

# Chapter 1

## 1.1 Introduction

### Investments and Investors

An investment can be defined as:

*“.....(a) current commitment of resources for a period of time in the expectation of receiving future resources that will compensate the investor for (1) the time the resources are committed, (2) the expected rate of inflation, and (3) the risk – the uncertainty of the future payments.” (Reilly & Norton, 2006)*

An investor may, for example, buy shares on a stock market in the expectation of receiving an income stream from dividend payments, and a lump sum of cash when the shares are sold at a higher price and a capital gain is achieved.<sup>1</sup>

There are various reasons for investing. Many individuals invest whilst they are working in order to provide a retirement fund for themselves and their family when they eventually stop working. Others may invest in order to save for a future payment, such as a child's education, or a down payment on a new car or house. Organisations, too, have many objectives when they invest. Pension funds, for example, invest so that they are able to make payments to retired workers, whilst life insurance companies invest policy-holders' premiums so that they are able to pay out when policies are cashed out or when benefits need to be paid.

In general, investments are made with the objective of satisfying three fundamental needs: providing future income, preserving capital (or the original value) of the invested funds, and capital appreciation (growth in value of the original invested amount).

In financial theory, several assumptions are made regarding investors. It is assumed that they are rational, profit-maximising, and risk-averse. Investors seek to minimise risk and maximise return. It is

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<sup>1</sup> There are, of course, other types of investments in addition to shares. Examples include certificates of deposit, money market instruments, bonds, derivatives, and alternative investments, such as property, commodities and even fine wines and art. This study, however, intends only to focus on equity (shares).

generally the case that there is a positive relationship between expected return and expected risk. The higher the expected risk (the uncertainty of the future outcome) involved in an investment, then the higher the expected return.

### Emerging Markets

Emerging markets are generally viewed as developing countries, which are in the process of rapid economic growth and industrialisation. They are considered to be the fastest-growing economies in the world. There is no single universal definition of what constitutes an emerging market. The market index maker Morgan Stanley Capital International (MSCI), however, currently classifies 21 countries as emerging markets, including them in its Emerging Market index. Amongst these 21 countries are Brazil, China, Egypt, India, Indonesia, Malaysia, Mexico, the Philippines, Russia, South Africa, South Korea, Thailand and Turkey (MSCI Barra, 2011). MSCI Barra classifies Singapore as a developed market, and Vietnam as a *frontier market*, including it in its Frontier Market index.

The financial markets in emerging economies have traditionally been considered as being fairly small, illiquid and volatile. Emerging markets have also been viewed as typically exhibiting low levels of corporate governance and high levels of political risk.<sup>2</sup>

Investing in stocks in emerging markets (and frontier markets) is viewed as a high risk and high expected return decision. Emerging market stocks are risky in the sense that these markets are volatile, and the annual returns that investors could potentially receive may vary considerably. For example, during the period from May 1987 to May 2007, using the MSCI indexes for world developed markets and emerging markets, volatility, as measured by annualised standard deviation of returns was 13.8% for the world index and 22.6% for the emerging markets index (Solnik & McLeavey, 2009).

In spite of the risk involved, emerging market stocks have the potential to deliver exceptionally high returns. This is due largely to the higher rates of economic growth in these countries when compared to developed economies. During the 20-year period from May 1987 to May 2007, geometric mean returns in US dollars were 8.9% per year for developed markets compared with 14.5% per year for emerging markets (Solnik & McLeavey, 2009).

In the last few years, emerging market stocks have become an asset class in their own right. Fidelity Investments, for example, recommend that up to 20% of an investment portfolio should be invested in 'foreign equities' (Reilly & Norton, 2006). A 'balanced' strategy would require that 5% be invested in

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<sup>2</sup> It should be noted, however, that, especially in the wake of the 2008 global economic crisis, many critics are challenging these traditional distinctions between emerging and developed markets (Dimitrijevic, 2009)

foreign equities, whilst the ‘most aggressive’ growth strategy suggests 20%. Kurt Umbarger, an emerging markets specialist at T. Rowe Price, recommends that retail investors put up to 10% of their portfolio into developing markets (Business Week, 2006).

