

Analysis of the Asia-Pacific Region's Corporate Presence in the Americas in Context to the Congruence of their Stock Markets and Economies

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The purpose of this study is to provide a contribution to the analysis of foreign cross-listing behaviour in general, and on the state of the integration of the Asian-Pacific region's capital markets and economies in specific; while also examining the market preferences of Asian-Pacific firms in the Americas and around the world in the context of their integration within the Americas. A logistic regression model is developed which takes into consideration exchange, firm, geographic, and industrial regressors in order to determine whether firms prefer listing on which American stock exchanges. Logistic regressions are also run on foreign corporations operating in the Asia-Pacific region. Unit-root causality tests and ARCH regressions are run on the economic specific characteristics of the Asian-Pacific economies to analyse currency union and finance market integration possibilities. The Asian-Pacific governments do look to their home exchanges first for their financing needs, though the Asian-Pacific governments then look to the world capital markets before the regional capital markets, which demonstrates an operating efficiency by the Asian-Pacific governments in the capital markets. That said, the Asian-Pacific markets are arguably not as established as the European markets, and thus using the European markets may in fact be more efficient for the Asia-Pacific countries.

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Disclosure Statement

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IV. Asia-Pacific

1. Introduction

The stock markets in the Pacific are among the largest in the world, and the most diverse. This region has a very eclectic variety of regimes, which has led to an incredible amount of diversity in their equity markets. For example, the two Indian exchanges boast upwards of 6,000 plus companies combined and (\$600,000) each in market capitalisation, while the Tokyo Stock Exchange (\$3,115,803) is the second most capitalised market in the world. The Shanghai (\$1,425,354) and Shenzhen (\$353,430) exchanges are steadily growing alongside their older brother in Hong Kong (\$1,328,768), while Australia (\$683,871) and New Zealand (\$24,209) are home to several large and established exchanges as well. Korea's (\$470,797) stock exchange rivals other established markets in terms of market capitalisation, while smaller economies like Singapore (\$264,974) and Taiwan (\$356,710) are carving out their own niche as well. Singapore is beginning to serve as the primary hub for cross-listing in the region by catering to an astonishing 312 cross-listed foreign firms, which is more than three times the next closest market of Australia, and Hong Kong.

It is not uncommon for countries to cater primarily to their own companies when utilising their capital markets, however, this region is definitively the least integrated of the three primary equity markets in the world, with Europe being one and the Americas being the other.² This is not always a bad thing however, as integration for the wrong reasons can lead to potentially devastating financial contagion. China and India not letting foreign firms list onto their markets is actually a very pragmatic approach, as it is much easier to initially let someone into your capital markets than to get rid of them once they have become tangled in your banking system. Though, as some degree of foreign compatibility is a

² Africa and the Middle East have lagged behind in integration due to various issues.

prerequisite for global integration, which is where financial markets evolve towards as long as technology and standard of living keep rising, one has to believe that at some point admission of Australian and Japanese businesses to Chinese stock exchanges should benefit all three countries. The political differences may not be as distant as they at first appear, although the cultural barriers within all the different countries in the region seem likely to persist. This region has the potential to implement a revolutionary business model, and only allow regional companies onto their stock exchanges.

This study is organised into several sections as follows. Since the emphasis of the study is on how the Asia-Pacific region's corporate activity in the Americas may be affecting their capital market integration and currency union convergence, first the Asia-Pacific region's integration with the American markets is analysed. The Asia-Pacific region is characterised by its closed-door political and economic policies, and as such the efficacy of this type of system is discussed next, after which the current state of the Asia-Pacific markets is presented, and then empirical studies are performed. For the empirical studies, the corporate activity of the Asia-Pacific region's countries in the American stock markets is cross-sectionally analysed, and then the time series characteristics of the Asia-Pacific region's stock markets and economies are examined, all in an effort to deduce stock market and integration possibilities in the Asia-Pacific region, with an emphasis on how their corporate activity in the Americas may be affecting their welfare within the region. Then, more in depth background information on the Asia-Pacific region's major countries is presented in an effort to better understand how the results from the empirical studies may be best interpreted.

The Asia-Pacific region's markets are analysed for their economic and stock market characteristics, in the context of their corporate activity in the Americas. The Asia-Pacific region analysis considers three primary hypotheses. Do certain Asian-Pacific countries exhibit more preference for the Americas than others, and if so, which American markets do their corporations prefer? How do these countries

preferences differ according to region and cultural heritage? Has there been a change in Asian-Pacific involvement in the Americas since the SOX act? If so, what is behaviour of the different regions and cultures, and what of the countries that could be integrated into common stock markets or a common currency? Is there a discernable time series trend, in terms of unit roots and significant variables, in the stock markets and economies of the Asian-Pacific countries? If so, do these trends correlate to region, and do they mirror the affiliations we see today in their political and cultural heritages?

2. The Pacific Markets Today

Some may say that the American markets provide the primary corporate financing centre for the world, the European markets provide the primary government financing centre, and the Asian-Pacific markets utilise both. The Pacific markets, however, are characterised by their solidarity, rather than over-involvement in either the American or European markets. China and India are probably the two best known examples, as they do not allow foreign corporations onto their stock exchanges, though even on the Japanese market, there are only fifteen foreign corporations listed, and they have around 50 since inception, a much lower amount than the large country markets in Europe and the Americas. There is a movement towards integration in the Pacific, however, and though it is slow moving, this may be a good thing, as by moving slowly the Pacific countries are able to be restrained in their growth policies, and effectively minimise potential contagion consequences from irresponsible and poorly-directed international integration programmes.

The Asia-Pacific markets are less involved in the global markets than are the European or American, though they are still active on a global scale, as well as they exhibit substantial integration at the regional level. Japan's stock markets are perhaps the most integrated with the rest of the world, though primarily due to Japan's economic strength, rather than their integration attitude. Australia and New

Zealand are of course the most similar English speaking countries, India, China, and Russia are relevant. There are significant linkages between the all the countries in the Asia-Pacific region, both economically and culturally, though politically there seems to still be significant differences. The South Asian markets which were known to be segmented mainly due to regulatory and institutional barriers in the early 1990s, have been gradually liberalised and opened up for the world economy, as the financial sector reforms have been successful in strengthening the interlinkages between the markets (Vats, 2008).

When discussing currency union possibilities in the Asia-Pacific region, one of the first groupings that comes to mind is Australia and New Zealand, because of their cultural, geographical, and political similarities. Haug et. al. (2005) discusses how there is substantial similarity of transmission mechanisms in New Zealand and Australia, primarily in regard to both GDP and the CPI in response to monetary stabilisation policy shocks. As a high degree of internal labour mobility is a desirable feature of currency unions, it is shown that shocks to relative per capita output have a significant and symmetrical impact on migration flows between Australia and New Zealand. Further separating the shocks to Australia and New Zealand shows that pull effects are more important than push effects, and it seems that in the choice of New Zealand emigrants, permanent migration responds intuitively to the state of the economy in Australia and New Zealand (Creighton, 2006). Regarding some of the other countries in the region, Vats (2008) suggests that even though formation of an East Asian monetary union may be to some extent feasible from an economic perspective, the region's political situation does not appear favourable for the creation of one. As such, when comparing the largest economies in the region, Japan and China, it seems that a currency union with China may generate higher average welfare gains for East Asian countries than a currency union with Japan. Shirono (2009) therefore concludes that Japan does not appear to be a dominant player in forming a currency union in East Asia, and this trend is likely to continue if China's relative presence continues to rise in the regional trade.

The majority of the countries in the region have major international stock exchanges which are listed on the World Federation of Exchanges, though there are three primary junior stock exchanges in East Asia with legitimate growth ambitions of becoming regional exchanges emerging corporations as well: the Tokyo Stock Exchange Mothers, Hong Kong Stock Exchange Growth Enterprise Market, and the Singapore Exchange Catalist. As compared with the AIM section of the London Stock Exchange, one of the most recognised growth exchanges in the world, the Catalist is more integrated with the AIM than the Mothers or the Enterprise, thereby suggesting the Singapore Catalist is more efficient than the Japanese Mothers or the Hong Kong Enterprise (Mizuno and Tabner, 2008). As far as the developed exchanges are concerned, Yu and Huang (2002) determined that the Taiwanese and Korean markets are the most two volatile markets in the Asia-Pacific region, yet the Taiwanese market is weaker than the Korean market in dissipating volatility.

To put in light the interaction between the countries in the region, Chang et. al., (2009) conducted a study analysing Japanese tourist activity via volatility estimates for the monthly growth in Japanese tourists to New Zealand and Taiwan. The results actually indicate that Japanese tourists to New Zealand are correlated with positive shocks, though there were no positive or negative effects for Taiwan. It may be expected for there to be little effect for Taiwan, since they are so close, though the positive effects for New Zealand suggest how close the many diverse members of the Asia-Pacific region really are.

In terms of cross-country integration in the Asia-Pacific region, Mahmood and Dinniah (2007) determined that amongst Malaysia, Korea, Thailand, Hong Kong, Japan, and Australia, there is a long run equilibrium relationship between Japan, Korea, Hong Kong and Australia. As for short run relationship, all countries except for Hong Kong and Thailand show some interactions. Hong Kong shows relationship only between exchange rate and stock price while the Thailand reports significant

interaction only between output and stock prices. Sanchez (2005) also suggests that the region's economies exhibit a high degree of cross-country supply diversity, though warns that there is little compelling evidence that shocks are highly correlated across the region. Kim and McKenzie (2008) find a significant evidence of a relationship between the presence of international investors and the level of stock market correlation in nine Asia-Pacific stock indices. In line with mainstream economic reasoning, private capital flows have been linked to high stock market performance in Asia-Pacific countries, suggesting stock market integration in this region due to the co-movement of net equity flows across markets. Specifically, it seems that these net equity capital flows have reduced the market segmentation in South Korea significantly, and linked Indonesia's stock market to regional stock markets after stock market liberalisation (Ameer, 2005). As for Russia and China, the Russian markets have substantially increased their integration with global stock markets recently, while both the Chinese A- and B-share markets continue to move largely independently from global movements, and only slightly in line with regional forces (Kozluk, 2008).

As Japan is the most developed market in the region, Japan's role and interaction with the other markets in the area is both highly informative when analysing the region as a whole, and important to be healthy in order for the region to compete with the other two major world regions of the Americas and Europe. Specifically, research has demonstrated that the equity markets of Australia, China, Hong Kong, Malaysia, New Zealand and Singapore are highly integrated with the stock market in Japan, and have become more integrated over time, especially since 1994. Soenen and Johnson (2002) also suggest that within the Asia-Pacific region, a higher import share as well as a greater differential in inflation rates, real interest rates, and gross domestic product growth rates may have negative effects on stock market comovements between country pairs. They also note an increased export share by Asian economies to Japan, as well as propose that greater foreign direct investment from Japan to other Asian economies can contribute to greater growth in the region. Further, considering the historical

endogenous nature of many Asian markets, Japan will likely continue to be a lucrative destination for international investors to invest and diversify the portfolio risks (Seshaiah, 2006)

India is a rising economy, and as such research has shown that Asian Stock markets have a long term relationship with the Indian Stock Markets, whereas the Indian stock markets exhibit a short term relationship with the Japanese capital markets and developing markets in Asia and South America. Sariannidis et. al., (2009) also find that Indian, Singapore and Hong Kong, markets are highly integrated, with them reacting to information which influence not only the mean returns but their volatility as well. According to Raj and Dhal (2009), when analysing Bangladesh, India, Pakistan, and Sri Lanka it seems that stock markets indicators such as market capitalisation and trading value in the region following liberalisation measures do not seem to influence the real sector in South Asia, and the stock markets thus are still playing a minor role in their respective economies. As far as global reach in India, Husain and Qayyum (2006) have determined that the markets in India and Pakistan are affected by the major as well as by the regional markets in the long run though in the short-run are independent, though since 2003 the integration of India's stock market with the global markets, such as the USA and the UK, is much higher than with the regional markets. Also, due to the Indian market recent liberalisation, the Indian stock market may provide opportunity for higher return than global and regional markets.

