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East Asian Capital Markets Integration: Steps Beyond ABMI

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1. Introduction

July 2007 will mark the 10th Anniversary of the Asian Financial Crisis. Following the Crisis, the ASEAN Finance Ministers' Meeting in Manila in April 1999 decided to work towards strengthening ASEAN cooperation and also aims at wider (ASEAN+3) cooperation. Since then, many measures, such as the Asian Bond Market Initiative (ABMI) and Chiangmai swap arrangements have been launched to considerable fanfare. There was common recognition that Asian economies need to cooperate more, build deep and liquid capital markets, improve surveillance, and strengthen risk management and supervision in order to avoid future financial crises.

In an earlier paper,[2] it was suggested that despite considerable goodwill and intentions by the different Asian authorities, it has proved difficult to integrate Asian

[1] The authors are grateful to many friends and colleagues for their helpful comments. All opinions and views are personal to the authors.
[2] Andrew Sheng, "Building National and Regional Financial Markets: The East Asian Experience", Emerging Markets Forum, Jakarta, September 2006

Bond Markets due to bureaucratic differences within countries and between countries. This paper tries to take the analysis further by using Network Theory and Douglass North's new institutional framework to understand Asian capital markets can work together, through the "process" of searching for common values, common beliefs, common products and shared infrastructure.

To begin with, conditions for regional integration has improved since the Asian economies have emerged beyond "original sin" (Eichengreen and Hausman, 1999), *i.e.* that most countries cannot borrow internationally in their own currencies. Asians have also understood the dangers of balance sheet weaknesses, particularly the "double mismatch" problem that plagued the Asian crisis economies. Overall, Asian financial strength has improved since 1997/98, by reducing their foreign debt, strengthening their supervisory capacity, opened up their financial system more, and also built up considerable foreign exchange reserves. The last serves to avoid the humiliation of getting once again into IMF conditionality.

More, as foreign capital continued to pour into the Region arising from the improved economic conditions, particularly with the acceleration in growth of China and some recovery in Japan, new product innovation (such as Islamic finance), exchange traded funds, the rise of private equity and hedge funds and the demutualization of exchanges that have pushed for greater capital market integration. As each Asian economy becomes more confident with higher domestic savings, there is awareness that the time has come to open up more to regionalism and globalization.

Nevertheless, there are still many roadblocks in building a matured and vibrant regional capital market in East Asia[3]. The question is just the why, but how, what and for whom? Although the Asian Development Bank has specifically articulated through excellent research and through the creation of an Office for Regional Integration that there are benefits in greater regional integration, there remains considerable questions to be answered on the following fronts: -

- *What is the true Purpose of Capital Market Integration? Who benefits?*
- *What are the Common Principles + Standards that the Region should use?*
- *Which are the Common Products and Why?*
- *Can we agree on Common Platforms?*
- *Can Incentives be built in such a way that winners can help the losers from integration?*
- *How do we reducing Transactions or Friction Costs + Risks during the Integration Process?*
- *How do we Share the Benefits of Integration more equitably?*

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[3] East Asia in this paper is defined as the 10 members of the Association of Southeast Asian Nations (henceforth ASEAN), the People's Republic of China (henceforth China), Hong Kong SAR (henceforth Hong Kong), Japan and the Republic of Korea (henceforth Korea).

These are not trivial questions and should be explored before we begin to rush into specific products or institutions. This paper attempts a framework to think about these issues in a constructive manner.

2. Trade Integration in East Asia[1]

A significant feature of East Asian integration is that trade integration has occurred in advance of financial integration. East Asia has been able to world-class export sectors and industries, and emerged as the global manufacturing supply chain. Three indicators illuminate the importance of trade integration: -

(i) Largest increase in trade networking in the world as measured by trade connectivities – total trading partners for exports and imports;
(ii) Largest trade openness as measured by total trade per GDP
(iii) Larger Share of Total Trade/World Trade, compared with NAFTA (North-South America, and Canada).

Table 1, which shows the trade connectivities from 1985–2005, demonstrates that East Asia is the only region that is expanding its trade networking (Figure 1). Although the value of the trade connectivities of 0.7699 is the smallest value when compared NAFTA, and EU15 (referred to as the Euro zone or countries using the Euro dollar), their coefficient of trade networking has in fact declined.

The degree of trade openness in East Asia has also strengthened trade integration (Table 2). Indeed, not only is trade openness increasing, the importance of East Asia in total world trade relations has also grown significantly (Table 3). East Asian's share of world trade (25%) is already larger than NAFTA (16%), but this is smaller than the EU15 or EU25, due to the huge intra-EU trade.