GDP growth rates in Asia, and especially in India and China, are forecasted to be considerably greater than those in developed countries over the next few years (at least for the next six years according to IMF forecasts, and, in all probability, much longer). Many even believe that the recent 2008 global economic downturn could mark a significant shift in global economic power from West to East. Thus, with this rapid economic growth in Asia, powered by the highly populous nations of India and China, it is not surprising that investors increasingly want to invest in Asia. Mark Dampier, head of research at Hargreaves Lansdown, a UK independent financial services and asset management company, has commented:

*“I think people should have upwards of 20% in emerging markets now.... There is an industrial revolution going on, an urbanisation that I can’t see being derailed. The West is going to decline in importance in the next 50 years.” (Johnson, 2009)*

The table below highlights GDP growth rates for various countries for the past 4 years, and forecasts for the next 6 years:

*Table 1: GDP Growth Rates, Historical and Forecasted for G7 and Asian Countries, 2007-2016*

<u>Country</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
<b>G7 Countries</b>										
Canada	2.200	0.518	-2.462	3.071	2.752	2.625	2.494	2.149	2.000	1.937
France	2.323	0.091	-2.546	1.486	1.647	1.784	2.000	2.066	2.066	2.065
Germany	2.784	0.703	-4.669	3.504	2.541	2.092	1.882	1.772	1.419	1.340
Italy	1.482	-1.323	-5.217	1.296	1.052	1.304	1.365	1.379	1.400	1.430
Japan	2.363	-1.165	-6.285	3.938	1.398	2.068	1.693	1.510	1.281	1.192
United Kingdom	2.685	-0.065	-4.875	1.251	1.659	2.330	2.495	2.486	2.563	2.577
United States	1.947	0.000	-2.633	2.834	2.758	2.872	2.723	2.729	2.732	2.677
<b>Newly Industrialised Asian Economies</b>										

Hong Kong	6.389	2.306	-2.668	6.812	5.407	4.193	4.216	4.216	4.274	4.322
Korea	5.106	2.298	0.196	6.110	4.460	4.183	4.167	4.045	4.041	4.050
Singapore	8.775	1.487	-0.770	14.471	5.162	4.409	4.295	4.203	4.068	4.008
Taiwan	5.983	0.730	-1.926	10.823	5.420	5.172	5.089	4.986	4.941	4.907
<u>Developing Asia</u>										
China	14.200	9.600	9.200	10.300	9.593	9.523	9.475	9.522	9.462	9.525
India	9.883	6.176	6.755	10.365	8.242	7.823	8.165	8.139	8.120	8.133
Indonesia	6.345	6.014	4.576	6.105	6.200	6.500	6.700	7.000	7.000	7.000
Malaysia	6.480	4.708	-1.714	7.156	5.500	5.200	5.100	5.100	5.000	5.000
Philippines	7.089	3.692	1.061	7.334	4.953	4.967	5.000	5.000	5.000	5.000
Thailand	5.044	2.484	-2.330	7.803	3.957	4.527	4.700	4.750	4.850	5.000
Vietnam	8.456	6.311	5.323	6.784	6.259	6.752	7.225	7.435	7.495	7.495

(IMF World Economic Outlook Database, 2011)

It is not just investors from developed countries who want to invest in Asia, but also investors from within Asia. As Asian nations become richer, it is predicted that the emerging middle classes in these countries will want increasingly sophisticated investment products. They will not, for example, be content to leave their savings in a savings account. Instead they may require the higher returns that mutual funds, for example, can offer. Also, increasingly, pension schemes will become more widespread, with larger amounts of money from pension funds being invested in local markets.

Thus, increasingly, investors, whether from developed countries or from other Asian countries, are investing in Asian emerging markets (as well as other emerging markets, such as those in South America, Africa and Eastern Europe).

An investor who wants to invest in emerging markets needs to know which markets to invest in and when. Such an investor needs to know what factors to consider when making these kinds of country-allocation investment decisions. He or she needs to be able to evaluate potential markets according to these factors.

As examples, both the Thai and the Vietnamese stock markets have, in the past, delivered excellent returns. In 2003, for example, the Thai stock market produced an annual return of 138.7% in US dollar terms (the highest in the world in that year) (Reilly & Norton, 2006). Equally, during 2006, the

Ho Chi Minh stock index rose by 142.82% in local currency terms (Bloomberg, 2011). Nevertheless, in spite of these high returns, there are a whole host of other factors that must be considered before investing heavily in these two markets. In September 2006, for example, Thailand suffered from a military coup that overthrew the government, and the country has, since that time, experienced considerable political instability (note from the table below that Thailand was the only country in the region to experience a negative stock market return in 2006). Vietnam too has had a period recently where it has been afflicted by spiralling inflation. Both of these factors have affected stock market returns in these countries, and have the potential to do so again in the future.

