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# Asian Financial Integration

Seminar

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# What is financial integration?

- Specifically means markets in which all investors have access to all financial markets without regard to national borders. So, closely linked to openness and lack of barriers to entry and to transactions.
- Relates to financial market liberalisation but is not the same: liberalisation refers to removal of regulatory barriers so would expect integration to follow if barriers are both at the border and behind the border.
- Integration has *implications* for prices (as we will see)
- Very few (no?) complete examples beyond national borders and few even within borders – but globalisation of financial markets implies a trend in some segments

# Benefits of financial integration?

Many regions claim to see benefits from integration:

- Europe, APEC and ASEAN have statements about desirability of closer financial integration

ECB report Financial Integration in Europe (2008)

“Financial integration is a key component of the general economic policy of the EU, as it promotes the development of the financial system, thereby raising the potential for stronger non-inflationary economic growth.”

ADB report on Integration in Asia (2008)

“The case for Asia’s financial development and integration is clear-cut...In short Asia’s financial integration could both bolster the region’s economic growth and reduce its vulnerability to global shocks. Strengthening financial stability regionally would also bolster it globally.”

# But...

Theory specifies only gains from financial  
*development*

- Consumption smoothing
- Investment increases and growth
- Macro-economic discipline
- Increases efficiency of capital allocation
- May enable leapfrogging of stages of financial devlpt

“Integration” *may* achieve this by economies of scale

- Plus competitive pressures may speed process

## Why regional financial integration?

- But cannot say definitively that closer *regional* integration, as conventionally measured, is essential to getting these benefits. In theory liberalisation *per se* gets the gains.
- There is no theory of an “optimal financial area” – nothing akin to optimal currency area theory.
- So no *theoretical* basis for saying that integrating with neighbours or trade partners has particular benefits.

# Political economy?

- Does regional financial integration pave the way for globally integrated markets?
- Does it help to make the case for greater financial liberalisation generally ?
- I.e. a building block for global free capital markets? (analogy with trade)

## Political Economy II

- Such arguments are implied by ADB study
  - (lack of regional integration “damaging in itself”. “National capital markets need to be developed and connected to improve liquidity. Such measures may be easier...regionally.” “ Regional institutions could also foster dialogue, information sharing and peer pressure that promote financial development and integration as well as best practices in financial regulation ...”
- Evidence for Asia suggests the reverse: regional follows global integration



## Costs of “integration”

- “Integration” also implies an increase in openness of financial system
- Empirical evidence broadly supports link between financial openness, efficiency, development and growth
- But openness may also expose countries to external shocks and financial contagion
- Ambivalence & resistance to openness comes from this aspect
  - Resistance also comes from incumbents wanting protection
- Ambivalence is real: ASEAN Blueprint seeks free markets in goods, services, labour but FREER markets for capital.

# Deeper Meaning of Financial Integration

- What is the meaning of financial integration?
- Refers usually to markets for financial instruments (bonds, stocks, interbank money markets, bank accounts)
- Has been used to mean
  - Price arbitrage occurs
  - Large transactions volumes occur
  - Close co-movements between exchange rates or interest rates (monetary integration)
  - Close co-movements exist between consumption streams (financial markets allow risk sharing and consumption smoothing)

## Deeper Meaning II

- “Integration” could mean something deeper e.g. the similarity and interoperability of these systems, or their convergence to such similarity. Not usually studied.
- And could address financial *services* markets but normally does not.

# Measurement

- Most empirical measures reflect the extent of *openness* of financial markets (i.e. the absence of barriers to capital flows)
- And/or the evidence that arbitrage occurs

## Measurement II

- So care is needed in thinking about what conventional measures say about e.g. Asia's financial engagement with the region and the world.
- How to interpret statements that a country or region is "more integrated" with some markets than with others?
- We actually measure only
  - 1) aggregate openness (e.g. regulatory barriers)
- or
  - 2) the results of a set of market transactions ?

## Measurement III

- Measures that directly capture “openness” will normally apply equally to all potential sources of financial flows.
  - in the absence of discriminatory (non MFN) barriers (rare in financial services and financial markets) a financial market cannot be “more open” to some outside markets than to others.
- Measures that reflect transactions tell us about the state of the world *given* the current state of barriers to integration i.e. reflecting preferred choices of risk and return

- The appearance of “closer integration” in some groups of markets is hard to interpret –
  - Need to look further - what would be causing it and what changes would impact on it?
  - Price and quantity measures reflect many influences – non regulatory barriers (“distance”); preferences; unobserved risk characteristics; unmeasured but similar, exogenous influences on price etc
- Many steps between the observation and policy prescriptions about desirable degree of integration and how to achieve it.