Table 1
Trade Connectivities as Percentage of World Trading Partners

	1985	1990	1995	2000	2005
East Asia	**0.4849**	**0.5488**	**0.6168**	**0.7546**	**0.7699**
ASEAN	**0.3285**	**0.4023**	**0.4517**	**0.6769**	**0.6831**
Brunei	0.2117		0.2511	0.2885	0.3030
Cambodia	0.0000		0.0000	0.3798	0.4711
Indonesia	0.4089	0.5023	0.5230	0.8759	0.8489
Malaysia	0.5272	0.7576	0.8178	0.7804	0.8614
Philippines	0.4421	0.0000	0.6455	0.7057	0.7119
Singapore	0.4670	0.5064	0.5874	0.8531	0.5957
Thailand	0.5708	0.6476	0.7887	0.8634	0.8842
Vietnam	0.0000	0.0000	0.0000	0.6683	0.7887
Japan	0.7700	0.7742	0.8676	0.8800	0.8863
China ML	0.6247		0.7721	0.8095	0.8510
China HK Rep.	0.6164		0.6974	0.7534	0.7970
Korea	0.5542	0.6164	0.7908	0.8863	0.8925
	0.6413	0.6953	0.7820	0.8323	0.8567
US	**0.6912**	**0.8032**	**0.8863**	**0.9008**	**0.9091**
UK	**0.7188**	**0.7342**	**0.8212**	**0.8289**	**0.8598**
EU	**0.6552**	**0.6746**	**0.7572**	**0.7721**	**0.7941**
NAFTA	**0.6088**	**0.7127**	**0.7874**	**0.8119**	**0.8690**

Source: CONTRADE Database

Figure 1 **Trade Connectivities as Percentage of World Trading Partners**

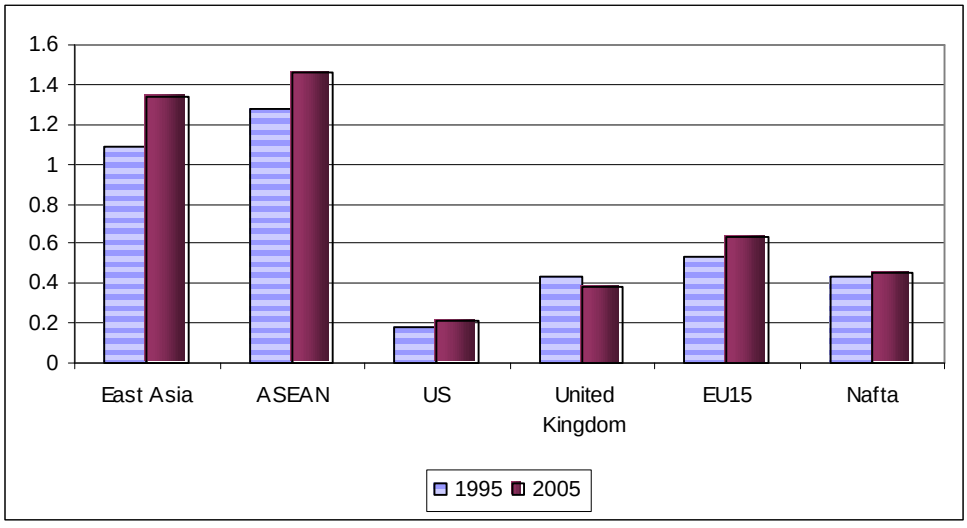


Table 2 Trade Openness in East Asia (1985 – 2005)

	1985	1990	1995	2000	2005
East Asia	0.8836	0.8613	1.0882	1.1229	**1.3395**
ASEAN	1.0688	1.3698	1.2791	1.3204	**1.4554**
US	0.1351	0.1569	0.1830	0.2076	0.2117
UK	0.4623	0.4116	0.4336	0.4309	0.3820
EU15	0.5686	0.5005	0.5346	0.6920	0.6338
NAFTA	0.2710	0.2613	0.4367	0.5022	0.4566

Source: CONTRADE Database

Table 3 Regions' Trade as a Percentage (%) of World Trade

	1985	1990	1995	2000	2005
East Asia	18.17	20.10	25.60	24.51	25.19
ASEAN10	3.54	4.41	6.57	6.23	5.88
US	15.22	13.48	13.57	15.76	12.59
NAFTA	22.04	19.49	20.66	19.78	15.89
UK	5.62	6.06	5.08	4.75	4.08
EU15	38.81	45.34	43.67	34.82	62.77
EU25	38.83	45.36	43.70	34.86	62.83