The table below highlights recent returns for the main Southeast Asian equity markets:

*Table 2: Stock Market Returns for the Southeast Asian Equity Markets 2001- 2011*

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Singapore Straits Times Index	-10.26	-27.73	43.12	13.42	15.06	29.58	-4.60	-41.43	57.19	15.82	-8.59
FTSE Bursa Malaysia KLCI	-1.22	-7.52	23.19	11.88	-0.25	30.12	17.14	-36.52	42.37	20.71	0.09
Thailand's SET Index	2.42	8.56	88.89	0.43	8.65	-14.24	19.91	-44.19	59.14	38.41	12.43
Indonesia's JSX Composite Index	6.12	-13.99	93.83	38.85	17.88	42.60	49.51	-49.28	95.91	30.58	15.62
Philippines PSE Composite Index (PSEi)	-19.27	-22.41	42.74	33.90	6.23	50.99	0.83	-44.12	61.81	31.43	20.64

Sources: World Federation of Exchanges and Stock Exchange of Thailand website

This study deals with the main Southeast Asian equity markets, as listed above. It considers both institutional investors (financial institutions, such as insurance companies and pension and mutual fund companies) and retail investors (individual investors, or members of the general public). The aim is to discover what the most influential factors are that affect investors' country-allocation decisions. The means of evaluation involves the development of a multiple regression model.

## 1.2 Statement of the Problem

The research problem is:

“Identify the factors affecting investors’ asset allocation decisions in the Southeast Asian equity markets.”

## 1.3 Objectives of the Study

The objectives of the study are:

- To determine factors affecting investors’ asset allocation decisions in the Southeast Asian equity markets. This will be achieved by means of a multiple regression equation that will include only the explanatory variables that exhibit statistically significant relationships with the dependent variable. The dependent variable will measure how attractive, or appealing, the Southeast Asian equity markets are to investors.<sup>3</sup> This model should thus provide *empirical evidence* that certain factors do affect investors’ asset allocation decisions.
- To make policy recommendations for investors wishing to invest in the Southeast Asian equity markets.

## 1.4 Usefulness of the study

### Significance of the Study

Factors that highlight the perceived research gap, or the perceived need for research in this area are:

- the lack of recent, or up-to-date, research on the Southeast Asian equity markets;
- the lack of research focusing on the ASEAN (Association of Southeast Asian Nations) stock markets as a bloc (particularly in view of current plans for further ASEAN integration; for the development of a joint electronic trading system; and the enormous economic potential of the ASEAN countries, which has probably not yet received as much attention from investors as it could do);

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<sup>3</sup> As will be explained later, the stock market index will be used as the dependent variable and as a proxy for the appeal, or the ‘attractiveness’ of the relevant stock market to investors.

- and, from the perspective of retail investors, the lack of a comprehensive educational guide focusing on the many factors that should be considered when deciding which countries to invest in.

Firstly, there is a lack of recent research on the Southeast Asian equity markets. Freeman and Bartels did carry out research into the Southeast Asian equity markets following the 1997 Asian economic crisis (Freeman & Bartels, 2000). Their research included a global survey of foreign fund managers active in the Southeast Asian equity markets. Nonetheless, this work is now approximately eleven years old. The Southeast Asian nations are now facing much different situations than they were eleven years ago. Eleven years ago they were emerging from the Asian financial crisis, and were facing considerable economic challenges. They are now emerging from the global financial crisis, which began in 2008, in a comparatively much stronger position. They are also in a position where developed nations are still weak and only very slowly recovering from recession, whilst China in particular and, to a lesser extent, India are now emerging as significant world economic powers.

Other research papers that have focused on Southeast Asian stock markets include those written by Maysami et al who studied the Singaporean stock market in 2000 (Maysami & Koh, 2000), in 2002 (Maysami & Sim, 2002) and in 2004 (Maysami, Howe, & Hamzah, 2004) and Malaysia and Thailand in 2001 (Maysami & Sim, 2001); Islam et al who studied the Malaysian stock market in 2003 (Islam M. , 2003) and the Thai stock market in 2004 (Islam, Watanapalachaikul, & Billington, 2004); Chong et al who studied the Malaysian stock market in 2003 (Chong & Goh); and Yip who studied the Singaporean stock market in 1996 (Yip, 1996). Obviously, this is not an exhaustive list, but it does show that, generally, the most recent studies were carried out in 2004 or before then. This is almost eight years ago now.