# Conventional Measurement of Integration

- For capital markets
- 3 types measures:
  - quantity measures,
  - regulatory or institutional measures
  - price measures



## How integrated are Asia's financial markets?

- On average, Asia holds foreign portfolio assets valued at only about half the European level relative to GDP

but:

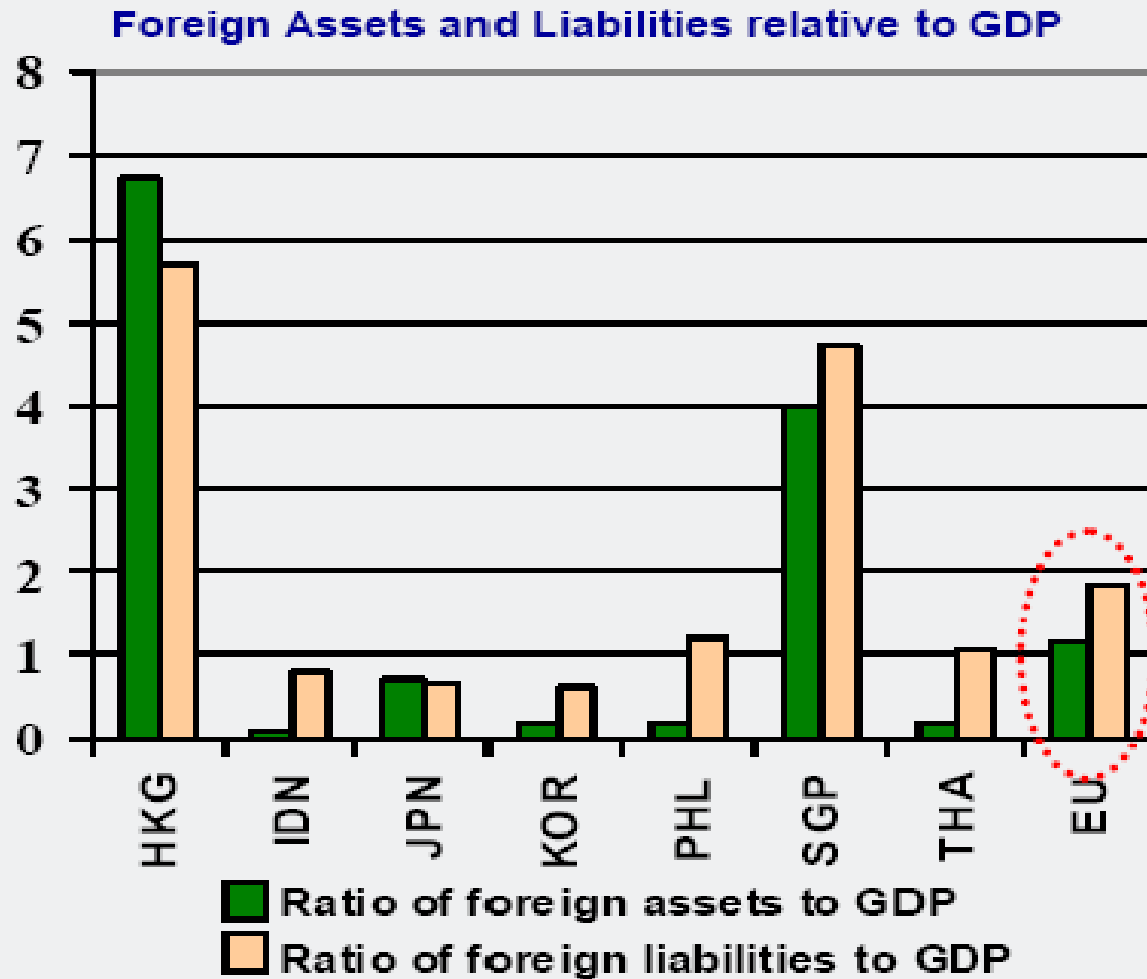
- Compared to the US, the average of Asian economies is quite deeply integrated with the world financial system.
  - The US has a much lower value of foreign assets to GDP than either Asia or Europe. (Large countries hold less)

## How integrated II?

And averages misleading :

- Hong Kong and Singapore, regional financial centres, are much *more* “integrated” than the average European economy.
- Most other countries of the region still hold very modest foreign assets in relation to their GDP.