Capital market integration in the Asia-Pacific is found to be greatest in Singapore, Hong Kong, Australia, and Taiwan, and weakest in mainland China and India. When Hsu (2009) analysed the daily returns of India, Indonesia, Korea, Malaysia, Singapore, Taiwan, and Thailand, it was shown that stock index and exchange returns are positively, yet weakly dependent on each other, with Singapore having the lowest dependence level and Indonesia having the highest. Yu and Huang's (2002) study found that the Tokyo and Singapore markets are very similar in fractal dimension and probability distribution,

though different in their resistance to volatility, while Tokyo has a higher ability to dissipate volatility. Also, the Tokyo market is more efficient than the Singapore market, and the Hong Kong market is similar to the Singapore market in its ability to dissipate volatility. Analyst forecast revisions exhibit persistence in all countries in the region, though the profitability of trading strategies varies on earnings momentum, which is related to information dissemination mechanisms within a country. Earnings momentum yields significant profits in Australia and Hong Kong, though not in Malaysia, South Korea, Japan, Singapore, or Taiwan. Price momentum exists only in those countries where earnings momentum is profitable, and markets with high levels of corruption in the Asia-Pacific region exhibit weak momentum (Hong et. al., 2003). Another interesting fact about the cooperation between countries in this region is that the Singapore Exchange (SGX) and Taiwan Futures Exchange (TAIFEX) both offer future contracts based on the Taiwan stock market indice. Though there are structural differences between these two markets, such as the trading costs and speed of information transmissions, any significant developments in Taiwan will affect the Singapore market, such as higher trading taxes. As such, when taxes were reduced on the TAIFEX, implicit trading costs reduced significantly and the price execution efficiencies also improved significantly after the tax reduction (Chou and Lee, 2001).

The Asia Financial Crisis was an important event for the Asia-Pacific region. The Asian financial crisis of 1997, which started as an apparently limited shake-up in remote Thailand, became a crisis soon, spreading to Indonesia, the Republic of Korea, and Malaysia, which experienced little increase in capital risk before 1997. As for the development of the crisis, there was an over-identification of contagion for the early Thailand crisis phase and an under-identification of contagion during the late Hong Kong crisis phase during the two phases. There is little evidence of a significant change in the transmission mechanisms from Thailand to any other country, as most financial shocks are thus transmitted through non-crisis-contingent channels. Contrary to the Thailand finding, there is evidence of contagion from the Hong Kong stock market to most of the other Asian stock markets, contrary to

the theory that most shocks are transmitted through crisis-contingent channels (Kleimeier et. al., 2003). Since the Asia crisis, interdependence of the stock markets in Hong Kong, Japan, Korea, Taiwan, Indonesia, Malaysia, Philippines, Singapore, Thailand, and Australia has not changed much (Vo and Daly, 2005). For countries involved in the crisis directly, it seems that correlations increased markedly between them during the crisis period (Hyde et. al., 2007). Trading strategy of international investors changed as a result of the Asian currency crisis, evidence for the role of volatility in explaining autocorrelation, though not substantially (Kim and McKenzie, 2008).

There was a long run relationship between the Malaysian and the Philippines stock markets before the 1997 Asian financial crisis, and a bi-directional relationship between Malaysia and the stock markets in Hong Kong and Thailand. Before the 1997 Asia financial crisis, the daily price movement of the Malaysian stock market led the daily price movement in Indonesia and China in the short-run, and the Philippines in the long run. The short-run causal relationship between the Malaysian stock market and the stock markets of its major trading partners started to weaken after the financial crisis, though Malaysia's imposition of capital controls in September 1998 in their attempt to curb speculative attacks has been relatively successful in shutting out negative foreign influences (Karim and Gee, 2006). As for dynamic capital mobility using deviations from uncovered interest parity in seven Asian countries- Hong Kong, Indonesia, the Republic of Korea, Malaysia, the Philippines, Singapore, and Thailand- capital mobility increased in six of the countries, and most in Thailand post crisis. Except in Singapore, the countries' currency (relative to the yen) was overvalued, largely because their interest rates differed from Japan's, while before the crisis, all seven countries' currencies were overvalued 30 to 40 percent against the yen (Min, 1998). Another recent event in Asia was the Asia Flu crisis. During this time period, for Japan and Thailand exchange rates leads stock prices with a positive correlation, while for Taiwan stock prices led exchange rates with a negative correlation. Data from Indonesia, Korea, Malaysia, and the Philippines also indicate strong feedback relations (Granger et. al., 1998).

There is a delicate relationship between the government and the financial markets. The financial markets should ideally be heavily regulated by the national government, so as to ensure foreign institutions are not over-infiltrating the domestic economy. **Table X.** suggests that the Asia-Pacific stock markets have a healthy amount of foreign corporations on them, with Singapore and Hong Kong hosting the most foreign firms; **Table XI.** also shows that there have been relatively few delistings of foreign corporations from Asia-Pacific stock exchanges, thus confirming the preceding observation. The governments, however, also must utilise the financial markets from time to time for their own business needs. It is preferable for a government to use their domestic equity and debt markets for their financing needs, though when those are not sufficient, they may feel the need to utilise other countries' capital markets as well. Therefore, when discussing capital market integration in the Asia-Pacific region, understanding if the region's governments do utilise foreign exchanges is important, as is knowing the markets in the region that other countries prefer for their government financing needs.

The activity of Asian-Pacific governments on other world stock exchanges can shed light on what creates their government cross-listing needs within the Asia-Pacific region, as theory suggests that the government will first utilise their domestic capital markets, then their region's capital markets, and then the world's capital markets. **Table XII.** shows that the Asia-Pacific governments prefer the four primary European exchanges that all countries prefer for their foreign financing needs: Frankfurt, Luxembourg, London, and Switzerland. **Table XIII.** describes how the Asian-Pacific governments are interacting in the global financial markets, and accordingly, it seems as if the Asia-Pacific governments utilise the global financial markets quite efficiently, as the amount of entities they have is relatively equal to the number of issuances. The Asian-Pacific governments do look to their home exchanges first for their financing needs, though the Asian-Pacific governments then look to the world capital markets before the regional capital markets, which demonstrates an operating efficiency by the Asian-Pacific

governments in the capital markets. That said, the Asian-Pacific markets are arguably not as established as the European markets, and thus using the European markets may in fact be more efficient for the Asia-Pacific countries. As shown in **Table I**, Australia is the only stock exchange which caters to foreign governments in the region, with the Asian Development Bank from the Philippines being the only Asia-Pacific government entity listed in Australia.

Table I. Government Entities Cross-Listed in the Pacific

Country	Government	Stock Exchange	Number of Issues
Canada	Province of Ontario	Australia	1
Canada	Province of Quebec	Australia	1
Finland	Nordic Investment Bank	Australia	2
France	Compagnie de Financement Foncier	Australia	3
France	Dexia Municipal Agency	Australia	5
Germany	Development Bank NorthRhine-Westphalia	Australia	1
Netherlands	BNG (Banking Serving Governments)	Australia	1
Philippines	Asian Development Bank	Australia	6
Sweden	Swedish Export Credit	Australia	1
USA	Inter-American Development Bank	Australia	1
USA	International Finance Corporation	Australia	2

This table shows the distribution of foreign governments listed on Asia-Pacific exchanges.

3. Empirical Study

Several African and inland Asian countries are also analysed, though the focus is on the Western Pacific region's main capital markets. For example, South Africa and Israel are perhaps as integrated into the Asian region as they are with the Americas or Europe, and so their characteristics are also briefly examined in this study. There are many variables, capital market related, firm-specific, and economy related, both theoretical and empirical in nature, that have direct effects on each other for capital market and currency union integration prospects. The Pacific region's corporate activity in the Americas is related to their degree of openness and thus integration within their own region, as the Americas is the preferred corporate financing destination in the world. Thus, we should expect that those Pacific countries with greater activity in the Americas to be more open themselves with the capital markets, and should have similarities in their economies. The individual characteristics of the Asian-Pacific region may help to explain their corporate activity in the Americas and thus integration in the Pacific.

3.1 Hypotheses

1. The Pacific region's corporate activity in the Americas is related to their degree of openness and thus integration within their own region, as the Americas is the preferred corporate financing destination in the world. Thus, we should expect that those Pacific countries with greater activity in the Americas to be more open themselves with capital markets, and with should have similarities in their economies. The individual characteristics of the Asian region may help to explain their corporate activity in the Americas and thus integration in the Pacific.

A. Do certain Asian-Pacific countries exhibit more preference for the Americas than others, and if so, which American markets do their corporations prefer? How do these countries preferences differ according to region and cultural heritage?

B. Has there been a change in Asian-Pacific involvement in the Americas since the SOX act? If so, what is behaviour of the different regions and cultures, and what of the countries that could be integrated into common stock markets or a common currency?

C. Is there a discernable time series trend, in terms of unit roots and significant variables, in the stock markets and economies of the Asian-Pacific countries? If so, do these trends correlate to region, and do they mirror the affiliations we see today in their political and cultural heritages?

Cross-Sectional Analyses

Logistic regressions are performed on a sample of Asia-Pacific corporations cross-listed in the Americas, to determine their market listing preferences in the Americas as of their listing date. The sample is first regressed as USA exchanges against the other American exchanges, and then as NYSE against the Nasdaq. Then time-specific logistic regressions are run to determine if listing preferences

have changed since 2002. This not only provides information about which markets certain types of Asian-Pacific firms prefer, it will also help explain what firms are locating in the Americas, which can then help us to understand better some of the dynamics occurring within the Asia-Pacific region in regards to their operating of their economies and stock markets. Multiple Exchange Listings include: Australia, China, India, Indonesia, Israel, Japan, Korea, Liberia, New Zealand, Papa New Guinea, the Philippines, Singapore, South Africa, and Taiwan. Single Listings exchange listings include: Ghana, Marshall Islands, Russia, and Tanzania. Countries with no Listings from Asia include: Malaysia, North Korea, Pakistan, Azerbaijan, Bangladesh, Sri Lanka, Vietnam, Cambodia, Myanmar, and several other smaller Pacific island nations and inland Asian countries. There are only four African countries with listings: Ghana, Nigeria, South Africa, and Tanzania. There are 10 regional tests performed: Asia Pacific-Africa, Asia-Pacific, Asia, Oceania, Orient, Africa, South Asia, English Speaking, Dharmic Region, and Abrahamic Region.

Logistic regressions are performed on a sample of Asia-Pacific corporations cross-listed in the Americas, to determine their preferences as of their listing date. To do this, they first are regressed as USA exchanges against the other American exchanges, and then NYSE against the Nasdaq. Finally time-specific logistic regressions are run to determine if listing preferences have changed since SOX. This not only provides information about which markets certain types of Asian-Pacific firms prefer, it will also help explain what firms are locating in the Americas, which can then help us to understand better some of the dynamics occurring within the Asia-Pacific region in regards to their operating of their economies and stock markets.

