countries have enjoyed abundant savings. Some countries in this region have recorded domestic savings rates of more than 30 percent. In no other regions in the world do countries have such large reservoirs of domestic savings at their disposal. Asian's high savings rates have provided the platform for robust capital markets.

We have already aware of developed countries capital market, now it's time to know about the developing countries position in the world of capital market. As so many authors have claimed that Asian capital market is growing incredibly, this paper will give an idea about some of Asian capital market's position in the market.

Hsu, (November 2000) also suggested that, Asian capital markets are expected to continue to grow and their market capitalization is expected to increase further, as the Asian economy is expected to recover steadily and require increasing capital to meet its investment needs. Also, in some Asian countries, technology-intensive industries have developed rapidly and hence a large sum of capital is needed.

In light of the current state of the global economy, Asian frontier markets are poised to experience some of the highest growth rates over the next decade.

Unquestionably, emerging markets, particularly BRICS (Brazil, Russia, India, China and South Africa), have experienced unprecedented growth over the past decade and played a crucial role toward global recovery following the 2008 financial crisis.

Asian frontier markets are commonly used to describe a subset of emerging markets (EMs). Frontier markets (FMs) are investable but have lower market capitalization and liquidity than the more developed emerging markets. The frontier equity markets are typically pursued by investors seeking high, long term returns and low correlations with other markets.

Asian frontier markets present unique investment opportunities that are generally unavailable in other economies. In many instances, these markets exhibit high economic growth, yet are vastly overlooked, thus providing pioneer investors access to the best prospects in an undervalued market. Further, Asian frontier markets enable investors to diversify assets by investing in growing economies with low correlation to developed markets. Lastly, frontier markets afford investors the prospect of becoming early-entrants into areas that will likely transform into emerging and developed markets with long-term growth.

From 2000 through 2009, Frontier Markets represented 17 of the 20 fastest growing economies in terms of average annual GDP growth. For several frontier countries, the GDP growth in 2011 is forecasted to be greater than China's and India's, like Qatar 16%, Ghana 13%, Mongolia 12%, Eritrea 10% and Ethiopia 9%. As documented by this year's UN publication 'World Economic Prospects

2011', developed economies declined in 2009 by 3.5%, while developing countries reduced their GDP growth rate to 2.4% and, interestingly, the 'least developed countries' reduced their superior growth rates to only 4.0% in 2009. Looking ahead, the same UN publication estimates this and next year's growth rates, for all countries and regions, to be lower than in 2010 with 'least developed countries' being the sole exception, showing accelerating growth rates through 2012. Asian capital markets have changed so profoundly over the past ten years and continue to change so dramatically, that the region truly is entering a new era.

4. Emerging Asian Capital Market

Emerging markets are capital markets in developing countries. The World Bank defines a developing country as one having a per capita GNP that would place it in the lower or middle-income category; at the end of 1995, a developing country had an annual per capita GNP less than \$8,955.2 Although developing countries are home to about 85 percent of the world's population, they produce only about 20 percent of the world's GNP and have only about 11 percent of the world's stock market capitalization. Emerging markets are thought to have tremendous growth potential. In fact, during the past decade, these markets have experienced considerable growth. As of 1986, emerging markets accounted for only 3.6 percent of the world's stock market capitalization, but the market capitalization of emerging market stocks increased from \$167.7 billion in 1985 to \$1.9 trillion in 1995, an increase of nearly 12 times. Over the same time period, the stock market capitalization of developed countries increased about 3.5 times, from \$4.5 trillion to \$15.9 trillion (Barry, John & Rodriguez, 2000)

The growth of emerging capital markets has received much attention in the past few years. Investors have been attracted to the potential for high returns along with diversification benefits of such markets. Managers and trustees of U.S. pension funds have begun for the first time to commit a portion of their pension assets to emerging market debt and equity securities. The unique characteristics of emerging markets are helping academics to better understand the development of financial markets and their role in broader economic development.

As emerging markets are new and high volatility involved investors still hesitate to invest in emerging market. According to Ody (2012) “Over the past couple of years, many asset classes around the globe have been whipsawed by a phenomenon known as risk-on, risk-off trading. When investors learn of positive developments about, say, the European debt crisis, they scoop up risky investments, such as emerging- markets stocks, in a fit of optimism. When headlines bear bad news, investors sell their risky holdings.