**Figure 2.2a: East Asia's foreign asset holding relative to GDP is generally low compared with EU**



Source: IFS

Source: Poonkatipbul et al, Bank of Thailand

## Geographic pattern

- In foreign portfolio asset holdings (equities, long term debt and short term debt), Asia's holdings in the region are increasing but still small (i.e. how much of all Asian pf assets held offshore is held in other Asian countries) 4.9% (benchmark is with Europe, 57%)
- Of inward holdings ( foreign assets held in Asian host countries, i.e. liabilities of host) Asian investors hold 8.6% (Eur 62%)

## Japan's role is idiosyncratic

- If Japan is excluded from the East Asian group then 17% of assets held abroad are held in the East Asian region compared with Europe's 57%.
- In equities the proportion is 20% compared with Europe's 53%, while in long term debt the comparison is 15% against 46% and in short term debt 18% against 59%.
- Japan, a large, post-industrial economy, is heavily invested in equivalent economies elsewhere, rather than near neighbours.
- This is often seen as a "problem" but can't make judgements about this without some better data on risk and returns of different portfolios.
- In banking markets Japan's withdrawal after crisis was large and still remains low. Studies suggest is explained by growth rates and health of banking sectors

## Bottom line?

- Asia's asset holdings are regionally largest in equities, then short term debt and then long term debt (excl Japan)
- In liabilities (i.e. inward flows) order reversed:
- regional share is largest in short term debt, next in long term debt and least in equities.
- The reason is that extra-regional investors account for very large proportions of the inward portfolio investments in equities.
- Large role played by investment of industrialising (HK, Korea, Sing) in each other and in developing (China, Indn, Malys, Ph, Th)

# Capital Account Restrictions

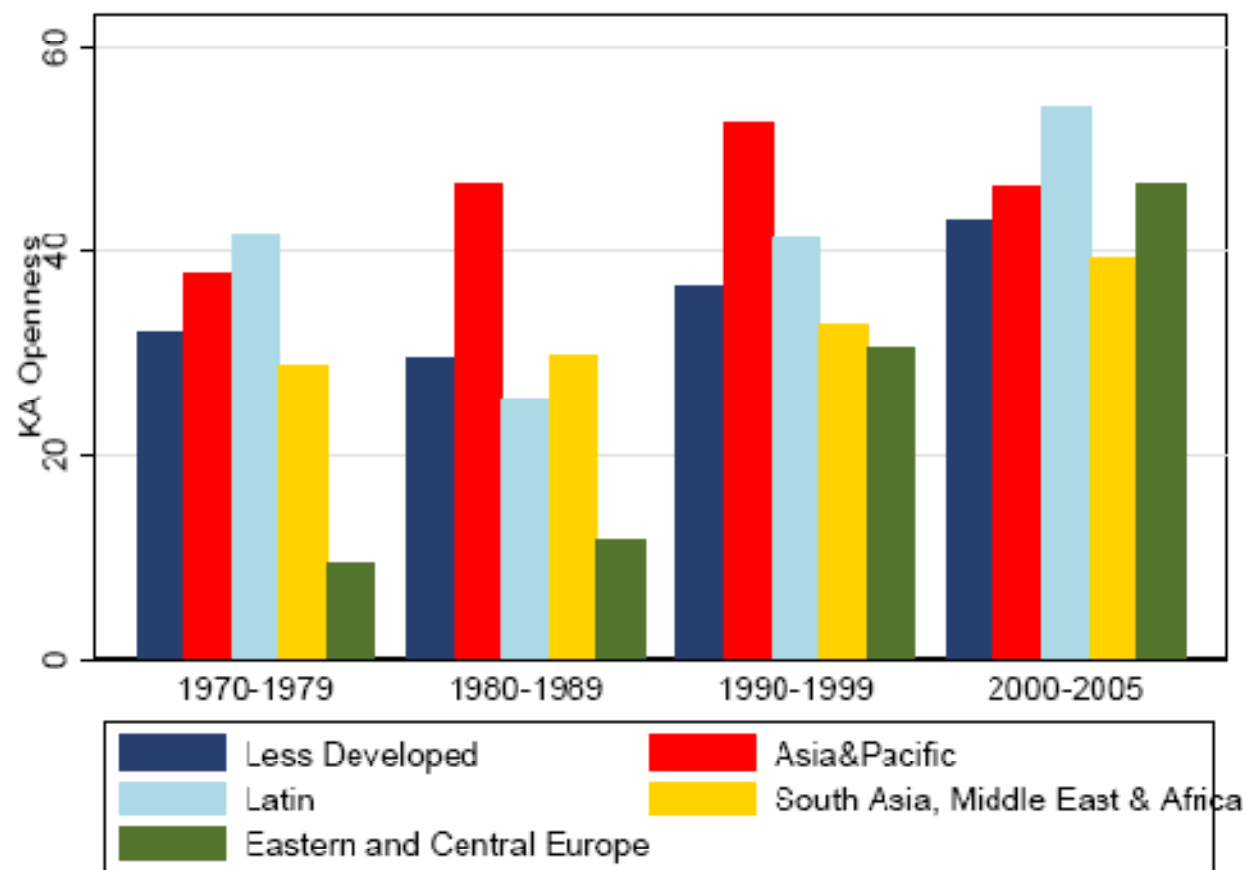
- Direct measures usually based on IMF Annual Report on Exchange Arrangements and Exchange Restrictions. (just an index of “on” or “off”)
- Since 1996 more detailed categories available and several indices based on the average of disaggregated data.
- Chinn and Ito show capital account restrictions have basically not changed or slightly increased since the crisis but were previously quite open so still relatively open region though pace has slowed
  - (Chinn-Ito use principal components rather than average of 0/1 so get a more sensitive index )