Secondly, as the above list of research papers shows, no research has been carried out focusing on the Southeast Asian (or ASEAN) nations as a bloc. This is relevant because ASEAN<sup>4</sup>, which encompass approximately 600 million people have plans to establish an EU-style ASEAN Economic Community (AEC) by 2015, which, amongst other goals, would include the creation of a Free Trade Area among member states. As already illustrated in the Introduction, the economic growth rates of the countries which make up ASEAN are comparatively high, particularly in relation to those of developed Western nations. Not only does ASEAN represent a huge consumer market, and a formidable trading bloc, but it also has access to considerable natural resources and a vast pool of low-cost labour (which is all the more relevant as labour costs have risen rapidly in China recently). Various countries and trading

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<sup>4</sup> The Association of Southeast Asian Nations (ASEAN) comprises the nations of Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam. See the ASEAN website for more details: <http://www.aseansec.org/index2008.html>

blocs, such as China, Japan, South Korea (known as ASEAN Plus Three) and the EU have sought to establish trading and other agreements with ASEAN. Also relevant here are recent changes in Myanmar, which in 2012 released hundreds of political prisoners, eased media restrictions and welcomed the previously imprisoned Nobel laureate Aung San Suu Kyi back into politics. On 1<sup>st</sup> April 2012 Myanmar held historic by-elections in which Suu Kyi won a seat in Parliament (winning 44 of the 45 seats available to her party). In response the EU has recently lifted economic sanctions against Myanmar. Many are hoping that this is among the first steps towards fully-fledged democracy and the end of fifty years of military rule in the impoverished nation. Although Myanmar still has a long way to go, and many do doubt how genuine recent reforms are, the opening up of Myanmar would certainly have a significant positive impact for the ASEAN economy.

It should also be mentioned that now is a relevant time to evaluate the Southeast Asian equity markets in view of the plans these nations have to create a joint trading system. The stock exchanges of Malaysia, Singapore and Thailand were aiming, by the second half of 2011, to link via an electronic trading system that would give investors access to all three markets simultaneously. This was viewed as a step towards the creation of a single securities market, which would give investors access to a greater range of stocks, and improve market liquidity. It was also envisioned that the Philippine stock exchange would join the alliance in the first half of 2012. (CBS News.com, 2010) <sup>5</sup> There have been delays, however, due to technology issues, and the ASEAN trading link is now expected to be launched in June 2012. Initially it will comprise only two exchanges: Singapore's SGX and Bursa Malaysia. The Stock Exchange of Thailand is expected to join in August 2012, and it is envisioned that the Indonesia Stock Exchange in Jakarta, the Philippine exchange and Vietnam's Ho Chi Minh Stock Exchange will join at some stage in the future. As Magnus Böcker, the SGX chief executive, has pointed out:

*"The collaborative decision of the member exchanges to roll out the ASEAN Trading Link will mark our first key milestone towards breaking down the barriers to cross border trade in ASEAN."*

He said the three bourses that will participate in the first stage of the link represented about two-thirds of the \$2.1trillion market capitalisation of the seven members of the ASEAN exchanges (Grant, 2012). The link will not create a single ASEAN stock exchange, but it will electronically connect the exchanges to facilitate cross-border order routing and trading, and allow investors and members to trade in multiple ASEAN markets from their own country or from outside Southeast Asia. One of the aims is to develop an ASEAN asset class. This joint trading system could raise the profile of the

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<sup>5</sup> It is also noteworthy that Laos officially opened their stock exchange on 10<sup>th</sup> October 2010, known as the Lao Securities Exchange (LSX). Two stocks are listed: Banque Pour le Commerce Exterieur Public, and EDL Generation Public Company. Cambodia, too, have plans to operate a stock exchange in the near future.



Southeast Asian equity markets, potentially leading to a greater demand for a thorough assessment of these markets.

Thus, it can be seen that now is an opportune time to carry out research focused on the Southeast Asian stock markets as a group. Such ASEAN-centric stock market research is currently lacking<sup>6</sup>.

Finally and somewhat unrelated to the above points, there is a need, particularly from the perspective of retail investors, for a comprehensive educational guide focusing on the many factors that should be considered when deciding which countries to invest in. Many studies and textbooks do discuss *some* of the factors to be considered when making country-allocation decisions. Many also explain the top-down investment process, which focuses initially on economic factors, as a means to decide which countries to invest in. Nevertheless, the literature review has not yielded one source which gives a *comprehensive list* of the factors to be considered when making country-allocation decisions. Such a list would undoubtedly be extremely valuable to a large number of retail investors, who, for example, would want to know whether or not they should invest in Thailand, or China, or Brazil, or Singapore, or the UK, or the US, and, if so, how much capital should they commit to each of these markets, and for how long. A comprehensive guide teaching retail investors how to assess different countries' stock markets would certainly be of great value to a significant number of retail investors, who may lack investment experience and knowledge.