Even though many emerging nations have stronger balance sheets and better growth prospects than the developed world, investors think of the stocks as riskier than developed-market stocks, so they treat them as riskier. So the stocks fall disproportionately on bad news and rise disproportionately on good news.

But that doesn't mean all emerging markets are risky and low profit, just like not all developed country's market are profitable and less riskier. Emerging markets could be profitable as well.

But it's also true many emerging nations also face serious problems. According to Ody (2012) "China's economy, which grew at a double-digit percent- age pace as recently as last year, is slowing and may expand only 7% to 8% in 2012 and 2013. Any attempt to stimulate the country's economy needs to avoid adding air to China's precarious real estate bubble. The Shanghai Composite index of Chinese stocks dropped 11.6% over the past year. Meanwhile, the economies of big commodity exporters, such as Russia and Brazil, are bound up in China's fate because Chinese demand has been the key driver of commodity prices over the past decade. Although India is less dependent on China, its economy is also slowing. And India is plagued by persistent inflation, trade and budget deficits, and a business environment riddled with corruption and burdened by government red tape (Ody, 2012).

Emerging markets have huge populations-China and India together accounts for half of the world's population, and as their economies industrialize, large numbers of people are moving from rural areas to cities-opening up opportunities for them to get a better education and higher-paying jobs. That leads to in- creased consumption.

Emerging-markets stocks appear to be cheap. The MSCI Emerging Markets index trades at less than 10 times estimated earnings for the coming 12 months, compared with 13 for the S&P 500. Furthermore, many developed nations and their citizens are still at the beginning of a long process of belt-tightening and

debt-reduction, and that makes emerging-markets shares look all the more appealing.

“If you don't already have a stake in developing markets, start by putting 25% of the money you have dedicated to foreign stocks into an emerging- markets fund.” (Ody, 2012)

a. Five reasons to invest in emerging capital markets

When will the bear market in emerging markets end? Count on emerging markets to continue to move in much the same direction as developed markets -- but to be much more volatile. That's how they've behaved, with few exceptions, for decades. At any rate, now is a great time to invest in emerging-markets stocks. Here are five reasons (Goldberg, October 19, 2011) :

1) Emerging-markets stocks are cheap.

Buying stocks when they're inexpensive doesn't guarantee you'll make money, but it sure boosts your odds. The MSCI Emerging Markets index currently trades at 10 times analysts' forecast earnings for the next 12 months. By contrast, the S&P trades at 12 times estimated earnings.

2) Emerging markets are still the fastest-growing part of the global economy.

Emerging economies will grow 6.4% this year, compared with 1.6% for advanced economies, the International Monetary Fund forecasts. Since the start of 2008, emerging nations have been responsible for fully 85% of all global growth. Rapid growth, moreover, is turbo-charging corporate profits. Analysts expect the MSCI Emerging Markets index to show a 16.5% gain in earnings per share this

year and a 12% increase in 2012. And companies in developing nations are expected to raise dividends by 10%, on average, each year.

3) Demographics favor emerging nations.

As the U.S. population ages, more people are relying on government benefits, and fewer people are entering the workforce and starting to pay taxes. It's the same story in Japan and Western Europe. But the opposite is true in emerging markets. In most of those countries, the population, on average, is young and just entering the workforce.

4) Globalization isn't going to slow down.

Attempting to stop international trade is economically foolish and ultimately impossible. It's akin to fighting gravity. Continued advances in technology make it good business to move more work to developing countries, where wages are lower than they are in the U.S. and other established nations.

5) It's not all about exports.

Consider China, which Standard & Poor's estimates will grow 8.8% this year. Exports last year amounted to 27% of China's GDP -- down from 35% in 2007. Falling exports, caused by a slowdown in demand from overseas, will likely reduce China's GDP growth by just one percentage point in 2012, UBS predicts.

The point is this: A vast new middle class is emerging in emerging nations, and those aspiring citizens are eager for the goods and services that once only the wealthy in those countries could afford. As this middle class grows, emerging markets will increasingly become less dependent on exports to the developed world.