Time Series Analyses

Time series tests are performed to determine currency union and stock markets integration possibilities in the Asia-Pacific region. To analyse the currency union and finance market integration possibilities, a

two-step time series test is employed which compares 37 macroeconomic and stock exchange variables from select Asia-Pacific countries since 1980 to determine currency union and stock market merger possibilities in the Asia-Pacific region. The stock market is affected by both economic and political factors. The political events of specific countries can have impacts on financial markets and economy performance both within and across countries. These stock exchanges are studied: Australian Stock Exchange, Bombay Stock Exchange, Bursa Malaysia, Colombo Stock Exchange, Hong Kong Stock Exchange, Jakarta Stock Exchange, Jasdaq, Johannesburg Stock Exchange, South Korea Stock Exchange, National Stock Exchange of India, New Zealand Stock Exchange, Osaka Stock Exchange, Shanghai Stock Exchange, Shenzhen Stock Exchange, Singapore Stock Exchange, Taiwan Stock Exchange, Tel Aviv Stock Exchange, Thailand Stock Exchange, and the Tokyo Stock Exchange. These countries' economies are tested: Australia, China, Hong Kong, India, Indonesia, Israel, Japan, Malaysia, New Zealand, Singapore, South Africa, South Korea, Sri Lanka, Taiwan, and Thailand. To test these research hypotheses, a two-step time series analysis is employed that involves: (i) eliminating non-stationary variables via unit root tests (ii) performing tests of significance using an ARCH model of the stationary variables from the data set.

4. Sampling Distribution

The sampling distribution details both the variables collected and the data sources used. The variables to be used were determined based on analysis of prior studies and after consideration of the current financial climate. Data sources utilised include both free-access databases and proprietary data obtained via correspondence.

4.1 Variables

Variables used include both the logistic cross-sectional, and the unit-root time series. There are 19

cross-sectional variables and 37 time series variables utilised. For the logistic cross-sectional study, there are: seven company specific variables, fourteen country specific variables, three industry specific variables, four market specific variables, and one time specific variable included. For the economy-specific series analysis there are 16 variables, which include: six income and productivity indicators, eight investment, savings, and government purchases variables, six monetary stabilisation policy variables, and one general indicator. The stock market-specific time series analysis utilises 21 variables: seven performance indicators, seven liquidity variables, and seven general identification factors. It has found that there are in fact dynamics relationships between stock prices and economic variables in the Asian-Pacific countries, and as such, time series analyses analysing the stock markets and economies of these countries and cross-sectional studies of their foreign corporate activity abroad may yield helpful information for studying stock market integration and currency union convergence in the region (Mahmood and Dinniah, 2007).

4.1.1 Logistic Cross-Sectional

The firm specific variables account for size (assets), liquidity (sales), profitability (net income), growth prospects or book-to-market ratio (BTM), market cap or market value of equity (MVE), and efficiency of operations or return on assets (ROA). There is also one firm-level indicator variable included, Big5 auditor used in year of listing, and one time period indicator variable included, the year 2002 and SOX. The firm's total assets, total sales, net income, market value of common equity, and book-to-market ratios in year of listing are used to control for firm specific features. Market value of equity is defined as the corporation's stock price multiplied by the number of basic common shares outstanding for the year of listing. Book-to-market ratio is calculated as the ratio of total shareholders' equity to MVE in the year of listing. If shareholders' equity is negative, BTM is assigned a value of zero. Return on assets is calculated as net income scaled by total assets in the year of listing. Another issue that will arise when a firm decides to cross-list on a new exchange is that modifications must be made to the

firm's accounting system; managers always have the opportunity to smooth income by selecting among accepted accounting methods or by applying given accounting methods in particular ways, and so an indicator variable equal to 1 if the firm employed a Big5 auditor in the year of listing is included. What is also helpful is using a cut-off date to analyse trends before and after, and for this reason, SOX passage in 2002 is used both as a midpoint, and to further examine its effect. Additionally, 2002 also happens to be shortly after Euro adoption, and so this can shed some light on those processes as well.

The country specific variables tested are: English speaking, emerging, common law, tax haven, and difference in trade to test for foreign dependence. The industry specific variables of energy, tech, or non/tech are added to control for preferences in industrial relocation. Type of home government can also affect the cross-listing decision of a foreign firm. For this reason a country-specific indicator variable of home government, equal to 1 for common law is included; indicator variables for English speaking and tax haven also flow from this same reasoning. The reason for including emerging country as an indicator is that emerging countries typically experience higher degrees of corruption and have less developed regulatory regimes; as such, firms from these countries should prefer markets with similar regulatory structures. As well, the country specific variable `diff_trade` is included to control for foreign market dependence, which is calculated by the difference in home and foreign government trade balance in the year of listing scaled by home country GDP. Indicator variables are included for industry type, as studies have shown that in matching companies from Australia, Canada, and the USA by size and industry, the degree of capital market integration varies across industries.

As market conditions have also been shown to impact a corporation's listing decision, several explanatory exchange-specific variables are used: the difference in the turnover of domestic shares, the difference in index returns, the difference in share value, and the percentage change in total companies per exchange in year of listing. Domestic as opposed to total values are used for these values to provide

a more consistent sample of corporations that typically list on the respective exchanges. Velocity, turnover, or liquidity is the ratio between the turnover of domestic shares and their market capitalisation for the year. Index return is measured as the percentage of the exchange's index return for the year. Value of share trading refers to the total number of shares traded multiplied by their respective matching prices for the year of listing, and the percentage change of companies is measured as the change in total companies listed on the exchange for the 12 calendar months preceding the listing event.

4.1.2 Two-Step Time Series

As the primary focus of the paper is to add to the cross-listing literature by focusing on the stock-market attributes of foreign corporations in the Americas at their listing dates, there is less attention devoted to the time series variables used for the unit root and ARCH tests. They are, however, the traditional variables used for such analyses, and thus this type of analysis provides additional explanation of integration attitudes in the Americas. The economy-specific and stock market-specific tests employ 21 variables for a total of 37.

In the economy analysis, 16 variables are examined. There are five income and productivity indicators: gross domestic product (GDP) in USA dollars, percentage change in GDP, gross national income (GNI), GDP in terms of purchasing power parity (GDP-PPP), and GDP-PPP as a percentage of the world GDP. Investment, savings, and government purchases are represented with five indicators: investment, gross savings, gross external debt, current account balance (CAB), and CAB percentage of GDP. There are six indicators commonly used for monetary stabilisation policy analysis: short-term interest rates, long-term interest rates, exchange rates, inflation rate, unemployment rate, and poverty rate. The overall population level is also included as a general variable. The exchange rate is based on that of the USA. As poverty rate calculations can differ by country, it is calculated as the percentage of

the people living under the poverty line for that country, as per the IMF website.

For the stock market study, 21 variables are used. These include seven performance indicators: index levels, equity market cap, bond market cap, PE ratio, gross dividend yield, total performance, index performance. Seven liquidity variables are regressed: value of share trading, value of bond trading, equity turnover, value of domestic equity trading, value of foreign equity trading, value of domestic bond trading, and value of foreign bond trading. Seven general identification factors are utilised, number of companies, stock market's importance in the national economy, gross capital formation, domestic equity capital raised, foreign equity capital raised, domestic bond capital raised, foreign bond capital raised. PE ratio is calculated by dividing the market capitalisation by the total market earnings of the stocks included in the main index of the stock exchange. Gross dividend yield is determined by dividing the total dividends distributed by the domestic companies composing the main index by their market capitalisation. Total performance is calculated by adding the annual stock price index performance and the gross dividend yield paid during a given year. Index performance is calculated as the percentage change in index level from the previous year. Turnover is calculated as value of share trading divided by equity market cap. Stock market's importance in the national economy is calculated as equity market cap divided by GDP. Capital raised is the exchange's investment flows-capital raised divided by the national gross fixed capital formation (GFCF). Gross fixed capital formation is obtained from the IMF website, and is measured as the total value of a country's acquisitions less disposals of fixed assets for a given year.

4.2 Data Sources

Multiple data sources are used for both the cross-sectional and the time series collections. The cross-sectional data collection took substantially more time to complete, as many of the variables had to be cross-referenced and hand-collected from old listing prospectuses and annual financial information

forms. The time series data collection was more straight-forward.

4.2.1 Logistic Cross-Sectional

A total of 19 variables are applied. Eight are indicator variables and 11 are numerical values. Of the 11 numerical values, four are exchange-specific variables, and six are firm-specific variables, with three being logs of the numerical values for better standardisation. Six indicator variables are used for geographic region or country, and two indicator variables are included for industry. Two more indicator variables are included for company specific characteristics, and `diff_trade` is the one country-specific quantitative variable. All variables are measured in terms of USA dollars. As described in Table XVI., there are a total of 247 (Nasdaq) + 163 (NYSE) + 45 (TSX) + 18 (TVSX) + 18 (BMV) + 0 (BOVESPA) + 15 (BSX) corporations from each exchange for a sample total of 506 Asian-Pacific firms listed on American exchanges. Due to incomplete information: 1 firm is dropped from the NYSE, 5 from the Nasdaq, and 9 from the BSX. This drops the total sample to 491 Asia-Pacific firms listed on American exchanges for statistical regression analysis purposes.

The first items to be collected were the listings of the current foreign firms from the respective exchanges. The NYSE and NASDAQ provide this data directly on their websites. TSX responded to email inquiries and provided listings, and BMV, BOVESPA, and BSX provided the information on their websites as well. Second, the delisted firms were collected. For the USA exchanges, a Google search was used, as well as the SEC website. The BSX provides that data on their website, and the TSX provided a proprietary listing. Brazil has not had much turnover through the years, so no delisted firms are obtained for Brazil, even though if they were needed it is questionable whether they would have been able to be located. No delisted Mexican firms were able to be located after an exhaustive search online and multiple requests to the Mexican stock exchange, providing the only missing link in the study. ADR data from the Bank of New York and Citibank provided supplementary data for CUSIP

(Committee on Uniform Security Identification Procedures), year of listing, and industry data for cross-checking purposes. After the lists of foreign companies were collected for each exchange, firm specific data was needed. The Compustat database was used to extract data on total assets, net income, sales, BTM, and MVE in the year of listing. For companies not available, such as many TSX, BMV, BOVESPA, and BSX firms, the SEDAR database, company websites, and Yahoo Finance provided the necessary data. Next all the corporations' annual reports were searched through to identify which firms had employed a big 5 auditor in the year of listing. Some of this data had already been retrieved in an earlier step with SEDAR, though the remaining is collected via EDGAR, SEDAR again, and company websites. The logs of MVE, Assets, and Sales are used for better standardisation in the logistic model. If sales are zero or btm, then logsales is assigned a value of 0, and if shareholder's equity is negative, then BTM is assigned a value of 0.

Indicator variables were then assigned. Companies are assigned indicator variables equal to 1 if they are from an emerging country, as reported by the World Bank. Tax haven is an indicator variable included to control for how authoritative and strict the home tax regime is; firms will gravitate towards similar exchanges, with the USA being the most strict as a result of legislation such as SOX. A common law home government, English speaking country, and having a Big5 auditor in year of listing also result in a one for the indicator variable. Industry indicators are included for energy, tech, and non/tech³. The final country specific variable needed was diff_trade, which is defined as the difference between home and foreign government trade balance in the year of listing scaled by home country GDP.⁴ The trade balances are obtained from the International Monetary Fund (IMF) website, with GDP data obtained from there as well. Similar to the exchange-specific indicators, the Canadian values are

3 Non/tech is dropped from the regression to avoid the dummy trap.

4 For example, for a Chinese listed firm on the NYSE: the USA/China trade balance scaled by USA GDP in the year of listing, minus the Canada/China trade balance scaled by Canadian GDP in year of listing.

then subtracted from the USA values to arrive at the final value for difference in trade.⁵ These could be different for each exchange, though there are infinite possibilities what values can be assigned; as such, and due to the time required to locate all the data, one set was finalised on with the USA acting as the primary, Canada acting as the primary when the USA was not part of the calculation, and England being used as a proxy in the Canadian and USA corporations cross-listed onto each other exchanges. Perhaps Mexico or Brazil could have been used here, however, the use of England offers a new distinguishing aspect to the study, and also represents a legitimate choice of cross-listing market, as London is one of the most desired foreign stock exchanges around the world.