#### Contribution of the Study

This study will be of benefit to portfolio investors who either are, or who plan to, or are interested in, investing in the Southeast Asian equity markets (not to mention other emerging country equity markets). It should assist them in their decision-making and enable them to better evaluate different national equity markets.

The study will be of greater benefit to retail investors, who may lack the knowledge, time, experience and resources available to more sophisticated institutional investors.

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<sup>6</sup> It should, however, be noted that recently the ASEAN stock exchanges have created a website focusing on the Southeast Asian stock exchanges: see <http://www.aseanexchanges.org/>. ASEAN Exchanges, launched on 8<sup>th</sup> April 2011, is a collaboration of 7 ASEAN stock exchanges (the 5 focused on in this study, in addition to the Ho Chi Min City Stock Exchange and the Hanoi Stock Exchange), with the aim of promoting the growth of the ASEAN capital market. One of the main aims is to increase liquidity to member exchanges, through "...driving cross-border collaboration, streamlining access to ASEAN, creating ASEAN centric products and implementing targeted promotional initiatives."

It should also benefit other researchers in this field. The findings of this research, using a panel data approach, and the Recommendations section in particular should give guidance with regards to the direction of future research on these markets.

Other parties who could benefit include the Southeast Asian nations studied and their relevant stock exchanges. In their efforts to attract foreign investment, this study may provide some guidance. The Asian Development Bank (ADB), and others, are aware of many of the shortcomings of the Southeast Asian equity markets and are taking steps to address these issues.<sup>7</sup> Thus, a study assessing these equity markets could well support the ADB's efforts to overcome these challenges.

Finally, students of Economics, Finance and Business, and particularly those with an interest in the Southeast Asian equity markets, should benefit from the study.

### 1.5 Scope of the Study

This study only deals with the following Southeast Asian equity markets:

- ✦ Indonesia Stock Exchange (IDX), Jakarta, Indonesia
- ✦ Bursa Malaysia (MYX), Kuala Lumpur, Malaysia
- ✦ Philippine Stock Exchange (PSE), Manila, Philippines
- ✦ Singapore Exchange (SGX), Singapore
- ✦ Stock Exchange of Thailand (SET), Bangkok, Thailand<sup>8</sup>

These markets have been chosen not only because they are the largest markets in terms of market capitalisation in Southeast Asia, but also because these are the only stock markets for which the necessary data is available. For example, Vietnam has two large stock markets, the Ho Chi Minh City Stock Exchange and the Hanoi Stock Exchange. The necessary economic (and other) data for Vietnam is not, however, readily available.

The five stock markets mentioned therefore constitute the population of the study. The time frame of the study was from January 2000 to September 2011.

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<sup>7</sup> The Asian Development Bank has recognised the need for greater integration of the Southeast Asian stock exchanges. It recognises that they lag behind more developed regions' stock markets in terms of depth and quality, are comparatively illiquid, and have high trading costs due to small trading volumes. In April 2008, objectives were put in place, to be accomplished by 2015, with one of the main aims being to overcome existing regulatory and other impediments to cross-border transactions. (ADB, 2008)

<sup>8</sup> There are other stock exchanges in these countries. Thailand, for example, has the Market for Alternative Investment (MAI).

Although different types of securities are traded on stock exchanges, the study effectively only deals with common equity securities, since it evaluates the impact of certain variables on stock market indices, which are composed only of common equity securities.

Also, since stock market indices are being used to measure how attractive, or appealing, the Southeast Asian equity markets are to investors, the study, by definition, deals with the decisions of both institutional and retail investors.

Whilst the study attempts to identify important factors influencing investors' decision-making, it is by no means an attempt to identify *all* factors influencing these investors. Specific national markets may possess characteristics unique only to themselves, for example, which may well have an influence on foreign investors' decision-making. Emotional and psychological factors, for example, that affect investor sentiment may influence their decision-making. The comparative lack of foreign investor interest in the Malaysian equity market following the Asian financial crisis at the end of the 1990's, for example, has been attributed by some to be due to negative investor sentiment that still persists following the imposition of strict capital controls at the time of that crisis (in other words, foreign investors still have a negative *perception* about investing in Malaysia, now over thirteen years after the Asian financial crisis). (Yap & Lee, 2010)<sup>9</sup> Some factors which may well have a bearing on investors' decision-making may therefore be omitted.

Finally, with regards to the time frame of the study, monthly data observations were used, covering the period from January 2000 to September 2011.