## Other measures of institutional restrictions

- Few systematic studies of accessibility of all aspects of financial system
- Proportion of stock market available for foreign investment is one – Edison and Warnock measures show most countries in the region increased the access to stock market for foreigner investment (except Philippines)
- Takagi-Hirose (2004) use principal components on a set of de facto indicators – ex rate volatility, deviations of PPP, deviations of UIP, trade intensity and int rate correlations. Method interesting but not yet the right elements? (Future research)



**Figure 2: Development of capital account openness measured by the *KAOPEN* index  
Less Developed Countries by Region**



Note: The index is normalized with the highest degree of financial openness captured by the value of 100 and the lowest by the value of zero

## More needed but not the main problem?

- Looks like conventional barriers to cross-border flows are not the main problem
  - They have come down, pace has slowed since crisis, (so more is needed) but these are only one barrier to more integration
- Supported by evidence on activities of foreign entities in the regions' markets and the growth of cross-border M&As, foreign-led loan syndication etc (all growing strongly)
  - Foreign bank ownership shares risen
  - Underwriting, lead management and investment bank services are dominated by big international players
- Foreign investment via M&A in other financial services is growing

## Benchmarks: Gravity models

- Small values of cross-border assets (or low shares to GDP) alone cannot necessarily be taken to indicate low integration.
- Gravity models provide some benchmark
- For both portfolio holdings and cross-border bank flows the East Asia regional effect is significant.
  - Country pairs within East Asia hold portfolio assets in each other that are 1.54 times larger than would be held by a random pair of countries. (Lee et al)

## Gravity Models II

- Trade effects account for most of the effect. Once bilateral trade is removed regional effects are very small i.e. financial flows are linked to trade.
- In fact larger bilateral trade flows have such a large positive effect on financial flows that, once that effect is taken out, the additional effect of being within the Asian or European region is negative
  - financial flows in both Asia and Europe are *lower* than they would be between random pairs of countries with similar bilateral trade flows.

## Price measures

- Standard price models, designed to show the absence of arbitrage opportunities, often fail internationally
- Asian regional data also fails – i.e. complete arbitrage is not happening. Also true in Europe though some sectors come much closer.