The exchange specific variables presented the greatest challenge in collection. The preference would be to use the value in the month of listing, however, it is difficult to obtain month of listing values for some of the less transparent exchanges and more obscure variables for all years and months. For this reason, year of listing is used for all variables in order to standardise the data sets and tests. All exchange specific factors are calculated using the USA exchange data as the primary, where applicable, as with the *diff_trade* variable. For example, when calculating TSX's index return differential, TSX data is subtracted from NYSE data. This creates *diff_liquidity*, *diff_index* return, *diff_share* differential, and *diff_percentage* of company turnover. Exchange specific variables were retrieved from the World Federation of Exchanges website, DataStream, and through direct correspondence with the individual exchanges. Additionally, the London Stock Exchange's main index FTSE is used for the calculation of exchange level variables of Canadian firms on USA exchanges and USA firms on Canadian exchanges, in order to provide the next most realistic option for exchange level and difference in trade variable comparisons.

⁵ This is true for the Canadian and USA exchanges; for the other American exchanges, the respective country trade difference, i.e. Mexico, Brazil, or Bermuda, is subtracted from the Canadian trade difference. For USA and Canadian corporations cross-listed onto Canadian or USA exchanges, UK values are substituted appropriately, as a Canadian corporation cross-listing onto a USA exchange is usually not deciding between the USA or Canada.

4.2.2 Two-Step Times Series

A total of 37 variables are applied in hypothesis two, and all are numerical values. For the economy study there are five income and productivity indicators; five investment, savings, and government purchases variables; six monetary stabilisation policy variables; and one general indicator. For the stock market study there are seven performance indicators, seven liquidity variables, and seven general identification factors. The majority of the variables for the economy time series analysis were obtained from the International Monetary Fund website. There were a few variables that were incomplete, such as: output gap, savings rates, investment rates, foreign direct investment rates, interest rates, poverty rates, unemployment rates, and exchange rates. Output gap had to be calculated for Mexico and Brazil. This was accomplished by using a methodology supplied by the International Monetary Fund that they used themselves to calculate the variables.⁶ Savings, investment, and foreign direct investment data was partially supplied by the IMF, and was supplemented by the *Earthtrends* searchable database. Short and long term interest rates for all four countries were obtained from their central bank websites. Poverty and unemployment rates for Brazil and Mexico were obtained from their central banks as well and were confirmed with a Google search based on historical trends. The exchange rates are based on the USA dollar, which were obtained from Google searches. For the stock market data, the World Federation of Exchanges provided all of the information. Their website provides a wide array of stock market indicators for the major international stock exchanges, and this process was quite simple and straightforward.

4.3 Limitations

Several limitations presented themselves that made the data collection process more difficult. As much of the exchange information was obtained from the World Federation of Exchanges database, any data limitations from that database could be debilitating; as such, exchange info only goes back to 1996 on

⁶ De Masi, P. (1997) IMF Estimates of Potential Output: Theory and Practice, IMF Working Paper No. 97/177

the World Federation of Exchanges database. In terms of classical assumptions fulfilment, several issues did present themselves. Of the three primary assumption issues; heteroscedasticity, autocorrelation, and model specification, the latter, model specification is the most pressing issue. Due to the large amount of variables used, it is difficult to say if all variables are truly needed in the final regression, or if all necessary explanatory variables have been culled from the error term. Another issue may be the standardisation of all variables. The size and scale variables were standardised using their logs, and the index variables were calculated using the same primary variables with the USA info serving as the model. The use of many dummy variables makes model creation more difficult as well, as dummy variable transformation can get rather mathematically involved.⁷ One can conclude, however, that this sample reasonably represents the actual population of Asian-Pacific corporations listing on American exchanges, as there are very few companies left out. Although this is not a representative sample of all Asian-Pacific firms listing on all American markets from market inception, it does provide a fair sample for use in today's economy.

5. Results

This study analyses whether corporations from the Asia-Pacific region prefer certain stock exchanges over others, and if so, what does that mean for stock market integration and currency union convergence within the region. As the Americas region is arguable the most influential in the world, understanding how one's corporations interact within that region can potentially provide useful information for numerous purposes relating to economics issues within the home region. Even though Israel is technically part of Asia, it is included in the Africa section. Two samples are used: USA exchanges (0) v. other American exchanges (1); NYSE (0) v. Nasdaq (1).

⁷ Sweeny, R., and Ulveling, E. (1972) A transformation for simplifying the interpretation of coefficients of binary variables in regression analysis, *The American Statistician* **26**, 30-32.

5.1 Logistic Cross-Sectional

Prob (NYSE =0) (1)

$$= \alpha + \beta_1 \log MVE + \beta_2 \log Ast + \beta_3 \log Sales + \beta_4 ROA + \beta_5 NI + \beta_6 BTM + \beta_7 Big5 + \beta_8 SOX + \beta_9 English + \beta_{10} Energy + \beta_{11} Tech + \beta_{12} Emerging + \beta_{13} CommonLaw + \beta_{14} TaxHaven + \beta_{15} Diff_Trade + \beta_{16} Diff_Liquidity + \beta_{17} Diff_IndexReturn + \beta_{18} Diff_NCompanies + \beta_{19} Diff_ShareValue + \varepsilon$$

5.1.1. Regional Studies

There are four regional studies presented, that of: Asia-Pacific-Africa, Asia-Pacific, Asia, and the Orient. Studies were also performed on Oceania, South Asia, and Africa, though the results were not significant for those three tests. As such, there were significant results obtained for the four studies presented, and substantial information can be obtained from them as to integration in the Asia-Pacific region. Asia includes firms from: China, Hong Kong, India, Japan, Korea, Russia, Taiwan, Indonesia, Philippines, and Singapore. Pacific (Oceania) includes firms from: Australia, Marshall Islands, New Zealand, and Papa New Guinea. Africa includes firms from: Ghana, Israel, Liberia, South Africa, and Tanzania. Orient includes firms from: China, Hong Kong, Japan, Korea, and Taiwan. The Dharmic sample includes firms from: China, Hong Kong, India, Japan, Korea, Taiwan and Singapore. The Abhramic sample includes firms from: Australia, Ghana, Indonesia, Israel, Liberia, Marshall Islands, New Zealand, Papa New Guinea, Philippines, Russia, and South Africa. Included in the English sample is firms from Australia, Hong Kong, Marshall Islands, New Zealand, Singapore, and South Africa. No individual countries from the Asia-Pacific region have significant results for cross-listings in the Americas.

Table II. Asia-Pacific-Africa and Asia-Pacific

	Asia-Pacific-Africa				Asia-Pacific			
	Full Sample		USA Only		Full Sample		USA Only	
LogAssets			-2.75	*			-2.28	**
LogSales	-2.79	*	-1.79	***	-1.86	***	-1.82	***
NI	2	**	-1.76	***	2.05	**	-1.81	***
ROA	-1.65	***	-3.33	*	-2.25	**	-3.18	*
SOX	2.55	*	-3.22	*	2.38	**	-3.83	*
Energy	3.22	*			1.84	***		
Emerging	-2.2	**			-3.05	*		
English			1.63	***				
Common Law			1.65	***				
Tax Haven	2.78	*			2.2	**		
Diff_Trade	-2.92	*			-3.27	*		
Diff_Liquidity	-4.72	*			-4.37	*		
Diff_NCompanies	-3.7	*	-5.75	*	-3.6	*	-5.69	*

The Asia-Pacific-Africa sample includes 487 firms in the full sample (82% concordant with a chi-square of 365.99), and 404 firms in the USA only sample (57% concordant with a chi-square of 310.4). The Asia-Pacific sample includes 352 firms in the full sample (82% concordant with a chi-square of 288.45), and 285 firms in the USA only sample (49% concordant with a chi-square of 149.6).

Asia includes firms from: China, Hong Kong, India, Japan, Korea, Russia, Taiwan, Indonesia, Philippines, and Singapore. Pacific (Oceania) includes firms from: Australia, Marshall Islands, New Zealand, and Papa New Guinea. Africa includes firms from: Ghana, Israel, Liberia, South Africa, and Tanzania. In the full Americas sample comprised of Asia, the Pacific, and Africa, firms with high sales, ROA, and those from emerging countries prefer the USA exchanges to others in the Americas. Energy firms, those with high NI, those from tax havens, and those listing since SOX prefer the other American exchanges to the USA. Trade balance is influential in listing with the USA, as are market liquidity differences and number of companies on the USA exchanges. In the Asia, Pacific, and Africa USA sample, firms with high amounts of assets, sales, NI, ROA, and those listing since SOX prefer the NYSE over the Nasdaq. Companies from English speaking and common law countries prefer the Nasdaq over the NYSE, while number of companies is a deciding factor for the NYSE. In the Asia and Pacific sample, or when Africa is dropped from the analysis, the same variables are significant for both the full Americas sample and USA only sample. One difference is that firms from English speaking and common law countries are not significant when Africa is not included in the regression.

Table III. Asia and the Orient

	Asia				Orient			
	Full Sample		USA Only		Full Sample		USA Only	
NI	1.91	***	-2.46	*	1.66	***	-2.74	*
ROA			-2.74	*			-1.96	**
SOX			-4.55	*	2.11	**	-3.65	*
Emerging					6.47	*	15.8	*
Tax Haven	2.27	**			8.63	*		
Common Law					6.13	*	15.27	*
Diff_Trade	-2.89	*			-2.86	*		
Diff_Liquidity	-3.14	*			-2.84	*		
Diff_NCompanies	-2.2	**	-5.88	*	-1.73	***	-5.39	*
Diff_ShareValue			-2.42	**			-3.23	*

The Asia sample includes 281 firms in the full sample (75% concordant with a chi-square of 146.4), and 250 firms in the USA only sample (51% concordant with a chi-square of 178.11). The Orient sample includes 240 firms in the full sample (75% concordant with a chi-square of 135.79) and 210 firms in the USA only sample (58% concordant with a chi-square of 169.58).

Asia includes firms from: China, Hong Kong, India, Japan, Korea, Russia, Taiwan, Indonesia, Philippines, and Singapore. Orient includes firms from: China, Hong Kong, Japan, Korea, and Taiwan. In the Asia full Americas sample, firms with high NI and those from tax havens prefer other American exchanges to the USA, while trade balance, market liquidity, and number of companies are more important when listing onto USA markets. In the USA only Asia sample, corporations with high NI, ROA, and those listing since SOX prefer the NYSE over the Nasdaq; number of companies and share value influence listing on the NYSE over the Nasdaq. In the Orient full Americas sample, companies with high NI, those listing since SOX, and those from emerging countries, tax havens, and common law countries prefer the other American exchanges to the USA. Trade balance, market liquidity, and number of companies listed is more important when listing onto the USA exchanges. In the USA only Orient sample, corporations with a high NI, ROA, and those listing since SOX prefer the NYSE, while companies from emerging and common law countries prefer the Nasdaq. Number of companies and share value are more relevant when listing onto the NYSE than the Nasdaq.

Table IV. Religious and Language Analysis

	Abrahamic				Dharmic				English			
	Full Sample		USA Only		Full Sample		USA Only		Full Sample		USA Only	
Log Assets	2.02	**										
Log Sales	-4.38	*	-1.73	***					-2.06	**		
NI	3.21	*			1.78	***	-2.86	*				
ROA			-1.79	***			-2.24	**			-2.16	**
Big5	-2.83	*	2.47	*								
SOX	4.64	*	1.65	***	1.92	***	-4.82	*	2.73	*		
Energy									1.99	***		
Tech			1.89	***					-2.01	**	1.75	***
Emerging									-1.77	***		
Tax Haven					2.62	*						
Diff_Trade	-2.57	*			-2.89	*			-2.36	**	1.67	***
Diff_IndexReturn									-2	**		
Diff_NCompanies	2.43	**	-2.39	**	-2.11	**	-5.92	*	1.73	***	-1.65	***
Diff_Liquidity					-3.17	*						
Diff_Share Value							-2.85	*	1.97	**	1.59	***

The Abrahamic sample includes 219 firms in the full sample (68% concordant with a chi-square of 164.13), and 167 firms in the USA only sample (83% concordant with a chi-square of 152.03). The Dharmic sample includes 268 firms in the full sample (75% concordant with a chi-square of 143.14), and 237 firms in the USA only sample, and is (54% concordant with a chi-square of 177.42). The English speaking sample includes 132 firms in the full sample (84% concordant with a chi-square of 153.54), and 72 firms in the USA only sample (76% concordant with a chi-square of 75.24).