5. Emerging Asian market outlook

Emerging Capital Markets are financial markets that reside in the low or middle income economies or where the ratio of investable market capitalization to GNP is low. The emerging capital market nations have a large population size but a very low share of the world GNP. Out of 155 of the Emerging Market Nations only 81 have equity markets. Although the world equity market has grown from below \$3.0 trillion in 1980 to above \$31 trillion in 1999, the emerging capital market economies have grown only by 12.5%. The bond market capitalization relative GDP is also very low for the Emerging Capital Markets compared to the Developed Markets. The emerging capital markets are characterized by derivative markets that are small but organized. There are organized exchanges where both options and futures contracts are traded for agricultural products, metals, local foreign currency and interest rate products.

The Emerging Capital Markets are segmented from the rest of the world. This implies that different interest rates exist for the same level of risk. The net private capital flows to the emerging capital markets reached 3.5% of GDP in 1995, remained strong till 1996 but witnessed a sharp fall by 1997.

According to the statistics of the Bank for International Settlements the emerging capital markets have grown by 3% to 5% of the world market. It has been observed that about 60% of the emerging capital markets resided in Asia, 21% in Latin America and 19% in Eastern Europe, Middle East and Africa.

Although the marginal propensity to save is very high for East Asian countries, the bond market is not fully developed. The local bond market as a percentage of GDP is about 30-50% for the countries like Malaysia, Korea Philippines and India. This ratio is below 10% in Hong Kong, Thailand, China and Indonesia. Due to the absence of any yield curve in the emerging debt markets, there is lack of liquidity in these markets.

A commonly held view of emerging stock markets is that they are characterized by high returns and high volatility.⁶ We used the International Finance Corporation's (IFC's) Emerging Markets Data Base (EMDB) to examine the risk and return characteristics of emerging markets and their diversification benefits for portfolios based on U.S. stocks? Our sample period starts in December 1975 and ends in June 1995. (Barry, John & Rodriguez, 2000) Asian development bank have published an article named "Asian capital markets monitor" (ACMM) reviews recent developments in emerging Asia's stock, bond, and currency markets along with their outlook, risks, and policy implications. This issue features a special section, "Financial Integration and Capital Flow Volatility in Emerging Asia: Issues and Policies." The ACMM covers the capital markets of the People's Republic of China; Hong Kong, China; India; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; Taipei, China; Thailand; and Viet Nam.

According to the article of Azis (2011) has elucidated performance of Asian capital markets. Such as

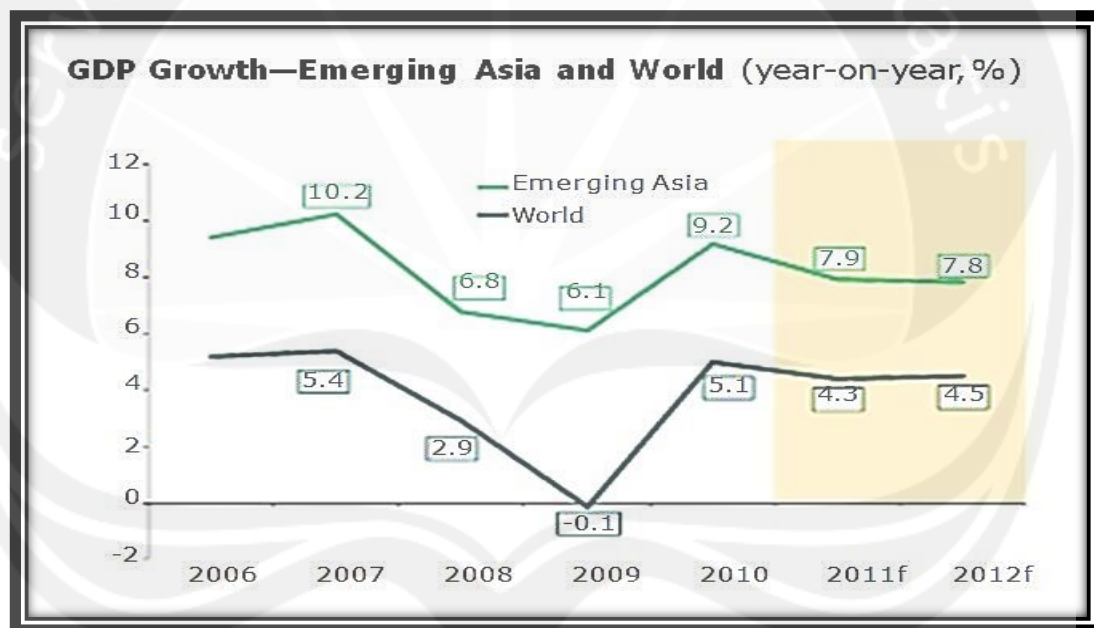
- a. Strong economic fundamentals support emerging Asia's equity markets following a wave of market corrections.
- b. Nonetheless, the outlook for emerging Asian equities has softened as markets factor in higher profit risks amid greater global economic uncertainty; Asia's equity results remain tightly linked to global financial developments.
- c. After last year's recovery-fueled growth bolstered emerging Asia's share of the global local currency bond market, government issuance eased this year as authorities unwind fiscal stimulus; nonetheless, corporate bond issuance remains strong given the region's robust outlook.
- d. Broadening the investor base and improving bond market liquidity remain key policy challenges for deepening emerging Asia's local currency bond markets.
- e. The size and pace of capital flows to emerging Asia have moderated since last year's resurgence, but the region's strong economic growth and widening interest rate gaps with mature markets continue to attract investors.
- f. While the return of capital flows to emerging Asia is welcome, today's dramatic increase in capital inflows, especially driven by short-term flows, may well presage tomorrow's large outflows
- g. Sustained recoveries in trade and investment flows continue to push emerging Asia's currencies higher on a broad front, although the moderating growth outlook is reducing some appreciation pressures.