Price co-movement studies are hard to interpret but

- *Broadly in Asia equity markets show most co-movement though still low; bonds, money and banking still exhibit interest differentials.*
- In my view not much recent increase in integration measured by prices

## Deviations from Covered Interest Parity, October 2006-June 2007 <sup>1/</sup> (In percent of nominal currency value)

	Against the Japanese Yen	Against the Hong Kong Dollar
Hong Kong	-0.006	--
Indonesia	0.409	0.415
Japan	--	0.006
Korea	0.080	0.086
Malaysia	0.017	0.023
The Philippines	-0.178	-0.182
Singapore	0.507	0.513
Taipei, China	-0.118	-0.112
Thailand	-4.002 (-0.040) <sup>2/</sup>	-3.997 (-0.018) <sup>2/</sup>

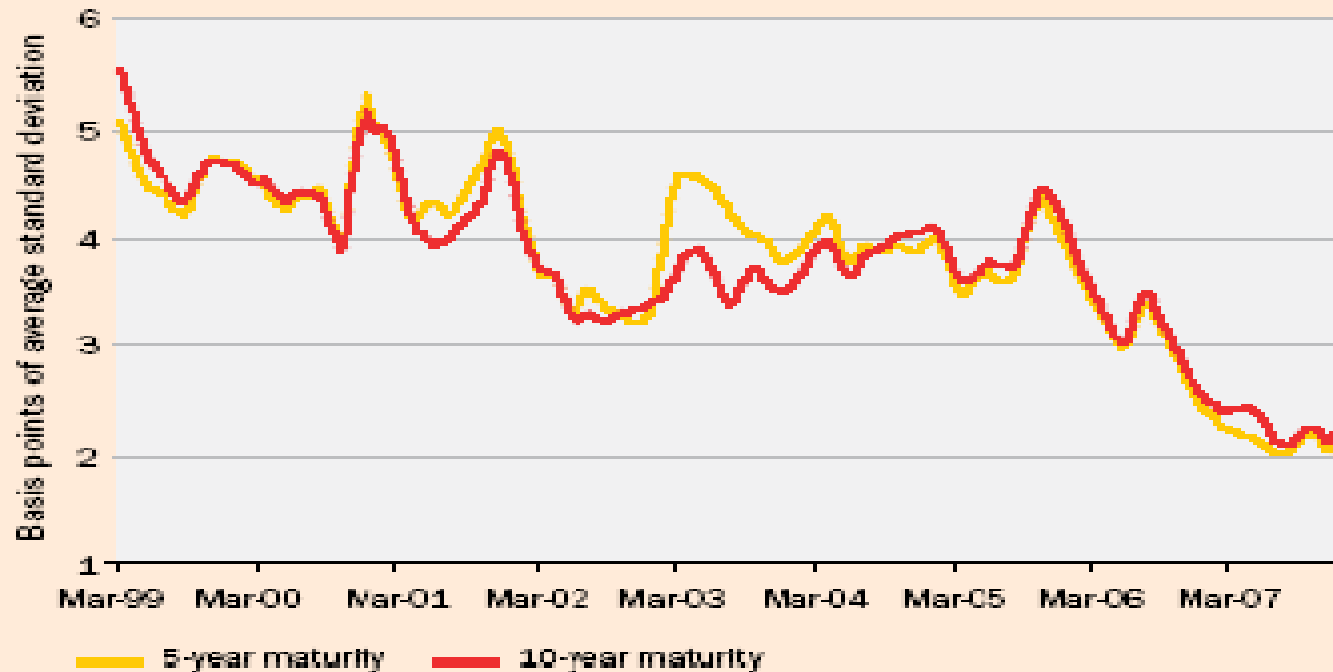
Notes: <sup>1/</sup> 3-month interbank offered rates.

<sup>2/</sup> For January-December 2006 only.

Source: Shinji Takagi, background study for ADB Flagship volumen, 2008 Calculated from Bloomberg.