The Abrahamic sample includes firms from: Australia, Ghana, Indonesia, Israel, Liberia, Marshall Islands, New Zealand, Papa New Guinea, Philippines, Russia, and South Africa. The Dharmic sample includes firms from: China, Hong Kong, India, Japan, Korea, Taiwan and Singapore. Included in the English sample is firms from Australia, Hong Kong, Marshall Islands, New Zealand, Singapore, and South Africa. Even though Hong Kong and Singapore are included in this regression because English is a common language in those countries, they both have English values of (0) in the rest of the regressions as Chinese is their main language. In the Abrahamic full Americas sample, companies with high amounts of assets, NI, and those listing since SOX prefer the other American exchanges over the USA, while those with high amounts of sales and employing a Big5 auditor prefer the USA exchanges. Trade differences are more important for USA listings, while the number of companies is more important for listings onto other American exchanges. In the USA only Abrahamic sample, companies with high amounts of sales and ROA prefer the NYSE over the Nasdaq, while those employing Big5 auditors in the year of listing, those listed since SOX, and technology firms prefer the Nasdaq over the

NYSE; number of companies is more important for listing onto the NYSE than the Nasdaq.

In the Dharmic full Americas sample, companies with high NI, those listing since SOX, and those from tax havens prefer the other American markets over the USA. Trade balance, number of companies, and market liquidity differences influence listings onto USA exchanges. In the Dharmic USA only sample, firms with a high NI, ROA, and those listing since SOX prefer the NYSE over the Nasdaq, while number of companies and share value also are reasons why companies may list on the NYSE over the Nasdaq. In the English full Americas sample, firms with high amounts of sales, those from emerging countries, and technology companies prefer the USA exchanges to the other American markets. Energy firms and those listing since SOX prefer the other American exchanges over the USA exchanges. Trade balance and index return are significant for firms listing onto the USA exchanges, while number of companies listed and share value are factors influencing listings onto other American exchanges. In the English USA sample, firms with a high ROA prefer the NYSE, while technology firms prefer the Nasdaq. Trade balance and share value influence listing onto the Nasdaq, while number of companies is important when listing onto the NYSE.

5.1.2. Time Trends

Prob (Pre-8/2002 =0; Post-8/2002 =1) (2)

$$= \alpha + \beta_1 \log MVE + \beta_2 \log Ast + \beta_3 \log Sales + \beta_4 ROA + \beta_5 NI + \beta_6 BTM + \beta_7 Big5 + \beta_8 SOX + \beta_9 English + \beta_{10} Energy + \beta_{11} Tech + \beta_{12} Emerging + \beta_{13} CommonLaw + \beta_{14} TaxHaven + \beta_{15} Diff_Trade + \beta_{16} Diff_Liquidity + \beta_{17} Diff_IndexReturn + \beta_{18} Diff_NCompanies + \beta_{19} Diff_ShareValue + \varepsilon$$

Table V. SOX Asia-Pacific-Africa, Asia-Pacific, and Asia

	Asia-Pacific-Africa		Asia-Pacific				Asia					
	Full Sample	USA Only	Full Sample	USA Only	Full Sample	USA Only	Full Sample	USA Only				
Log Sales		-1.83	***									
BTM	-1.81	***	-2.16	**			-1.97	**	-1.87	***	-2.06	**
Big5	-1.72	***										
Tech	-2.83	*	-3.32	*	-2.09	**	-2.16	**	-2.64	*	-2.45	*
Tax Haven	-2.2	**			-1.67	***	-1.66	***	-1.69	***	-2.25	**
Common Law	-4.25	*	-3.51	*			-2.1	**	-1.99	**		
Diff_IndexReturn	-2.71	*										
Diff_NCompanies	-6.53	*	-6.43	*	-5.83	*	-5.82	*	-5.76	*	-5.79	*
Diff_ShareValue	-4.13	*	-4.74	*	-4.19	*	-4.67	*	-4.15	*	-4.99	*
Diff_Liquidity			3.41	*			3.69	*			3.93	*
ZZZ	5.11	*	-3.94	*	3.69	*	-4.17	*			-4.24	*

The Asia-Pacific-Africa sample includes 487 firms in the full sample (36% concordant with a chi-square of 240.44), and 404 firms in the USA only sample (46% concordant with a chi-square of 250.75). The Asia-Pacific sample includes 352 firms in the full sample (36% concordant with a chi-square of 170), and 285 firms in the USA only sample (51% concordant with a chi-square of 201.76). The Asia sample includes 281 firms in the full sample (40% concordant with a chi-square of 150.64), and 250 firms in the USA only sample (57% concordant with a chi-square of 196).

In the Asia, Pacific, and Africa full Americas sample, firms with a high BTM, Big5 auditors,

technology firms, and those from tax havens and common law countries listed more before 2002.

Number of companies and share value were more important factors in cross-listing decisions before

SOX, and other American markets have been preferred to the USA exchanges since SOX. In the Asia,

Pacific, and Africa USA only sample, firms with high sales, BTM, technology companies, and those

from common law countries listed more before SOX. Number of companies and share value were more

important before 2002, though since 2002 liquidity has been important in listing on USA exchanges;

firms from these countries also have preferred the NYSE since SOX. The same factors are significant

in all three samples.

5.2 Time Series Analyses

The time series analyses utilise a two-step time series stochastic process that employs unit roots to

identify and remove nonstationary elements, and then regresses the significant factors in an ARCH

model to identify the most important economy-specific and stock market-specific variables in the Asia-

Pacific region. For the currency union analysis, GDP Change, GNI, GDP-PPP, CAB percentage GDP, and either short or long term interest rates are dropped from the ARCH tests to avoid collinearity. For the stock market analysis, domestic bond trading and domestic equity trading are dropped from the ARCH tests to avoid collinearity. The stock exchange data has 20 observations, ranging from 1990 to 2009, and the economy data has 30 observations, ranging from 1980 to 2009. The Bombay, NSI, Shanghai, and Shenzhen stock exchanges have observations only going back to 2000, Jasdak only to 2005, and Mauritius only to 2004. Russian economic data only goes back to 1990.

5.2.1. Currency Union Convergence

Thailand has the most stationary economy-specific variables at 16, followed by Malaysia, New Zealand, and Taiwan at 15; Singapore, Japan, South Africa, Israel, and Russia at 14; the Philippines, Mauritius, and Hong Kong at 13; Australia and China at 12; India at 11; Korea and Indonesia at 10; and Sri Lanka at 7. Malaysia has the most significant variables with 95, followed by New Zealand with 85; Singapore and South Africa with 79; Thailand with 77; Japan with 76; Russia with 74; Taiwan with 68; Israel with 67; the Philippines with 63; Hong Kong with 54; Australia with 51; Mauritius with 50; India with 49; China with 46; Korea with 37; Indonesia with 33; and Sri Lanka with 17. The most significant stationary economy-specific variables region-wide are: GDP PPP percentage World with 126, exchange rates with 125, population with 113, GDP USA with 108, CAB with 110, investment with 107, employment rates with 102, gross savings with 79, poverty rates with 67, short-term interest rates with 58, long-term interest rates with 42, gross external debt with 40, and inflation rates with 24.

5.2.2. Stock Market Integration

The NSI has the most stationary stock market-specific variables at 14, followed by New Zealand, Hong Kong, and Tel Aviv at 13; Australia, Singapore, Shenzhen, Tokyo, Johannesburg, and Mauritius at 12; Shanghai and Jasdak at 11; Korea and Taiwan at 10; Bombay and Thailand at 9; Colombo, Indonesia,

and Osaka at 8; the Philippines at 7; and Malaysia at 6. New Zealand has the most significant variables with 63, followed by Tokyo and Tel Aviv with 60; Johannesburg and Singapore with 58; Taiwan with 56; Shenzhen with 54; Australia with 53; Shanghai with 51; NSI with 48; Hong Kong with 45; Mauritius with 32; Thailand with 27; Osaka with 26; Korea with 24; JASDAQ with 22; Bombay with 21; Colombo and Indonesia with 16; Malaysia with 15; and the Philippines with 5. The most significant stationary stock market-specific variables region wide are: equity market cap with 118, index levels and bond market cap with 83, value of share trading with 69, domestic equity capital with 66, number of companies with 59, domestic bond capital with 53, value of bond trading with 49, stock market in the economy with 47, turnover with 42, capital raised with 41, foreign equity trading with 29, gross dividend yield with 23, foreign bond trading and foreign bond capital with 19, and PE ratio with 10.

7. Summary on Asia-Pacific Integration

A few important caveats regarding stock markets and currency unions are that integration does not imply correlation, as sensitivities between variables may differ. Integration will by default also be less in emerging countries, and even though international markets will increase some efficiencies, they will also increase contagion and volatility. Additionally, it is arguably easier to more efficiently forecast stock exchange mergers than currency unions, as stock markets data is primary, while economy-specific data is secondary. Nevertheless, in an ever-globalising world, what can be considered the home market is becoming more vague, while the possibility of both capital market mergers and currency unions are becoming more dependent on each other.

After reviewing the results and developing an understanding of the characteristics of the Asian-Pacific markets today, it seems that though while these countries may act distant in a political sense from each other, they are actually all quite integrated with each other. The political issues, of course, usually take precedence over everything else, though it definitely seems as if these countries have a lot of

similarities and thus integration prospects. The Asian-Pacific markets are integrated with the American markets, though whether this is affecting their prospects for continued growth at home is difficult to say. There is a movement towards integration in the Pacific, however, and though it is slow moving, this may be a good thing, as by moving slowly the Pacific countries are able to be restrained in their growth policies, and effectively minimise potential contagion consequences from irresponsible and poorly-directed international integration programmes. The Asia-Pacific markets are less involved in the global markets than are the European or American, though they are still quite active on a global scale, as well as they exhibit substantial integration at the regional level.

As far as union possibilities in the Asia-Pacific region, Japan would be the first economy to consider, as they are the second largest in the world. Japan, however, has traditionally maintained relatively closed doors, much like the rest of the Asia-Pacific region. As such, currency union convergence and stock market integration may be more likely to occur in the Oceania region, likely something between Australia and New Zealand, if something were to merge. As for the Asian countries, although China and India have long maintained closed doors themselves, perhaps these two countries, as their population begins to catch up with their economic progress, may take the lead in pushing some sort of currency unions and merged stock markets.

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Appendices

Table VI. Stationary Variables Economies

Variables	Australia	China	Hong Kong	India	Indonesia	Israel	Japan	Korea	Malaysia
GDP USA	Y	N	Y	N	Y	Y	Y	Y	Y
GDP Change	N	N	N	N	N	N	Y	N	N
GNI	Y	N	Y	N	Y	Y	Y	Y	Y
GDP PPP	Y	N	Y	N	Y	Y	Y	Y	Y
GDP PPP %World	Y	Y	Y	N	Y	Y	Y	Y	Y
Investment	Y	Y	Y	Y	Y	Y	Y	Y	Y
Gross Savings	N	Y	N	Y	N	N	Y	Y	Y
Inflation	Y	Y	Y	N	N	N	N	N	N
Employment	Y	Y	Y	Y	N	Y	Y	N	Y
Population	N	N	Y	Y	Y	Y	Y	N	Y
Gross External Debt	Y	Y	Y	Y	Y	Y	Y	N	Y
CAB	Y	Y	Y	Y	Y	Y	Y	N	Y
CAB %GDP	N	Y	Y	Y	Y	Y	N	N	Y
Poverty	N	Y	N	Y	N	Y	Y	Y	Y
IRShort	Y	Y	Y	Y	N	Y	N	Y	Y
IRLong	Y	Y	Y	Y	N	Y	Y	Y	Y
Exchange Rate	Y	Y	N	Y	Y	Y	Y	Y	Y
Totals	12	12	13	11	10	14	14	10	15

This table contains unit root tests of stationarity for the major Asian-Pacific economies for 17 variables.