- h. Real effective exchange rates for emerging Asian currencies have stabilized, since late 2010, on slowing nominal appreciation, rising inflation, and divergent currency movements of the region's major trading partners.
 - i. The share of international portfolio assets and liabilities held by emerging Asian investors is increasing over time, with wider geographic diversification and more regional assets held by regional investors.
- a. Financial Integration and Capital Flow Volatility in Emerging Asia Issues and Policies
- 1) Financial integration and contagion are two sides of the same coin: while a virtuous cycle in good times, greater integration reduces defense against negative shocks.
 - 2) Emerging Asia's equity markets—particularly those tightly linked to global markets—are vulnerable to abrupt swings in global investor sentiment, potentially increasing capital flow volatility.
 - 3) The region's local currency bond markets remain largely fragmented; while protected from external shocks, fragmentation hinders market liquidity.
 - 4) Emerging Asia should continue strengthening macroeconomic management and macro-prudential supervision to attract stable and long-term capital flows.
 - 5) The 1997/98 and 2008/09 crises highlight the region's vulnerability to financial instability arising from rapid financial globalization, large and

unfettered short-term capital flows, exchange rate volatility, and the lack of crisis control mechanisms.

- 6) Asia must assume greater responsibility in reforming the global financial architecture by actively participating at all levels of governance.

As stated in the article “Asian capital markets monitor”, Global economic growth —slows emerging Asia’s strong growth moderates on monetary tightening while advanced economies continue to struggle with debt (Azis, 2011).