## 1.6 Limitations of the Study

As mentioned above availability of data is a major factor that imposes limitations on this study. It not only limits which stock markets can be researched (as noted, it was not possible to include Vietnam due to the lack of availability of some of the most basic economic data), but it also limits which variables can be assessed. As an example, the multiple regression equation uses data that can be measured quantitatively and that are available in a monthly frequency. For example, although other researchers found industrial production to be a statistically significant variable, monthly data was not available for this variable for all five Southeast Asian equity markets.

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<sup>9</sup> It is true that there are means of measuring sentiment. A survey of investors could, for example, be used to assess investor sentiment. Nevertheless, identifying investors and surveying them would be a difficult and time-consuming task, beyond the scope of this study.

Further specific problems relating to lack of availability of data are, firstly, that it has been necessary to use different short-term interest rates for different countries. For example, for Singapore, the Singaporean interbank 3-month interest rate has been used, whereas, for Thailand, the Thai commercial banks' 3-month time deposit minimum rate has been used. This is because it has not been possible to easily obtain monthly data for one short-term interest rate for all five countries over the entire sample period. Secondly, for all countries, with the exception of Indonesia, the Consumer Price Index (CPI) for the *whole country* has been used. With regards to Indonesia, however, the only measure of CPI that was available in monthly frequency over the entire sample period was a measure of CPI that represents *sixty-six cities* in Indonesia.

Another significant limitation of this study, again related to availability of information refers to the use of stock market indices as the dependent variable in the multiple regression model. A stock market index is not an ideal measure of how appealing, or attractive, stock markets are to investors. It is very much a proxy. An ideal measure would have been net portfolio fund inflows, which measure in monetary terms, how much money investors are investing in different equity markets. The problem with using this measure, however, is the lack of availability of information. Data is only available on an annual basis, which is too infrequent for the purposes of this study.

Also related to the use of stock market indices, one of the conclusions of this research is that the findings lend support to the Efficient Market Hypothesis (EMH). It would, however, be expected that the companies with larger market capitalisations (which would have the largest weightings in the indices), and which therefore attract institutional investor interest, are generally priced correctly. The stocks which would be expected to be mispriced are more likely to be the smaller 'neglected' stocks which are either not large enough to make it into the index, or have extremely small weightings in the index. In other words, had a different measure been used to measure the appeal or 'attractiveness' of the Southeast Asian stock markets, then the findings may not have supported the EMH. To elaborate, the Southeast Asian stock markets may be extremely attractive to retail investors on account of the proliferation of under-valued, small-, or micro-cap stocks. Nevertheless, since such stocks would not be prominent in the stock market indices, which form the dependent variable in this study, the findings of the multiple regression modelling would not recognise this.<sup>10</sup>

A further significant limitation relates to the need to use multiple regression modelling and the constraints that this imposes. To explain, an important aim of this study was to provide *empirical*

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<sup>10</sup> Equally, had net portfolio fund inflows been used as the dependent variable, the same problem would have arisen since institutional investors, although considerably fewer in number than retail investors, have more money to invest.

*evidence*, using statistical techniques, of relationships between explanatory variables and the dependent variable, the stock market index. Multiple regression modelling was chosen as a means to achieve this aim. Unfortunately, many factors do have an observable effect on stock market indices, but they are not, however, measurable in such a way that they can be included in a multiple regression model. An example would be the March 2011 tsunami in Japan which caused stock markets globally to dip. Also, as a further example, many organisations do measure political risk, which undoubtedly affects stock markets. Nevertheless, such information is frequently not free, and/or it does not lend itself to inclusion in a multiple regression model. Thus, another significant limitation of this study is that only a few variables can be assessed (by including them in the multiple regression model), due to the need to provide empirical evidence and the constraints that this imposes on the tools that can be used.

It should be said that there are other means of determining which factors affect investors' decision-making and obtaining the necessary empirical evidence to support the findings. For example, a survey of investors may be an appropriate means. Surveying investors, however, is not an easy task. Firstly, institutional investors, although they can be located, are generally not responsive to surveys.<sup>11</sup> Secondly, retail investors are not easily identified and located.

Finally, as is elaborated in other parts of this research paper, a panel data approach is used when developing the multiple regression model. One of the reasons for this approach is the fact that it is often deemed to be the correct approach to use when the data involved have both a time-series and cross-sectional dimension. This panel data approach involves developing an equation that considers all five Southeast Asian equity markets together, and using dummy variables to cater for the differences in the markets. This approach therefore looks for explanatory variables that have statistically significant relationships with all five stock market indices simultaneously. One of the main weaknesses of this approach is that it fails to take into consideration the idiosyncrasies of each of the five markets. In other words, different markets respond differently to certain variables. Thus, treating each market separately, and developing equations for each individual market may have yielded more country-specific results.