Table VI. Stationary Variables Economies

Variables	Mauritius	New Zealand	Philippines	Singapore	South Africa	Sri Lanka	Taiwan	Thailand
GDP USA	Y	Y	Y	Y	Y	N	Y	Y
GDP Change	N	N	N	N	N	N	Y	Y
GNI	Y	Y	Y	Y	Y	N	Y	Y
GDP PPP	Y	Y	Y	Y	Y	N	Y	Y
GDP PPP %World	Y	Y	Y	Y	Y	Y	N	Y
Investment	Y	Y	Y	Y	Y	N	Y	Y
Gross Savings	Y	Y	Y	N	N	N	Y	Y
Inflation	N	Y	N	N	N	N	N	N
Employment	Y	Y	Y	Y	Y	Y	Y	Y
Population	Y	Y	Y	Y	Y	Y	Y	Y
Gross External Debt	N	Y	N	Y	Y	Y	Y	Y
CAB	Y	Y	Y	Y	Y	N	Y	Y
CAB %GDP	N	N	Y	Y	Y	N	Y	Y
Poverty	Y	Y	Y	Y	Y	N	Y	Y
IRShort	Y	Y	Y	Y	Y	Y	Y	Y
IRLong	Y	Y	N	Y	Y	Y	Y	Y
Exchange Rate	Y	Y	Y	Y	Y	Y	Y	Y
Totals	13	15	13	14	14	7	15	16

This table contains unit root tests of stationarity for the major Asian-Pacific economies for 17 variables.

Table VII. ARCH Results Economies

Variables	Australia	China	Hong Kong	India	Indonesia	Israel	Japan	Korea	Malaysia
GDP USA	6	-	5	-	6	4	7	5	11
GNI	-	-	-	-	-	-	-	-	-
GDP Change	-	-	-	-	-	-	-	-	-
GDP PPP	-	-	-	-	-	-	-	-	-
GDP PPP %World	7	8	8	-	4	8	10	8	10
Investment	2	3	9	5	6	7	8	6	11
Gross Savings	-	7	-	5	-	-	9	3	12
Inflation	5	4	5	-	-	-	-	-	-
Employment	8	3	5	1	-	7	9	-	10
Population	-	-	9	8	5	11	8	-	10
Gross External Debt	4	3	2	1	4	1	2	-	2
CAB	7	7	7	7	1	2	7	-	11
CAB %GDP	-	-	-	-	-	-	-	-	-
Poverty	-	3	-	6	-	7	8	2	4
IRShort	6	1	2	5	-	2	-	3	6
IRLong	4	4	2	1	-	7	1	2	-
Exchange Rate	2	3	-	10	7	11	7	8	8
Totals	51	46	54	49	33	67	76	37	95

This table contains ARCH tests of the stationary time series elements for the major Asian-Pacific economies for 17 variables.

Table VII. ARCH Results Economies

Variables	Mauritius	New Zealand	Philippines	Singapore	South Africa	Sri Lanka	Taiwan	Thailand
GDP USA	6	9	6	8	11	-	9	6
GNI	-	-	-	-	-	-	-	-
GDP Change	-	-	-	-	-	-	-	-
GDP PPP	-	-	-	-	-	-	-	-
GDP PPP %World	6	7	10	11	8	2	-	9
Investment	-	4	9	9	6	-	10	12
Gross Savings	4	5	5	-	-	-	7	11
Inflation	-	9	-	-	-	-	-	-
Employment	4	8	3	8	5	4	10	4
Population	8	10	7	7	9	4	8	9
Gross External Debt	-	3	-	4	7	1	3	3
CAB	6	9	9	8	10	-	6	3
CAB %GDP	-	-	-	-	-	-	-	-
Poverty	5	5	3	8	4	-	5	5
IRShort	2	7	2	7	-	2	5	3
IRLong	4	1	-	2	9	1	-	1
Exchange Rate	5	9	9	7	10	3	5	11
Totals	50	86	63	79	79	17	68	77

This table contains ARCH tests of the stationary time series elements for the major Asian-Pacific economies for 17 variables.

Table VIII. Stationary Variables Stock Markets

Variables	ASX	New Zealand	Bombay	NSI	Malaysia	Colombo	Singapore	Philippines	Thailand	Indonesia
Index Levels	Y	Y	Y	Y	N	Y	N	N	Y	Y
Value of Share Trading	Y	Y	N	Y	N	Y	Y	Y	Y	Y
Equity Market Cap	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Value of Bond Trading	N	Y	Y	Y	N	N	Y	Y	N	N
Bond Market Cap	Y	Y	Y	Y	Y	Y	Y	N	Y	Y
Number of Companies	Y	N	N	Y	N	N	Y	N	N	Y
Stock Market Economy	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Capital Raised	Y	N	Y	Y	Y	N	Y	N	N	N
Turnover	Y	Y	N	Y	N	N	N	N	N	N
PE Ratio	N	N	N	N	N	N	N	N	Y	Y
Gross Dividend Yield	N	N	Y	N	N	Y	Y	Y	N	N
Total Return	N	N	N	N	N	N	N	N	N	N
Index Return	N	N	N	N	N	N	N	N	N	N
Foreign Bond Trading	Y	Y	N	Y	N	N	N	N	N	N
Domestic Bond Trading	N	Y	Y	Y	N	N	Y	Y	N	N
Foreign Equity Trading	Y	Y	N	N	Y	Y	N	N	N	N
Domestic Equity Trading	Y	Y	N	Y	N	Y	Y	Y	Y	Y
Foreign Equity Capital	N	N	N	N	N	N	N	N	N	N
Domestic Equity Capital	Y	N	Y	Y	Y	N	Y	N	Y	N
Foreign Bond Capital	N	Y	N	N	N	N	N	N	N	N
Domestic Bond Capital	N	Y	N	Y	N	N	Y	N	Y	Y
Totals	12	13	9	14	6	8	12	7	9	8

This table contains unit root tests of stationarity for the major Asian-Pacific stock markets for 21 variables.

Table VIII. Stationary Variable Stock Markets

Variables	Korea	Taiwan	Hong Kong	Shanghai	Shenzhen	Tokyo	Osaka	Jasdaq	JoBurg	Mauritius	Tel Aviv
Index Levels	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y
Value of Share Trading	Y	N	Y	Y	Y	Y	N	Y	Y	Y	Y
Equity Market Cap	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Value of Bond Trading	Y	Y	Y	Y	Y	N	N	N	Y	N	Y
Bond Market Cap	Y	Y	Y	Y	Y	Y	Y	N	N	Y	Y
Number of Companies	Y	Y	Y	N	N	Y	Y	Y	Y	Y	N
Stock Market Economy	Y	N	Y	N	N	Y	Y	Y	Y	Y	Y
Capital Raised	N	Y	Y	Y	Y	Y	N	N	N	Y	Y
Turnover	N	N	N	Y	Y	Y	N	Y	Y	N	N
PE Ratio	N	N	N	N	N	N	Y	N	Y	Y	N
Gross Dividend Yield	N	N	N	N	Y	Y	N	Y	N	Y	Y
Total Return	N	N	N	N	N	N	N	Y	N	N	N
Index Return	N	N	N	N	N	N	N	Y	N	N	N
Foreign Bond Trading	N	N	N	N	N	Y	N	N	N	N	N
Domestic Bond Trading	Y	Y	Y	Y	Y	N	N	N	Y	N	Y
Foreign Equity Trading	N	Y	N	N	N	N	N	N	Y	Y	N

Domestic Equity Trading	Y	N	Y	Y	Y	Y	N	Y	Y	Y	Y
Foreign Equity Capital	N	N	N	N	N	N	N	N	N	N	N
Domestic Equity Capital	N	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
Foreign Bond Capital	N	Y	Y	N	N	N	N	N	N	N	Y
Domestic Bond Capital	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y
Totals	10	10	13	11	12	12	8	11	12	12	13

This table contains unit root tests of stationarity for the major Asian-Pacific stock markets for 21 variables.

Table IX. ARCH Results Stock Markets

Variables	Australia	New Zealand	Bombay	NSI	Johannesburg	Mauritius	Tel Aviv
Index Levels	-	4	7	2	3	11	6
Value of Share Trading	4	3	-	9	8	3	6
Equity Market Cap	8	6	1	2	7	9	8
Value of Bond Trading	-	4	2	4	8	-	9
Bond Market Cap	3	8	4	7	-	-	3
Number of Companies	5	-	-	6	7	5	-
Stock Market Economy	6	2	4	2	3	2	6
Capital Raised	4	-	-	-	-	-	6
Turnover	6	11	-	-	7	-	-
PE Ratio	-	-	-	-	1	-	-
Gross Dividend Yield	-	-	1	-	-	-	-
Total Return	-	-	-	-	-	-	-
Index Return	-	-	-	-	-	-	-
Foreign Bond Trading	7	3	-	3	-	-	-
Domestic Bond Trading	-	-	-	-	-	-	-
Foreign Equity Trading	5	6	-	-	8	2	-
Domestic Equity Trading	-	-	-	-	-	-	-
Foreign Equity Capital	-	-	-	-	-	-	-
Domestic Equity Capital	5	-	2	9	6	-	5
Foreign Bond Capital	-	8	-	-	-	-	5
Domestic Bond Capital	-	8	-	4	-	-	6
Totals	53	63	21	48	58	32	60

This table contains ARCH tests of the stationary time series elements for the major Asian-Pacific stock markets for 21 variables.

Table IX. ARCH Results Stock Markets

Variables	Jasdaq	Osaka	Tokyo	Hong Kong	Shanghai	Shenzhen	Taiwan
Index Levels	6	3	6	9	2	8	-
Value of Share Trading	6	-	3	2	6	6	-
Equity Market Cap	6	4	4	4	9	8	8
Value of Bond Trading	-	-	-	1	6	-	7
Bond Market Cap	-	4	6	6	9	-	5
Number of Companies	1	4	4	9	-	-	7
Stock Market Economy	-	2	8	1	-	-	-
Capital Raised	-	-	1	6	3	5	6
Turnover	-	-	6	-	8	4	-

PE Ratio	-	4	-	-	-	-	-
Gross Dividend Yield	-	-	9	-	-	8	-
Total Return	-	-	-	-	-	-	-
Index Return	-	-	-	-	-	-	-
Foreign Bond Trading	-	-	6	-	-	-	-
Domestic Bond Trading	-	-	-	-	-	-	-
Foreign Equity Trading	-	-	-	-	-	-	7
Domestic Equity Trading	-	-	-	-	-	-	-
Foreign Equity Capital	-	-	-	-	-	-	-
Domestic Equity Capital	3	5	-	1	8	9	6
Foreign Bond Capital	-	-	-	4	-	-	2
Domestic Bond Capital	-	-	7	2	-	6	8
Totals	22	26	60	45	51	54	56

This table contains ARCH tests of the stationary time series elements for the major Asian-Pacific stock markets for 21 variables.