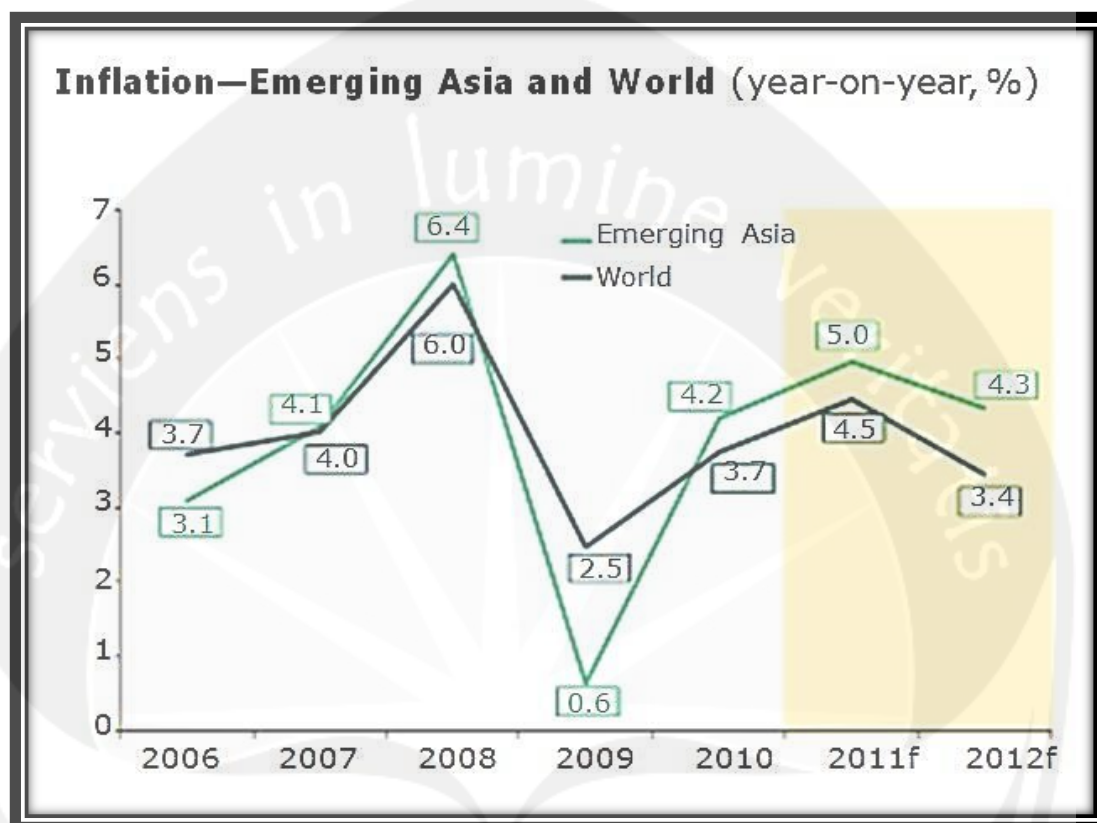


Notes: Emerging Asia includes People’s Republic of China; Hong Kong, China; India; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; Taipei, China; Thailand; and Viet Nam. 2011 and 2012 figures are estimates. Legend: f = forecast, GDP = gross domestic product.

Figure 3: GDP growth – emerging Asian and world (Azis, 2011)

In Figure 3 it shows the GDP growth of emerging countries related to world. From 2006 till 2012 GDP of emerging Asia has grown significantly much higher

than rest of the world Inflation continues to rise on broadening global recovery;
core inflation accelerates in emerging Asia on closing output gaps