# Interpretations need care

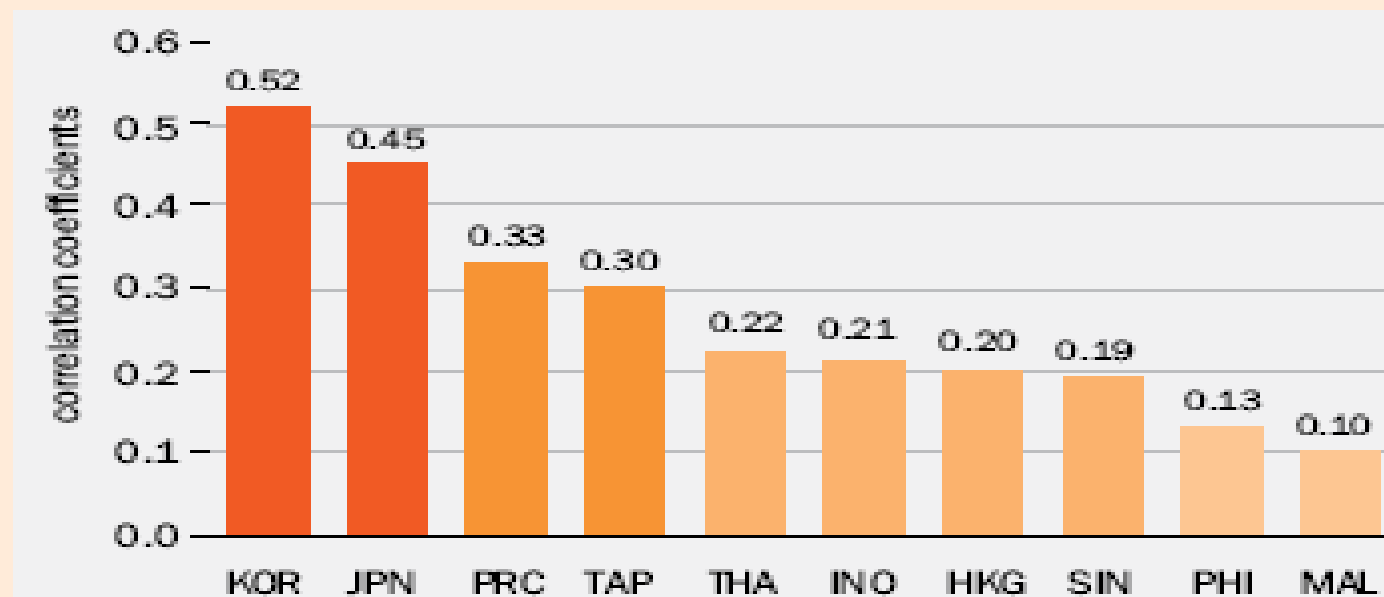
**Figure 4.8. Converging bond yields**  
(standard deviation of cross-market bond-yield spread differentials)



Notes: Average standard deviation (61-day) of government bond yield spreads of 10 Asian currencies (for which data are available) over the dollar. The currencies are the yuan, Hong Kong dollar, rupiah, yen, won, ringgit, peso, Singapore dollar, New Taiwan dollar, and baht.  
Source: Data from Bloomberg 2007. Available: <http://www.bloomberg.com> (accessed December 2007).

## Interpretations need care

**Figure 4.9. Correlation of stock price indexes in Integrating Asia**  
 Absolute changes in the average of bilateral correlation coefficients  
 precrisis (1990:Q2–1996:Q4); postcrisis (2000:Q1–2006:Q2)



HKG = Hong Kong, China; JPN=Japan; KOR=Republic of Korea; INO=Indonesia;  
 MAL=Malaysia; PHI=Philippines; PRC=People's Republic of China; SIN=Singapore;  
 TAP=Taipei,China; THA=Thailand; US=United States.

Source: Asian Development Bank staff elaborations based on Bloomberg data.  
 Available: <http://www.bloomberg.com>.



# Interpretations need care

Some attempts to measure price movements stretch interpretations

The ADB :

“The standard deviation of the absolute average cross-market long-term government bond yield spread over benchmark US Treasury bonds,, has been falling since 1999, although it remained substantial until 2005. Since March 2007, it has fallen to a new low, with an average standard deviation of about 2 basis points. While the dispersion of interest rates in the region has declined over the past decade, it has remained substantial until very recently.

And

“In terms of co-movement, the bilateral correlations of equity price indexes across markets have risen over the past decade,. This is not necessarily proof of greater regional financial integration; it may simply reflect growing links among most Asian bourses via the US or Europe. Nevertheless, Figure 4.9 shows that bilateral correlations among Asian bourses are generally higher in both the pre- and post-crisis periods than bilateral correlations with the US equity market”

But the first shows that regional prices vary more closely with the US and the second that only 3 countries are more closely correlated with the region than with the US.