Table IX. ARCH Results Stock Markets

Variables	Korea	Singapore	Thailand	Malaysia	Colombo	Indonesia	Philippines
Index Levels	4	-	7	-	2	3	-
Value of Share Trading	1	5	2	-	2	2	1
Equity Market Cap	5	9	6	4	4	3	3
Value of Bond Trading	2	6	-	-	-	-	-
Bond Market Cap	7	7	4	3	4	3	-
Number of Companies	3	7	-	-	-	1	-
Stock Market Economy	-	3	3	2	3	-	-
Capital Raised	-	8	-	2	-	-	-
Turnover	-	-	-	-	-	-	-
PE Ratio	-	-	3	-	-	2	-
Gross Dividend Yield	-	3	-	-	1	-	1
Total Return	-	-	-	-	-	-	-
Index Return	-	-	-	-	-	-	-
Foreign Bond Trading	-	-	-	-	-	-	-
Domestic Bond Trading	-	-	-	-	-	-	-
Foreign Equity Trading	-	-	-	1	-	-	-
Domestic Equity Trading	-	-	-	-	-	-	-
Foreign Equity Capital	-	-	-	-	-	-	-
Domestic Equity Capital	-	4	-	3	-	-	-
Foreign Bond Capital	-	-	-	-	-	-	-
Domestic Bond Capital	2	6	2	-	-	2	-
Totals	24	58	27	15	16	16	5

This table contains ARCH tests of the stationary time series elements for the major Asian-Pacific stock markets for 21 variables.

Table X. Asian-Pacific Stock Markets' Foreign Presence

	Australia	New Zealand	Jo-Burg	Mauritius	Singapore	Taiwan	Tel Aviv	Tokyo	Hong Kong	Korea	Totals
Australia		18	2		7				1		28
Austria	1										1
Bermuda			2		109				469		580
British V.I.				1	2						3
Canada	4	2	8						1		15
Cayman Islands					17			2	462		481
China					4	1					5
Finland	1										1
France	3				1						4
Germany	5							1		2	8
Hong Kong	1				2	2					5
India					9		1				10
Indonesia	1				1						2
Ireland		1									1
Isle of Man					1						1
Israel					1						1
Japan					4						4
Korea					1			1			2
Luxembourg			5								5
Macau	1						1				2
Malaysia								1			1
Marshall Islands					1						1
Mauritius					1						1
Netherlands An.					1						1
Netherlands	3							1			4
New Zealand	18										18
Nigeria			1								1
Papa New Guin.	4										4
Philippines	2				1						3
Singapore	1	1									2
South Africa	1										1
Spain	2							1			3
Sweden	1										1
Switzerland			1					1			2
Thailand					3						3
UK	4	12	20		2			1	2	2	43
USA	6	2						6		4	18
Zimbabwe			2								2
Total	59	36	41	1	168	3		15	935	8	1266

Shows foreign corporations listed on Asian-Pacific stock exchanges as of January, 2010. Although this does not show all foreign corporations listed on Asian-Pacific stock exchanges since their inception, this does provide an example as to what foreign corporate activity on the Asian-Pacific stock exchanges typically looks like.

Table XI. Annual Listings and Delistings of Foreign Corporations in Asia-Pacific

	Australia	Bombay/NSI	Malaysia	Colombo	Hong Kong	Indonesia	Israel	JoBurg	Korea
1995 Foreign Firms	49	0	3	0	24	0	2	26	0
Foreign Delistings	2	0	0	0	1	0	0	0	0
1996 Foreign Firms	55	0	3	0	22	0	2	27	0
Foreign Delistings	2	0	0	0	3	0	0	0	0
1997 Foreign Firms	60	0	3	0	20	0	2	27	0
Foreign Delistings	2	0	0	0	3	0	0	1	0
1998 Foreign Firms	60	0	3	0	15	0	1	26	0
Foreign Delistings	9	0	0	0	6	0	1	2	0
1999 Foreign Firms	70	0	3	0	13	0	1	23	0
Foreign Delistings	6	0	0	0	3	0	0	4	0
2000 Foreign Firms	76	0	3	0	11	0	1	23	0
Foreign Delistings	6	0	0	0	3	0	0	1	0
2001 Foreign Firms	75	0	3	0	10	0	1	22	0
Foreign Delistings	8	0	0	0	1	0	1	1	0
2002 Foreign Firms	66	0	3	0	10	0	2	22	0
Foreign Delistings	12	0	0	0	0	0	0	1	0
2003 Foreign Firms	66	0	4	0	10	0	4	21	0
Foreign Delistings	6	0	0	0	1	0	0	1	0
2004 Foreign Firms	68	0	4	0	10	0	5	21	0
Foreign Delistings	6	0	0	0	0	0	0	1	0
2005 Foreign Firms	69	0	4	0	10	0	5	21	0
Foreign Delistings	6	0	0	0	1	0	0	0	0
2006 Foreign Firms	78	0	4	0	8	0	0	30	0
Foreign Delistings	0	0	0	0	2	0	0	0	0
2007 Foreign Firms	81	0	4	0	8	0	0	29	0
Foreign Delistings	11	0	0	0	0	0	0	1	0
2008 Foreign Firms	85	0	4	0	10	0	12	44	4
Foreign Delistings	5	0	0	0	0	0	2	0	0
2009 Foreign Firms	85	0	4	0	10	0	12	44	4
Total Delistings	81	0	0	0	24	0	4	13	0

This table shows Annual Listings and Delistings of Foreign Corporations in Asia-Pacific.

Table XI. Annual Listings and Delistings of Foreign Corporations in Asia-Pacific

	Mauritus	New Zealand	Philippine	Shanghai/Shenzhen	Singapore	Taiwan	Thailand	Tokyo
1995 Foreign Firms	0	40	0	0	22	0	0	77
Foreign Delistings	0	4	0	0	1	0	0	16
1996 Foreign Firms	0	40	0	0	30	0	0	67
Foreign Delistings	0	4	0	0	0	0	0	12
1997 Foreign Firms	0	60	0	0	40	0	0	60
Foreign Delistings	0	0	0	0	1	0	0	8
1998 Foreign Firms	0	61	0	0	37	0	0	52
Foreign Delistings	0	3	0	0	2	0	0	11
1999 Foreign Firms	0	65	1	0	54	0	0	43
Foreign Delistings	0	5	0	0	5	0	0	9
2000 Foreign Firms	0	56	2	0	63	0	0	41
Foreign Delistings	0	12	0	0	3	0	0	5
2001 Foreign Firms	0	50	2	0	69	2	0	38
Foreign Delistings	0	7	0	0	2	0	0	4
2002 Foreign Firms	0	49	2	0	67	3	0	34
Foreign Delistings	0	6	0	0	6	0	0	4
2003 Foreign Firms	0	43	2	0	78	5	0	32
Foreign Delistings	0	10	0	0	1	0	0	2
2004 Foreign Firms	0	42	2	0	96	5	0	30
Foreign Delistings	0	10	0	0	1	0	0	3
2005 Foreign Firms	1	42	2	0	97	5	0	30
Foreign Delistings	0	13	0	0	2	0	0	3
2006 Foreign Firms	1	31	2	0	247	5	0	25
Foreign Delistings	0	5	0	0	9	0	0	4
2007 Foreign Firms	1	31	2	0	248	5	0	25
Foreign Delistings	0	7	0	0	8	0	0	3
2008 Foreign Firms	3	25	2	0	312	4	0	16
Foreign Delistings	0	1	0	0	8	1	0	9
2009 Foreign Firms	1	25	2	0	313	4	0	16
Total Delistings	0	87	0	0	49	1	0	93

This table shows Annual Listings and Delistings of Foreign Corporations in Asia-Pacific.

Table XII. Asian-Pacific Governments' Listing Preferences

		1st	2nd	3rd	4th	5th
Asia	China	Frankfurt	EuroNext	Luxembourg	Swixx	
	Hong Kong	Frankfurt				
	Israel	Luxembourg	Swixx	Frankfurt	London	NYSE
	Japan	London	Frankfurt	Swixx		
	Jordan	London				
	Kazakhstan	Frankfurt				
	Korea	Frankfurt	Swixx	Luxembourg		
	Lebanon	Luxembourg	Frankfurt			
	Malaysia	Frankfurt	London	Luxembourg	Swixx	
	Pakistan	Luxembourg				
	Philippines	Luxembourg	Frankfurt	Swixx	Australia	
	Qatar	Frankfurt	Luxembourg			
	Russia	Luxembourg	Swixx	Frankfurt		
	Turkey	Frankfurt	Luxembourg	Swixx		
	UAE	Frankfurt	London			
	Vietnam	Luxembourg	Frankfurt			
Oceania	Australia	Frankfurt	London	Luxembourg	Swixx	
	Fiji	Frankfurt				
	Indonesia	Frankfurt	Luxembourg			
	New Zealand	London	Frankfurt	Luxembourg	Swixx	NYSE
	Singapore	London				
	Sri Lanka	Frankfurt				
Africa	Algeria	EuroNext				
	DR Congo	Frankfurt	EuroNext			
	Egypt	Frankfurt	Luxembourg	Swixx		
	Gabon	London				
	Ghana	London	Frankfurt			
	Ivory Coast	Luxembourg	Frankfurt	Swixx	London	
	Morocco	Luxembourg	Frankfurt			
	R Congo	Luxembourg				
	Senegal	Frankfurt	Luxembourg			
	Seychelles	London				
	South Africa	Frankfurt	Swixx	Luxembourg		
Tunisia	Frankfurt					

This table shows Asian-Pacific Government's Listing Preferences.

Table XIII. Asian-Pacific Governments' Proportional Utilisation of the Global Markets

	Listed Entities	Total Issues	<i>Region Totals</i>		%		<i>Region Totals</i>	
			Entities	Issues	Entities	Issues	Entities	Issues
<i>Asia</i>	China	5	20			0.0080	0.0034	
	Hong Kong	1	1			0.0016	0.0002	
	Israel	5	14			0.0080	0.0024	
	Japan	9	45			0.0144	0.0076	
	Jordan	1	1			0.0016	0.0002	
	Kazakhstan	2	4			0.0032	0.0007	
	Korea	7	29			0.0112	0.0049	
	Lebanon	2	32			0.0032	0.0054	
	Malaysia	4	4			0.0064	0.0007	
	Pakistan	1	3			0.0016	0.0005	
	Philippines	7	155			0.0112	0.0261	
	Qatar	2	12			0.0032	0.0020	
	Russia	5	13			0.0080	0.0022	
	Turkey	3	53			0.0048	0.0089	
	UAE	5	12			0.0080	0.0020	
	Vietnam	2	5	61	403	0.0032	0.0008	0.0973 0.0678
<i>Oceania</i>	Australia	13	44			0.0207	0.0074	
	Fiji	1	1			0.0016	0.0002	
	Indonesia	2	14			0.0032	0.0024	
	New Zealand	5	11			0.0080	0.0019	
	Singapore	1	2			0.0016	0.0003	
	Sri Lanka	1	1	23	73	0.0016	0.0002	0.0367 0.0123
<i>Africa</i>	Algeria	1	1			0.0016	0.0002	
	DR Congo	2	2			0.0032	0.0003	
	Egypt	4	5			0.0064	0.0008	
	Gabon	1	2			0.0016	0.0003	
	Ghana	2	3			0.0032	0.0005	
	Ivory Coast	5	46			0.0080	0.0077	
	Morocco	2	2			0.0032	0.0003	
	R Congo	1	1			0.0016	0.0002	
	Senegal	2	2			0.0032	0.0003	
	Seychelles	1	1			0.0016	0.0002	
	South Africa	6	44			0.0096	0.0074	
	Tunisia	1	4	28	113	0.0016	0.0007	0.0447 0.0190

The regional percentages are based on calculations from the entire population of foreign government listings on stock exchanges.