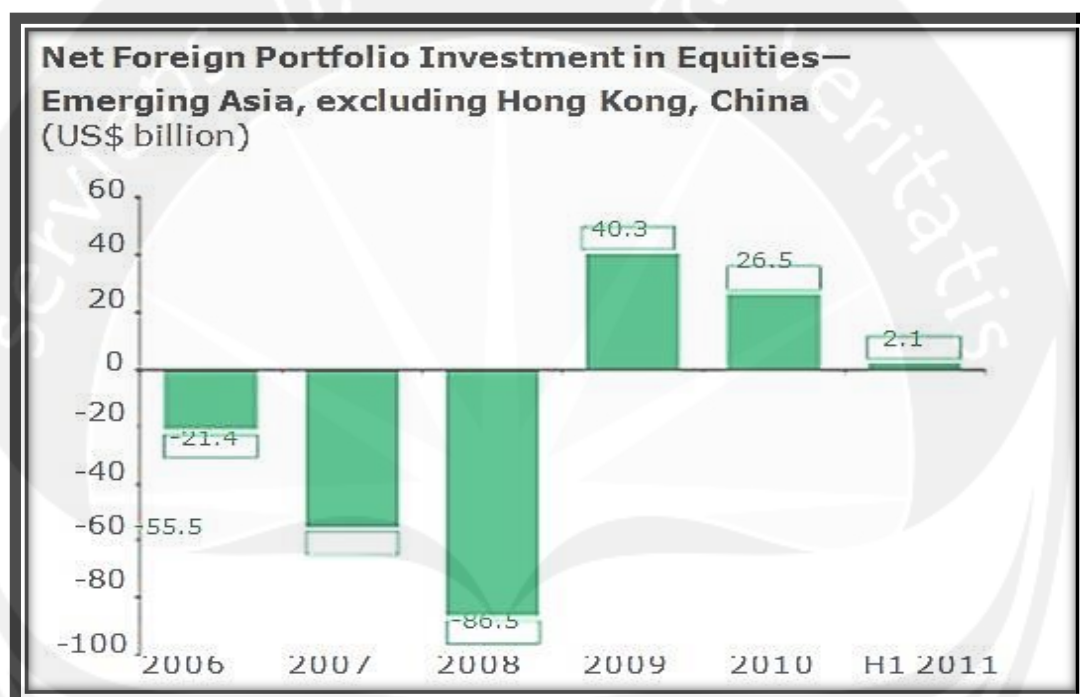


Notes: Emerging Asia includes People's Republic of China; Hong Kong, China; India; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; Taipei, China; Thailand; and Viet Nam. 2011 and 2012 figures are estimates. Legend: f = forecast.

Figure 4: Inflation – emerging Asian and world (Azis, 2011).

Figure 4 shows the change of inflation rate among Asian emerging market and the rest of the world. As we can see Asian emerging countries inflation rate is more volatility then the world. In 2009 inflation rate of Asian countries has dropped till 0.6 when the rest of the world's inflation rate was 2.5. High inflation rates suggest that there is a general increase in prices of goods and services from

previous period(s) to now. High prices means that there would be less consumption which would lead to less GDP which would lead to less investment which might eventually end up leaving the economy in a recession which would give rise to unemployment. Net foreign investment in emerging Asian equities has moderated since its rapid return toward the end of 2009



Notes: Emerging Asia includes India; Indonesia; Republic of Korea; Malaysia; Philippines; Taipei, China; Thailand; and Viet Nam. Data unavailable for the People's Republic of China and Singapore. Legend: H1 = first half.

Figure 5: Foreign portfolio investment in equities – emerging countries
(Azis, 2011).

6. International Investment portfolio

International investment portfolio is a grouping of investment assets that focuses on securities from foreign markets rather than domestic ones. An international portfolio is designed to give the investor exposure to growth in emerging and international markets and provide diversification.

There are several potential benefits that make it attractive for investors to internationalize their portfolios. These perceived advantages are the driving force and motivation to engage in international portfolio investment (IPI) and will, therefore, be dealt with first, i.e. before looking at the risks and constraints. Specifically, the attractions of IPI are based on (a) the participation in the growth of other (foreign) markets, (b) hedging of the investor's consumption basket, (c) diversification effects and, possibly, (d) abnormal returns due to market segmentation. All else being equal, an investor will benefit from having a greater proportion of wealth invested in foreign securities (1) the higher their expected return, (2) the lower the variation of their returns, (3) the lower the correlation of returns of foreign securities with the investor's home market, and possibly, (4) the greater the share of imported goods and services in her consumption (Bartram & Dufey, 2001)

While there appears overall significant empirical evidence in support of benefits from international portfolio diversification, the interpretation of the empirical results is generally plagued by a set of crucial assumptions. In particular, it has to be considered to what extent risk aversion among investors in various countries is different, to what degree results based on past correlations are informative about the future, whether country indices reflect securities that are actually accessible to foreign investors, and what the effect of inflation (real interest rate differences) on the results would be.

7. Portfolio selection

Modern portfolio theory is a mathematical formulation of the concept of diversification in investing, with the aim of selecting a collection of investment assets that has collectively lower risk than any individual asset. This is possible, intuitively speaking, because different types of assets often change in value in opposite ways.

The basic portfolio selection such as diversification will help investors analyze and determine that they should hold portfolios of financial assets in order to reduce their risk while investing. One of the most popular methods used to evaluate portfolio performance is “Markowitz’s theory on portfolio”. (Jones, 2010:191)

a. Markowitz portfolio theory

The author of the modern portfolio theory is Harry Markowitz who introduced the analysis of the portfolios of investments in his article “Portfolio Selection” published in the Journal of Finance in 1952. The new approach presented in this article included portfolio formation by considering the expected rate of return and risk of individual stocks and, crucially, their interrelationship as measured by correlation. Prior to this investors would examine investments individually, build up portfolios of attractive stocks, and not consider how they related to each other. Markowitz showed how it might be possible to better of these simplistic portfolios by taking into account the correlation between the returns on these stocks. (Levišauskait, 2010: 51)

To select the optimal portfolio of financial assets using the Markowitz analysis, investor should: (Jones, 2010:191)

1) Identify optimal risk-return combinations available from the set of risky assets being considered by using the Markowitz efficient frontier analysis.