## 1.7 Definition of Terms

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<sup>11</sup> Similar research carried out approximately 11-12 years ago, using a mailed questionnaire, was sent to 305 institutional portfolio investors located in Hong Kong, Singapore, the UK and the US, and achieved a response rate of only 10.2%, or 31 responses. (Freeman & Bartels, Portfolio Investment in Southeast Asia's Stock Markets: A Survey of Institutional Investors' Current Perceptions and Practices, 2000)

**Analyst** A financial professional who has expertise in evaluating investments and puts together "buy", "sell" and "hold" recommendations for securities. Also known as a "financial analyst" or a "security analyst".

**Corporate governance** The relationship between all the stakeholders in a company. This includes the shareholders, directors, and management of a company, as defined by the corporate charter, bylaws, formal policy and rule of law.

**Disclosure** The act of releasing all relevant information pertaining to a company that may influence an investment decision. For example, in order to be listed on major U.S. stock exchanges, companies must follow all of the Securities and Exchange Commission's disclosure requirements and regulations.

**Diversification** A risk management technique that mixes a wide variety of investments within a portfolio. The rationale behind this technique contends that a portfolio of different kinds of investments will, on average, yield higher returns and pose a lower risk than any individual investment found within the portfolio. Diversification strives to smooth out unsystematic risk events in a portfolio so that the positive performance of some investments will neutralise the negative performance of others. Therefore, the benefits of diversification will hold only if the securities in the portfolio are not perfectly correlated.

**Emerging market economy** A nation's economy that is progressing towards becoming advanced, as shown by some liquidity in local debt and equity markets and the existence of some form of market exchange and regulatory body. Emerging markets generally do not have the level of market efficiency and strict standards in accounting and securities regulation to be on par with advanced economies (such as the United States, Europe and Japan), but emerging markets will typically have a physical financial infrastructure including banks, a stock exchange and a unified currency.

**Equity** 1. A stock or any other security representing an ownership interest. 2. On a company's balance sheet, the amount of the funds contributed by the owners (the stockholders) plus the retained earnings (or losses). Also referred to as "shareholders' equity". 3. In terms of investment strategies, equity (stocks) is one of the principal asset classes. The other two are fixed-income (bonds) and cash/cash-equivalents. These are used in asset allocation planning to structure a desired risk and return profile for an investor's portfolio.

**Equity market** The market in which shares are issued and traded, either through exchanges or over-the-counter markets. Also known as the stock market, it is one of the most vital areas of a market economy because it gives companies access to capital and investors a slice of ownership in a company with the potential to realise gains based on its future performance.

**Exchange Traded Funds (ETF)** A security that tracks an index, a commodity or a basket of assets like an index fund, but trades like a stock on an exchange. ETFs experience price changes throughout the day as they are bought and sold.

**Fiscal policy** Government revenue and expenditure policies that influence macroeconomic conditions. These policies affect tax rates, interest rates and government spending, in an effort to control the economy.

**Frontier markets** Less advanced capital markets from the developing world. Frontier markets are countries with investable stock markets that are less established than those in the emerging markets. They are also known as "pre-emerging markets". The frontier, or pre-emerging, equity markets are pursued by investors seeking potentially high returns who are able to accept the higher risks these type of markets would be exposed to. Some of the risks investors face in these frontier markets are political instability, poor liquidity, inadequate regulation, substandard financial reporting and large currency fluctuations. In addition, many markets are overly dependent on volatile commodities. Frontier market investments can have a low correlation to developed markets and thus can provide additional diversification to an equity portfolio.

**Fundamentals** The qualitative and quantitative information that contributes to the economic well-being and the subsequent financial valuation of a company, security or currency. Analysts and investors analyse these fundamentals to develop an estimate as to whether the underlying asset is considered a worthwhile investment. For businesses, information such as revenue, earnings, assets, liabilities and growth are considered some of the fundamentals.

**Fund manager** The person(s) responsible for implementing a fund's investing strategy and managing its portfolio trading activities. A fund can be managed by one person, by two people as co-managers and by a team of three or more people. Fund managers are paid a fee for their work, which is a percentage of the fund's average assets under management. Also known as an "investment manager".