Source: CONTRADE Database

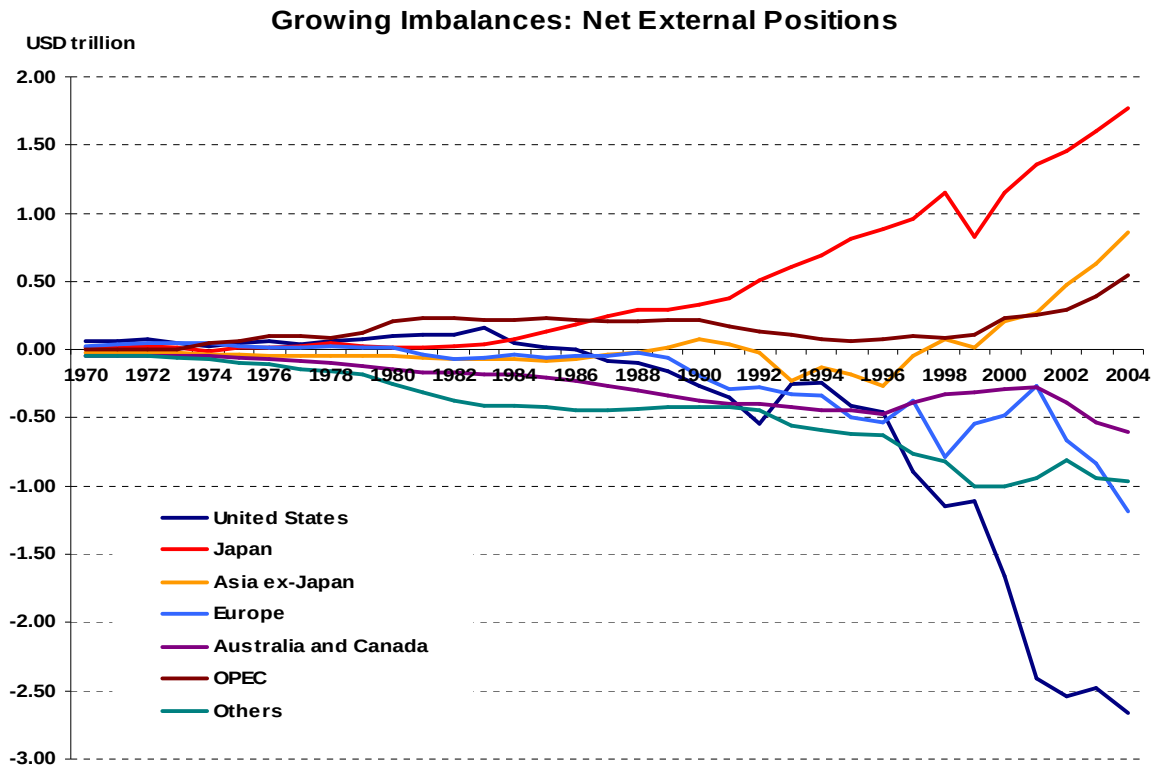
3. East Asia Financial and Capital Markets

East Asia Financial and Capital Markets have three interesting features. Firstly, the success in East Asian exports and high savings rate has created a high level of net foreign asset position, which arose not only because of the current account surplus, but also considerable inflow of foreign direct investment (FDI), and foreign portfolio investment (FPI). This created two distinct phenomena:

(i) High foreign exchange reserves, which Lane and Milesi-Ferritti, 2006 has pointed out that "Asia has become a net exporter of capital" creating the other side of the global imbalance; and
(ii) Savings have flowed back into Asia, through what Dooley, Folkerts-Landau and Garber, 2003 calls the "Total Equity Return Swap" effect.

Through their balance sheet analysis, Lane and Milesi-Ferritti (2006) has pointed out that East Asia is concurrently both an exporter of manufactures and capital (Figure 2). At the end of 2004, Asia had a net foreign asset position of 30% of GDP (US$2.7 trillion), whereas Europe had a net liability of 9.3% of GDP (US$1.2 trillion), and NAFTA had a much larger net liability of 22.9% of GDP (US$3.1 trillion). The global imbalance position appears to be widening rather than narrowing.

Figure 2



Source: World Bank Financial Structure Dataset, February 2006

The second feature of East Asian markets is the fact that its manufacturing prowess is not reflecting in the financial sector, which remains bank-dominated (Table 4). Despite strenuous efforts to develop the bond and equity markets, the Asian financial system remains bank-dominated, with still fledgling bond markets, speculative stock markets and relatively small insurance and pension and social security systems. As the demographic profile of North Asia and the urban economies of Hong Kong SAR and Singapore become older, there is greater awareness that development of deep pension and retirement funds are a matter of high priority.