This stem uses the expected returns, variances, and covariance for the set of securities.

2) Select the optimal portfolio from among those in the efficient set based on an investor's preference.

1) Efficient portfolio

Markowitz was the first to drive the concept of an efficient portfolio. Investors can identify efficient portfolio by specifying an expected portfolio return and minimizing the portfolio risk at this level of return. (Jones, 2010:192)

The method that should be used in selecting the most desirable portfolio involves the use of indifference curves. Indifference curves represent an investor's preferences for risk and return. These curves should be drawn, putting the investment return on the vertical axis and the risk on the horizontal axis. Following Markowitz approach,

The exemplified map of indifference curves for the individual risk) adverse investor is presented in Figure.6. Each indifference curve here (I1, I2, I3) represents the most desirable investment or investment portfolio for an individual investor. That means, that any of investments (or portfolios) plotted on the

indifference curves (A, B, C or D) are equally desirable to the investor.

(Levišauskait, 2010:52)

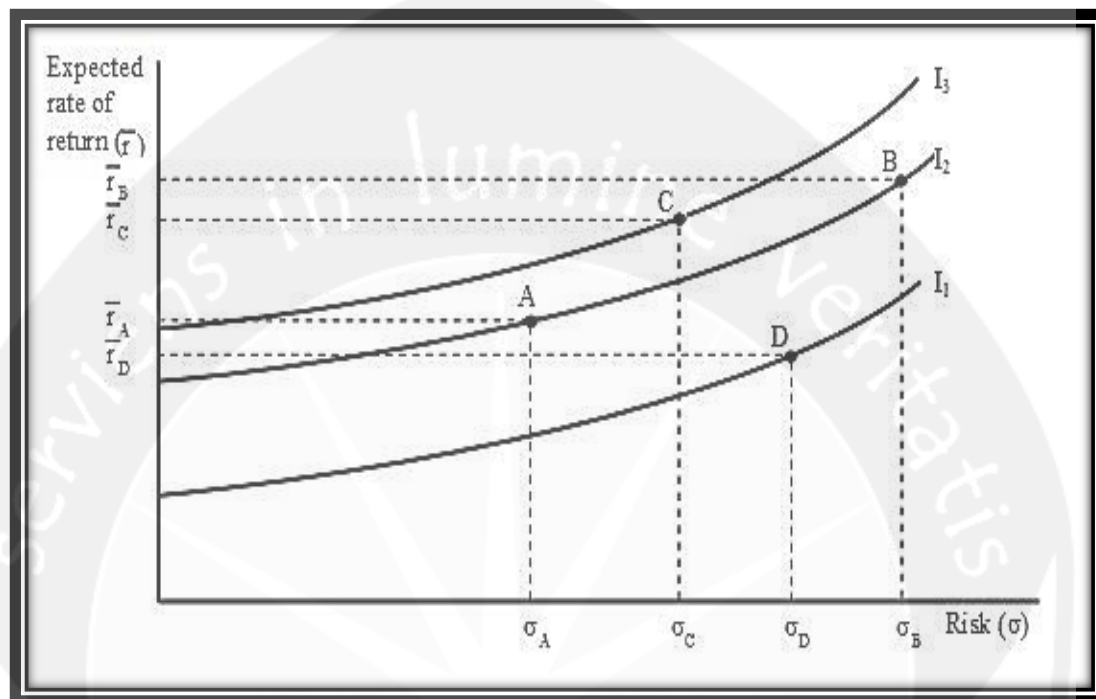


Figure 6: Map of Indifference Curves for a Risk-Averse Investor
(Levišauskait, 2010:52)

a) Features of indifference curves

- (1) All portfolios that lie on a given indifference curve are equally desirable to the investor. An implication of this feature: indifference curves cannot intersect. An investor has an infinite number of indifference curves. Every investor can represent several indifference curves (for different investment tools).
- (2) Every investor has a map of the indifference curves representing his or her preferences for expected returns and risk (standard deviations) for each potential portfolio.

