

Increasing Integration between Asia-Pacific Equity Markets

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This is a summary of our latest research on Asia-Pacific equity market integration. Detailed results are contained in our report “*Increasing Integration between Asia-Pacific Equity Markets*”.

Please contact us to obtain a copy.



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Investment Analysis & Strategy

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Agenda

- Asia-Pacific Equity Markets
- Why is this topic important?
- What techniques did I use?
- The Crashes
- How have the markets performed?
- What were the main Short Run outcomes?
- What were the main Long Run outcomes?
- What does this mean?



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Asia-Pacific Equity Markets Studied

- Australia
- China
- Hong Kong
- Indonesia
- Japan
- Malaysia
- New Zealand
- Philippines
- Singapore
- South Korea
- Taiwan
- Thailand



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Why is this topic important?

■ Diversification

- A major concept underlying portfolio management and investment decisions
- Reduction of risk by diversifying investments across a number of assets

■ Integration

- Inverse relationship
- The less integrated assets are, the more successful diversification is likely to be

■ Contagion

- Infection due to crashes
- Global equity markets crashes have affected the inter-relationships between markets in the region



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What techniques did we use?

- Graphical analysis
 - Used monthly equity market price indices
 - Plotted natural logs to determine the relative importance of specific crashes
 - Created 5 periods

- Investigated Short Run integration:
 - Used monthly returns (first difference of natural logs)
 - Compared pairwise **correlation** coefficients

- Investigated Long Run integration:
 - Used natural logs of monthly equity market price indices
 - Conducted **cointegration** analysis
 - Compared integration among groups of markets
(Could only test for Periods 1, 3 and 5)



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The Crashes

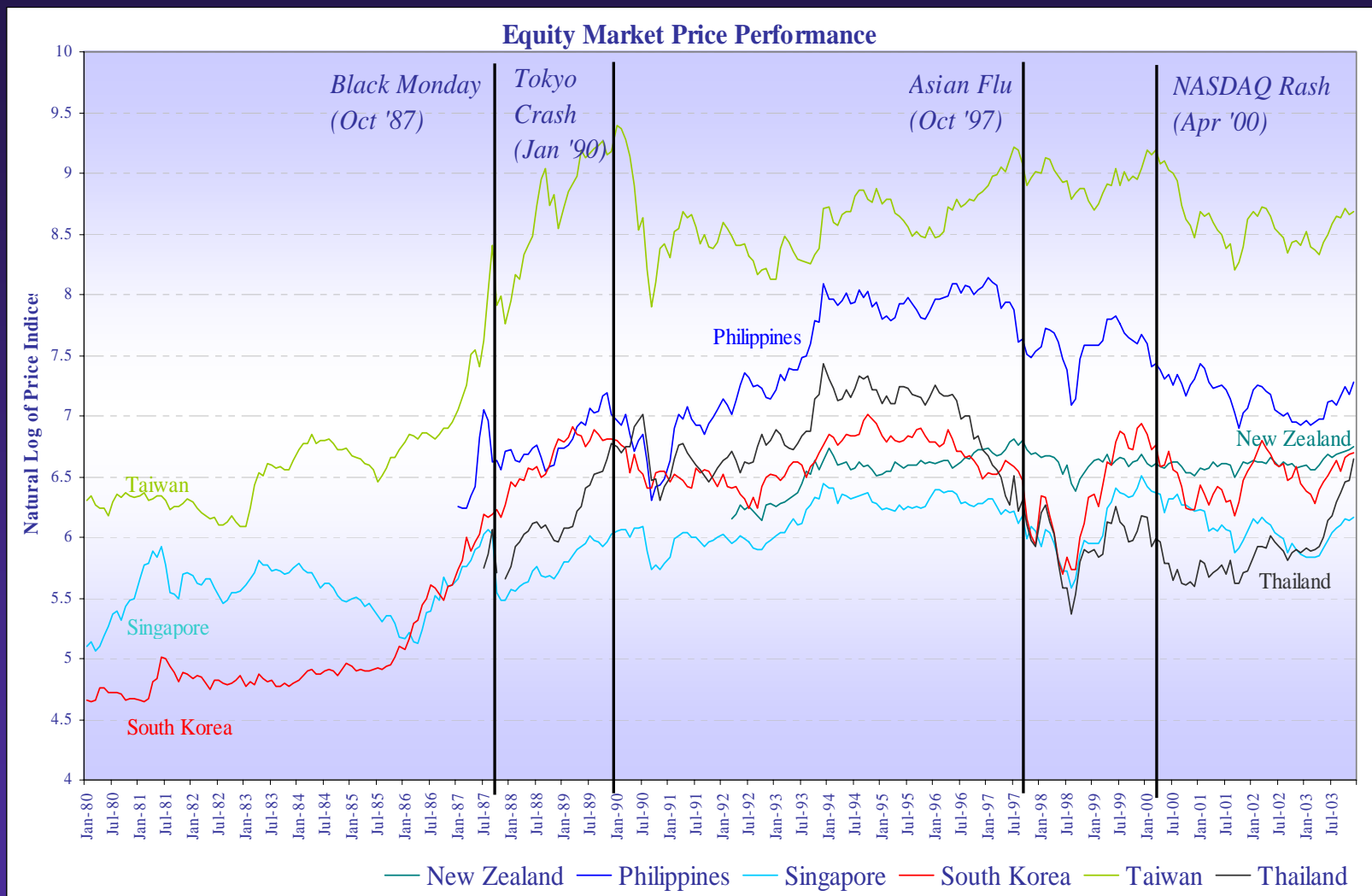
- *Black Monday* – October 1987
- *Tokyo Crash* – January 1990
- *Asian Flu* – October 1997
- *NASDAQ Rash* – April 2000



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How have the markets performed? cont.



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What were the main Short Run outcomes?

- Over all, Short Run integration increased (77.3% of pairs were correlated in Period 5)
 - Opportunities for short term pairwise diversification have fallen dramatically
- Short Run integration increased after each crash (except Black Monday)
 - Opportunities for short term pairwise diversification increased in Period 2



What were the main Long Run outcomes?

- Over all, Long Run integration appears to have increased (0% of pairs were cointegrated in Period 1 -14.5% in Period 5)
 - Opportunities for long term pairwise diversification have fallen slightly

- Long Run integration across the region as a whole is high (when all markets were tested together they were cointegrated in all periods)
 - Opportunities for long term multi-market diversification are scarce



What does this mean?

- Integration has increased, but there are still numerous specific market relationships that are not correlated or cointegrated
 - Although diversification opportunities have fallen, there are still opportunities to reduce risk

- Conclusions drawn from the Short Run analysis often differ markedly from those drawn from the Long Run analysis. (e.g., results from pairwise integration)
 - By relying on only one form of analysis, investors may be missing out on potential diversification opportunities