Table XIV. Summary Statistics Asian-Pacific Economies

Variable	Australia	China	Hong Kong	India	Indonesia	Israel	Japan	Korea	Malaysia
GDP-\$USA	408.85933	1176.338	118.94	454.18567	196.24	88.36667	3474.72	433.17167	82.897
GDP-%Change	3.179	9.863667	5.03666667	5.9873333	5.0546667	4.160333	2.212	6.0616667	5.9
GNI	404.38965	1161.145	120.139445	465.46905	175.68354	85.95699	3505.014	433.71582	79.8666903
GDP-PPP	417.87433	2560.082	144.062333	1281.2627	427.978	96.84367	2681.77	599.77	164.322667
GDP-PPP%World	1.1863333	5.840333	0.39633333	3.2706667	1.1576667	0.263333	8.048	1.4556667	0.425
Investment	30.212753	29.35053	28.6731341	16.869203	20.058107	30.27817	27.43133	43.526022	24.7543561
Savings	21.606667	41.22	31.6733333	25.016667	27.496667	17.08667	29.94533	33.033333	32.2466667
Inflation	4.6883333	5.719333	4.66333333	8.0053333	10.829	49.20267	1.169667	5.7463333	3.14733333
Employment	7.2336667	9.606667	3.78566667	10.456667	11.603333	7.903333	3.409667	3.5796667	4.91
Population	18.091	1186.701	6.164	948.467	191.74867	5.325667	124.3	44.428	20.4986667
Gross External Debt	155.4924	129.7967	87.2122	88.1693	95.916167	37.6932	783.816	101.39927	33.5457333
CAB	-18.752	62.58333	7.02033333	-5.286333	0.333	-0.322	94.82867	4.6076667	5.78433333
CAB%GDP	-4.4266667	2.353	4.89066667	-1.213	0.3863333	-1.425	2.547333	0.6556667	2.685
Poverty	13.02	8.57	6.20666667	29.133333	17.503333	25.92	16.17	17.99	7.44333333
IR Short	9.07	6.41	5.05133333	8.4626667	14.498333	10.8	0.75	9.8	6.34533333
IR Long	9.21	7.53	6.24	8.82	16.02	12.05	2.04	10.63	7.2
Exchange Rate	1.3392751	5.942204	7.49691403	29.194491	4612.0205	2.715434	144.1928	908.71091	2.98448226

This table shows Summary Statistics for the Asian-Pacific Economies.

Table XIV. Summary Statistics Asian-Pacific Economies

Variable	Mauritius	New Zealand	Philippines	Singapore	South Africa	Sri Lanka	Taiwan	Thailand
GDP-\$USA	3.7376667	57.93266667	69.0291	70.901333	140.650667	14.73	222.3047	119.436
GDP-%Change	5.1916667	2.307	6.2245116	6.569	2.371	4.793667	5.845	5.49167
GNI	3.884649	55.56590513	72.527943	70.448062	136.745705	14.52766	208.9664	116.872
GDP-PPP	6.9756667	63.69233333	153.01757	98.766	259.038333	40.962	329.759	254.744
GDP-PPP%World	0.0176667	0.187333333	0.4349333	0.2503333	0.76833333	0.111	0.861333	0.674
Investment	13.830609	25.3150233	16.589191	43.537419	10.6573756	15.68175	23.28722	35.5199
Savings	23.32	18.7	23.356667	44.273333	19.4133333	21.19333	18.46901	30.3367
Inflation	8.7123333	5.535333333	9.6808	2.036	16.158	11.756	2.842667	3.88867
Employment	10.033333	5.981666667	11.336667	3.1116667	35.5033333	8.266667	2.847	2.72433
Population	1.1216667	3.663	68.8591	3.5133333	39.957	17.34167	21.038	58.3653
Gross External Debt	1.4685333	21.30616667	41.6887	8.7585333	24.0543667	7.114267	35.63413	50.6468
CAB	-0.111333	-3.436	-0.1546333	11.007333	-2.787	-0.701	13.10733	-0.22133
CAB%GDP	-2.727	-5.39833333	-1.2404333	10.084667	-0.82333333	-6.033	6.538333	-1.25433
Poverty	11.241667	2.894333333	28.163333	1.17	48.343	22.93333	1.128333	12.56
IR Short	10.539667	10.42	10.15	5.0146667	12.24	9.7	3.06	10.6283
IR Long	12.25	9.39	11.27	6.34	13.23	12.01	3.9	11.7253
Exchange Rate	20.15969	1.644863922	31.501878	1.7819492	4.33864284	59.03289	32.13767	30.622

This table shows Summary Statistics for the Asian-Pacific Economies.

Table XV. Summary Statistics Asian-Pacific Stock Markets

Variable	ASX	BSE	Malaysia	Colombo	Hong Kong	Indonesia	Jasdaq	JoBurg
Index Levels	3197.14	3642.68	875.87	1221.01	13598.32	857.75	65.88	11273.75
Value Share Trading	390690.98	259252.28	73219.46	486.97	483572.52	32001.12	113000.58	122691.32
Equity Market Cap	502231.56	617680.03	168593.25	3161.34	768878.51	66649.31	104038.04	318738.2
Value BondTrading	2203.92	2216.05	591.63	3.55	13.98	0	0	972696.11
Bond Market Cap	69680.49	19014.99	2060	37.63	56227.76	11947.29	0	25556.19
Number Companies	1420.45	4367	722.85	220.9	807.15	279.5	935.2	551.35
Stock Market Econ.	90.68	63.01	154.84	17.49	338.77	26.63	2.1	167.32
Capital Raised	16.79	3.01	11.01	1.06	22.29	4.29	0.26	29.35
Turnover Velocity	63.87	117.59	42.37	14.71	53.97	47.91	105.14	34.9
P/E Ratio	20.49	17.67	15.33	6.74	15.22	13.62	3.84	17.72
Gross Dividend Yield	3.7	1.55	2.65	2.67	3.25	3.43	1.92	2.9
Total Return	12.2	33.37	12.26	13.93	15.6	12.09	-1.92	21.02
Index Performance	9.84	31.12	9.87	11.5	10.81	18.51	-4.15	14.76
ForeignBondTradg	14.73	0	0	0	0	0	0	9.75
DomesticBondTradg	2189.4	2447.77	562.96	3.57	13.98	0	0	972686.37
ForeignEquityTradg	12776.4	0	693.39	6.8	622.07	0	0	28516.09
DomesticEquityTradg	377913.57	259252.28	72460.61	482.39	443393.41	31998.15	112996.58	92962.52
ForeignEquityCaptl	0	0	0	0	0	0	0	0
DomesticEquityCaptl	24753.92	9794	3081.25	49.77	27886.87	3671.81	564.1	7506.14
ForeignBondCaptl	0	0	0	0	5756	0	0	0
DomesticBondCaptl	0	13096.96	330.54	24.76	3412.53	1791.58	0	3580.14

This table shows Summary Statistics for the Asian-Pacific Stock Markets.

Table XV. Summary Statistics Asian-Pacific Stock Markets

Variable	Korea	Mautitius	NSI	NewZealand	Osaka	Philippines	Shanghai
Index Levels	921.54	1235.85	2422.56	2032.52	1258.54	2071.25	2153.14
Value Share Trading	618533.9	260.9	388468.9	12029.24	194829.1	11305.53	1401408.62
Equity Market Cap	332827.69	4759.08	571474.87	28391.93	155399.26	42083.91	1055563.22
Value BondTrading	132340.14	2.15	148968.55	544.91	15785.95	0.17	47236.42
Bond Market Cap	393991.14	8.68	350565.1	15737.54	3152939.84	0	132366.6
Number Companies	962.15	54.17	1118	187.75	1031	216.05	785.9
Stock Market Econ.	52.57	67.85	56.61	40.18	3.52	52.14	34.47
Capital Raised	5.14	0.82	6.35	5.71	0.32	7.29	2.46
Turnover Velocity	186.57	5.65	86.56	41.39	129.11	25.35	108.94
P/E Ratio	17.41	10.01	16.02	16.8	106.05	16.65	31.95
Gross Dividend Yield	1.73	4.1	1.43	5	0.94	1.78	1.41
Total Return	12.99	24.53	28.67	12.21	1.71	17.88	23.59
Index Performance	11.02	21.8	23.38	11.64	0.44	16.2	21.85
ForeignBondTradg	0.19	0	12.59	9.45	0	0	0
DomesticBondTradg	132037.57	2.15	148954.7	534.59	15785.75	0.17	47236.42
ForeignEquityTradg	432.09	7.92	0	1235.89	26.99	20.2	0
DomesticEquityTradg	610991.24	246.35	388433.62	10696.28	191578.5	11302.56	1397053.84
ForeignEquityCaptl	0	0	0	0	0	0	0
DomesticEquityCaptl	7963.37	29.07	12789.98	986.11	3078.28	723.67	22539.28
ForeignBondCaptl	39.01	0	11.09	27.16	0	0	0
DomesticBondCaptl	209876.8	0	75925.88	987.12	6915.35	29.66	32238.47

This table shows Summary Statistics for the Asian-Pacific Stock Markets.

Table XV. Summary Statistics Asian-Pacific Stock Markets

Variable	Shenzhen	Singapore	Taiwan	Israel	Thailand	Tokyo
Index Levels	591.17	1941.44	6163.46	440.76	719.5	1336.38
Value Share Trading	745321.71	110208.16	698312.95	33525.79	67070.26	2328235.15
Equity Market Cap	304671.15	188710.28	325996.08	75549.57	90032.83	3221237.52
Value BondTrading	8059.06	4687.99	419	57780.07	8.24	91357.86
Bond Market Cap	61870.05	223722.14	58504.71	63800.45	23653.59	3204174.21
Number Companies	590.9	452.3	500.8	578.2	411.65	2048.15
Stock Market Econ.	11.07	181.16	102.44	59.31	66.36	78.37
Capital Raised	1	11.36	18.85	11.07	13.26	1.5
Turnover Velocity	183.91	56.8	255.04	43.43	77.5	68.63
P/E Ratio	35.31	23.78	25.9	19.8	13.1	55.47
Gross Dividend Yield	1.22	2.39	3.88	2.77	3.01	1.14
Total Return	34.83	13.79	11.29	15.95	11.91	1
Index Performance	32.58	11.09	8.8	14.56	9.49	-0.44
ForeignBondTradg	0	0	0	0	0	438.32
DomesticBondTradg	8053.52	4687.99	418.6	57780.07	8.24	90123.96
ForeignEquityTradg	0	0	763.04	0	0	1034.31
DomesticEquityTradg	740983.11	110205.7	695720.34	33525.79	67014.8	2320407.65
ForeignEquityCaptl	0	0	0	0	0	0
DomesticEquityCaptl	7257.33	2846.47	5365.13	2341.09	4743.75	20754.35
ForeignBondCaptl	0	0	97.48	65.46	0	0
DomesticBondCaptl	37455.6	24627.14	9285.48	10344.3	30041.95	46020.74

This table shows Summary Statistics for the Asian-Pacific Stock Markets.

Table XVI. Asian-Pacific Corporations in the Americas

Country	NYSE	NASDAQ	BMV	BOVESPA	TSX	TVSX	BSX	Total
Australia	13	16	2	0	29	5	3	68
China	58	68	4	0	4	5	0	139
Ghana	1	0	0	0	0	0	0	1
Hong Kong	10	10	1	0	1	3	7	32
India	13	4	0	0	0	0	0	17
Indonesia	3	1	0	0	0	0	0	4
Israel	6	102	0	0	0	0	0	108
Japan	20	14	7	0	0	0	0	41
Korea	11	7	1	0	0	0	1	20
Liberia	2	1	0	0	0	0	0	3
Marshall Is.	3	0	0	0	0	0	0	3
Mauritius	0	0	0	0	0	0	0	0
New Zealand	2	1	0	0	0	1	0	4
Nigeria	0	0	0	0	0	0	1	1
Papa New Guin.	0	1	0	0	2	0	0	3
Philippines	1	2	0	0	0	0	0	3
Russia	6	0	0	0	0	0	0	6
Singapore	1	9	0	0	0	1	0	11
South Africa	6	5	2	0	9	0	2	24
Taiwan	6	6	1	0	0	1	1	15
Tanzania	0	0	0	0	0	2	0	2
Turkey	1	0	0	0	0	0	0	1
Total	163	247	18	0	45	18	15	506

This table shows Asian-Pacific Corporations in the Americas.