The banking sectors in Asia (in terms of deposit base) account for 80–177% of GDP, which is large by emerging market standards. The East Asian banking system has remained large, despite the fact that the Japanese banking system has withdrawn significantly from regional lending since the Asian crisis. The Bank for International Settlement (BIS) cross border lending data showed that the Japanese bank lending to the Region fell by around US$250 billion from a peak exposure of US$375 billion in 1994 to only US$125 billion by 2001 (Jeanneau and Micu, 2002).

Since the Asian crisis, the banking systems have improved their risk management but have concentrated on consumer lending rather than SME and corporate financing. The result is that the US and the European investment banks, hedge funds and private equity funds have dominated active investment banking and securities business,

particularly the innovative and therefore profitable part of the business. Indeed, these financial intermediaries undertake the bulk of the cross-border financial activities, whereas national banks have remained essentially domestic based. The Japanese and Korean banks have cut back their branches in Asia after the Asian crisis, whereas non-Asian bank presence in East Asia has increased in size and scope. Only in the last 3 years have some Malaysian and Chinese banks begun to invest in banks within the region.

The third feature is the level of reforms that ASEAN-3 has undertaken especially in the last 5 years. These reforms include:

- Promoting Financial Integration and Cooperation in East Asia Capital Markets;
- Bilateral foreign exchange swaps;
- Regional economic surveillance;
- Regional Asia bond market:
    - The 2000 Chiang Mai Initiative (CMI) on regional swaps.
    - ASEAN Surveillance Process (ASP).
    - The 2003 Asian Bond Market Initiatives (ABMI).
    - The Asian Bond Fund Initiatives (ABF1 and ABF2 created in 2003 and 2004 respectively).
    - The 2005 FTSE/ASEAN Index Series to help standardise market indices.
- Of late, the proposals for Asian Monetary Fund, Asian Currency Index appear to surface in different forms.

These bold reforms aim to speed-up the regional development of the East Asia market integration. The recent 12th ASEAN Summit in the Philippines on 13 January 2007 agreed that the target date for creating the ASEAN Economic Community (AEC) be brought forward by five years to 2015. The AEC is the realization of a single market and production base in order to bolster ASEAN's competitive to meet the challenges of new global competition.

4. Roadblocks in Deepening the East Asia Capital Markets

Despite these significant efforts at the official level, most observers would agree that East Asia is still behind Europe in terms of financial market integration. In particular the capital markets are relatively shallow and contain significant barriers due to a host of reasons, many of which are entrenched:

- Large national differences in market practices, institutional development and regulatory standards, laws and processes.
- High transactions costs in many markets, as brokerage and stamp duties still hinder liquidity.
- Barriers to foreign entry and regulatory conservatism towards financial innovation.
- Conflict between national interests (protectionism) vs. integration (openness).
- Bureaucratic in-fighting and lack of cooperation between public and private interests.

- The lack of a common philosophy and roadmap to integration. While closer cooperation is a clarion call at the level of politicians, these efforts bog down when it comes to specifics.

The reality is that several capital markets in Asia at the domestic level are still some distance away from fulfilling four key functions: efficient resource allocation, good price discovery, sound risk management and effective corporate governance. Some of this is due to the legacy of exchange controls and previously entrenched policy-based lending, which meant that bank oversight still carry some window guidance. All these leads to considerable differences in stages of development of the equity markets, meaning that smaller markets fear that any opening up would mean loss of their own market liquidity to foreign players. At the equity market level, there is considerable segmentation, as institutional investor market is still under-developed and many markets are still dominated by large state-owned utilities/blue-chips. If these lag in terms of delivery of profits and growth, then the whole market does not offer the attractiveness relative to other markets that do deliver growth and total return.

On the other hand, although corporate governance and securities regulation has been tightened in the last few years, there are still many small stocks that are "penny stocks", which are not pulling their weight in terms of value delivery and corporate governance. If retail and foreign investors feel that their domestic markets are not protecting their property rights fairly, efficiently and transparently, then it is not surprising that they avoid the domestic market and diversifies into funds abroad (in developed markets). Foreign fund managers shun smaller markets because they lack the depth of liquidity and larger investments could cause huge swings in prices that would be blamed inevitably on them when the market falls.

There is no doubt that most policy makers hope that the domestic capital market will benefit from more competition and opening up, that would improve the intermediation better. In particular, there is awareness that the large amount of domestic savings is not being channeled to help rural and SME funding, as well as long-term social infrastructure.