Two important fundamental assumptions than examining indifference curves and applying them to Markowitz portfolio theory: (Levišauskait, 2010:53)

- (a) The investors are assumed to prefer higher levels of return to lower levels of return, because the higher levels of return allow the investor to spend more on consumption at the end of the investment period. Thus, given two portfolios with the same standard deviation, the investor will choose the portfolio with the higher expected return. This is called an assumption of non-satiation.
- (b) Investors are risk averse. It means that the investor when given the choice will choose the investment or investment portfolio with the smaller risk. This is called assumption of risk aversion.

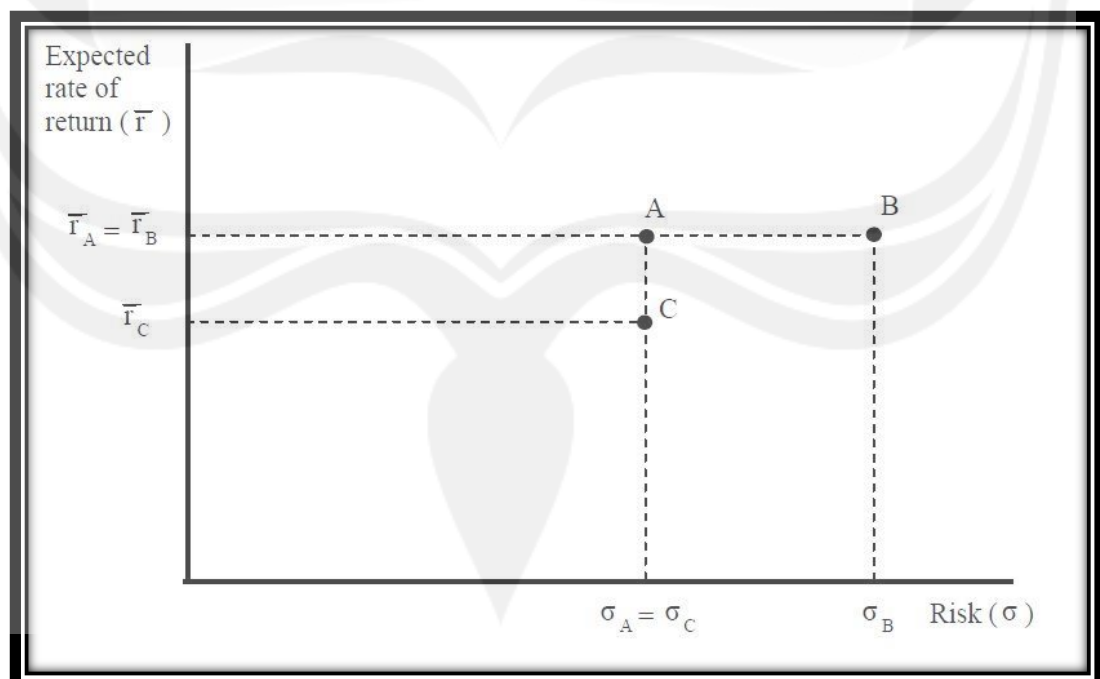


Figure 7: Portfolio choice using the assumptions of non-satiation and risk aversion

(Levišauskait, 2010:53)

Figure 7. Gives an example how the investor chooses between 3 investments – A, B and C. Following the assumption of non-satiation, investor will choose which have the higher level of expected return than C. Following the assumption of risk aversion investor will choose A, despite of the same level of expected returns for investment A and B, because the risk (standard deviation) for investment A is lower than for investment B. In this choice the investor follows so called “furthest northwest” rule.

b) Efficient set of portfolio

Efficient set of portfolios involves the portfolios that the investor will find optimal ones. These portfolios are lying on the “northwest boundary” of the feasible set and are called an efficient frontier.

Feasible set is opportunity set, from which the efficient set of portfolio can be identified. The feasibility set represents all portfolios that could be formed from the number of securities and lie either on or within the boundary of the feasible set.

The efficient frontier describes the relationship between the return that can be expected from a portfolio and the riskiness (volatility) of the portfolio. It can be drawn as a curve on a graph of risk against expected return of a portfolio. The efficient frontier gives the best return that can be expected for a given level of risk or the lowest level of risk needed to achieve a given expected rate of return. The efficient frontier is extremely important to the theory of portfolio construction and valuation. (Ravipati, 2012:5)