**Futures** A financial contract obligating the buyer to purchase an asset (or the seller to sell an asset), such as a physical commodity or a financial instrument, at a predetermined future date and price. Futures contracts detail the quality and quantity of the underlying asset; they are standardised to facilitate trading on a futures exchange. Some futures contracts may call for physical delivery of the asset, while others are settled in cash. The futures markets are characterised by the ability to use very high leverage relative to stock markets. Futures can be used either to hedge or to speculate on the price movement of the underlying asset. For example, a producer of corn could use futures to lock in a certain price and reduce risk (hedge). On the other hand, anybody could speculate on the price movement of corn by going long or short using futures.

**Hedge** Making an investment to reduce the risk of adverse price movements in an asset. Normally, a hedge consists of taking an offsetting position in a related security, such as a futures contract.

**Insider trading** The buying or selling of a security by someone who has access to material, non-public information about the security.

**Institutional investor** A non-bank person or organisation that trades securities in large enough share quantities or dollar amounts that they qualify for preferential treatment and lower commissions. Institutional investors face fewer protective regulations because it is assumed that they are more knowledgeable and better able to protect themselves. Some examples of institutional investors are pension funds and life insurance companies.

**Liquidity** 1. The degree to which an asset or security can be bought or sold in the market without affecting the asset's price. Liquidity is characterised by a high level of trading activity. Assets that can be easily bought or sold, are known as liquid assets. 2. The ability to convert an asset to cash quickly. Also known as "marketability".

**Market capitalisation** The total dollar market value of all of a company's outstanding shares. Market capitalisation is calculated by multiplying a company's shares outstanding by the current market price of one share. The investment community uses this figure to determine a company's size, as opposed to sales or total asset figures. Frequently referred to as "market cap".

**Market efficiency** The degree to which stock prices reflect all available, relevant information.

**Market index** An aggregate value produced by combining several stocks or other investment vehicles together and expressing their total values against a base value from a specific date. Market indexes are intended to represent an entire stock market and thus track the market's changes over time.

**Minority shareholder** Shareholders who have minority stakes in a company that is controlled by a majority shareholder (a majority shareholder is a person or conglomerate who owns more than 50% of the outstanding shares of a corporation).

**Monetary policy** The actions of a central bank, treasury, currency board or other regulatory committee that determine the size and rate of growth of the money supply, which in turn affects interest rates. Monetary policy is maintained through actions such as increasing the interest rate, or changing the amount of money banks need to keep in the vault (bank reserves).

**Mutual fund** An investment vehicle that is made up of a pool of funds collected from many investors for the purpose of investing in securities such as stocks, bonds, money market instruments and similar assets. Mutual funds are operated by money managers, who invest the fund's capital and attempt to



produce capital gains and income for the fund's investors. A mutual fund's portfolio is structured and maintained to match the investment objectives stated in its prospectus.

**Portfolio investment** 1. Passive investment for the sole purpose of deriving income, as opposed to participating in the management of the investee firm under a direct investment. 2. Investment in an assortment or range of securities, or other types of investment vehicles, to spread the risk of possible loss due to below expectations performance of one or a few of them.

**Retail investor** Individual investors who buy and sell securities for their personal account, and not for another company or organisation.

**Return** The gain or loss of a security in a particular period. The return consists of the income and the capital gains received on an investment. It is usually quoted as a percentage.

**Risk** The chance that an investment's actual return will be different than expected. This includes the possibility of losing some or all of the original investment. Risk is usually measured by calculating the standard deviation of the historical returns or average returns of a specific investment.

**Security** An instrument representing ownership (stocks), a debt agreement (bonds) or the rights to ownership (derivatives). A security is essentially a contract that can be assigned a value and traded. Examples of a security include a note, stock, preferred share, bond, debenture, option, future, swap, right, warrant, or virtually any other financial asset.

**Stock market** The market in which shares are issued and traded either through exchanges or over-the-counter markets. Also known as the equity market, it is one of the most vital areas of a market economy as it provides companies with access to capital and investors with a slice of ownership in the company and the potential of gains based on the company's future performance.

**Transparency** The extent to which investors have ready access to any required financial information about a company such as price levels, market depth and audited financial reports. Classically defined as when "much is known by many", transparency is one of the silent prerequisites of any free and efficient market. When transparency relates to information flow from the company to investors, it is also known as "full disclosure".

**Volatility** A statistical measure of the dispersion of returns for a given security or market index. Volatility can either be measured by using the standard deviation or variance between returns from that same security or market index. Commonly, the higher the volatility, the riskier the security.

**Volume** The number of shares or contracts traded in a security or an entire market during a given period of time. It is simply the amount of shares that trade hands from sellers to buyers as a measure

of activity. If a buyer of a stock purchases 100 shares from a seller, then the volume for that period increases by 100 shares based on that transaction.

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