## Consumption risk sharing

- Asian economies have a lower degree of risk sharing within the region but a higher degree of risk sharing globally than Europe. (Kim, Lee and Shin (2007))
- Out of 10 Asian countries, 4 had significant risk sharing with the region (China, Hong Kong, South Korea and Taiwan) while four had significant global risk sharing (Japan, Philippines, Singapore and Thailand).
- *If this is a potential source of gain from financial integration then large gains still exist from further integration.*

**Cross correlations of real consumption**  
**Cross Correlations of Log Real Consumption (First Difference),**  
**Q1:1985-Q4:1996**

	Hong Kong, China	Indonesia	Japan	Korea	Malaysia	Philippines	Taipei, China	Thailand
Indonesia	0.14							
Japan	0.16	0.39						
Korea	-0.14	-0.30	-0.09					
Malaysia	0.31	0.35	0.24	-0.01				
Philippines	-0.27	-0.32	0.09	0.30	0.13			
Taipei, China	-0.13	0.04	0.21	0.12	0.15	0.09		
Thailand	-0.37	-0.22	-0.13	0.24	-0.04	-0.15	-0.03	
United States	0.28	-0.01	0.07	-0.18	-0.14	-0.28	-0.03	-0.02

Source: Takagi

# Are there natural partners?

- Europe still does not have a single market in financial instruments although progress is observed.
- Some measures suggest unsecured money market is fully integrated, government and corporate bond markets are reasonably highly integrated, equity markets fairly high, credit market is least. (Baele et al, 2004)
- Asia is much further behind both relative to Europe and to the extent of trade integration
- But we don't have a good idea of what we would expect

## Deep Integration: What about Financial Services?

- Curious position of financial services in approaches to integration.
- They are quite different animals from financial instruments (capital markets).
- The ambition to build single markets usually includes ambitions in services generally. They also form (now large) part of trade negotiations.
- But is not clear how to measure achievements in these areas: in theory should be price convergence on fees, charges etc

# Financial Services

- Europe is quite advanced in monitoring financial integration. Currently doing “post FSAP” evaluation.
- Yet main studies (e.g. Adam et al, 2003) focus entirely on conventional measures of capital markets, says nothing about Financial Services.
- Commission staff working paper in 2003 discussed the need for indicators to monitor progress in realising the benefits of integrated market in financial services but doesn’t offer them.
- Annual European Financial Integration Report also uses old style indicators on markets, little on services
- Recent work for ERIA shows barriers to services trade are high in Asia relative to other regions.

# Conclusions

- Evidence is mixed using conventional measures of financial integration for both Asia and Europe
- It's hard to understand what it means to be "more integrated" with some region than another.
- Once restrictions are removed the patterns are result of choices on risk and return
- No theoretical basis to understand which countries will naturally integrate financially
- No obvious policy lessons from this approach to measuring integration
- Could be normative judgements on welfare costs of not enabling consumption smoothing and risk sharing - more research needed
- And empirical studies suggest big gains from liberalisation of both cap markets and services sectors
- There may be lessons from gravity models that are detailed enough to identify the elements of "distance" that could respond to policy (e.g. institutional variability, transparency etc) – so far it appears distance matters even in services

## Conclusions II

- Domestic regulation is a greater barrier to trade in services than border trade barriers on *supply* side
  - Gains from non-discriminatory regulatory reform are large
- Barriers to *demand* side also need thought
  - In retail markets information, transparency, confidence and protection
- Regional solutions to fill in the gaps in trade policy regime are possible
  - Harmonisation of financial sector regulation
  - Mutual recognition of financial regulatory systems (the EU Banking Directive approach)
  - Regional agreements on consumer protection and dispute resolution in cross-border cases



# Meanwhile.....

## Regional *Cooperation* proceeds

- Multiple fora – both public and private
- Regional architecture still evolving
- Not obvious whether one grouping best for specific purposes
- Most countries belong to several groups with finance agenda
- How to judge the progress and implementation of the policy ambitions? Benchmarking and scorecards?
- Is there a gap in regulators' meetings?
  - Looks like it but discussion has begun on Financial Stability Forum
- Not clear that creating new groups is useful but clarifying who deals with what might be.

# Future research

- Better gravity and intensity measures of regional financial flows
- Establish which elements of distance matter
- Use to discuss what causes closer *regional* financial integration – what prevents it.
- Develop measures of integration for financial services:  
Show which barriers matter for trade flows
- Provide priorities for policy actions based on firmer evidence