Table 4: Financial Structure in Selected Countries, 1990 and 2005 (% of GDP)

	Bank deposits		Equity Market		Bond Market		Insurance Premiums	
	1990	2005	1990	2005	1990	2005	1990	2005
ASEAN								
Brunei	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Cambodia	4.0[3]	14.4	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Indonesia	29.8	36.2	4.4	27.1	0.4	19.0	0.9	1.5
Lao PDR	4.0	17.3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Malaysia	52.1	93.5	100.7	143.6	69.8	90.4	3.0	3.7
Myanmar	7.9	8.9[5]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Philippines	24.1	45.8	20.6	35.3	22.1	38.8	2.0	1.5
Singapore	74.3	102.3	95.8	163.4	27.8	58.0	3.0	8.8
Thailand	56.8	78.7	29.2	68.0	9.7	41.1	1.7	3.6
Vietnam	10.9[4]	38.7	n.a.	n.a.	n.a.	n.a.	0.5[3]	1.6
ASIA – Others								
China	75.6	177.8	2.4[1]	32.0	8.5	25.6	0.8	2.7
Hong Kong SAR	205.6	242.3	107.2	528.1	1.5	26.9	3.0[1]	9.9
India	31.4	52.2	10.4	60.1	19.9	33.8	1.5	3.2
Japan	100.0	123.2	121.7	93.8	85.9	192.5	8.5	10.6
Korea, Rep. of	32.6	68.8	48.2	72.9	34.1	78.1	11.0	10.5
Taiwan	56.8	79.7	107.6	134.8	17.0	55.9	n.a.	14.2
LATIN AMERICA								
Argentina	5.5	21.3	2.7	28.2	9.8	15.4	2.4	2.7
Brazil	15.3[1]	23.9	6.7	50.8	2.2[1]	56.5	1.4	3.0
Chile	28.2	31.6	38.3	110.5	29.0	37.1	2.7	3.9
Mexico	14.1	23.0	10.6	21.9	21.1	24.2	1.1	1.8
OTHERS								
Russian Federation	12.9[2]	24.6	0.1[1]	43.1	0.4[2]	2.7	n.a.	2.8
South Africa	48.3	60.0	120.8	170.5	100.2	43.2	9.6	14.4
SELECTED OECD ECONOMIES								
Australia	49.0	72.1	40.6	113.5	35.6	50.9	7.3	7.4
Canada	43.5	64.8	46.9	119.7	72.3	70.0	5.4	7.1
Germany	53.8[1]	98.1	21.7	463.6	51.6	75.1	5.7	7.1
Switzerland	102.5	137.2	70.6	242.4	57.8	64.6	7.8	11.2
United Kingdom	87.8	122.1	85.2	134.7	36.8	46.9	9.6	13.7
United States	59.6	57.9	57.5	134.6	122.0	158.0	8.3	9.2

Sources: CEIC data; World Bank, Financial Structure Dataset, February 2006
1. 1992 data; 2. 1994 data; 3. 1995 data; 4. 1996 data; 5. 2003 data.
n.a. denotes not available

4.1 Regional Equity Integration Lagging behind Regional Trade Integration

This section examines why East Asian markets remain small relative to the global markets. First, of the total global market capitalization of US$42 trillion in 2005 (see Table 5 and Figure 6), East Asia accounted for 16% (US$ 6.7 trillion), and the market cap for ASEAN was barely 2%. The global equity market remains heavily dollar-based (55%), mainly to the depth and size of the US markets (New York Stock Exchange and NASDAQ). Although there are some signs that the tight legislation, such as Sarbanes-Oxley, may have been cumbersome, which has resulted in some regulatory arbitrage, by and large, many leading emerging markets are still quoted in American Depository

Receipts, with liquidity in such ADRs being stronger in New York, than in the home markets.

Table 5 World Market Capitalization

Market Capitalization	2000	2001	2002	2003	2004	2005
World (total) - US$ mn	31982402	27640836	23270879	31740572	38627320	41748202
East Asia	4885450.5	3819637.8	3622130.4	5277400.6	6186957.1	6716334.3
Japan - ¥ mn	3157090.2	2251795.5	2126041.1	3040756.8	3678355.5	3672045.5
South Korea - Won mn	171586.8	220046	249638.6	329616	428648.8	718180.1
China - RMB mn	580885.65	523766.09	462909.98	680960.18	639517.25	781174.53
Hong Kong, China - HK$ mn	623491.43	505991.8	463020.48	714299.17	861241.73	947109.97
Indonesia - Rp mn	26834.194	23005.538	29991.378	54659.092	73250.64	81428.12
Malaysia - RM mn	116934.8	120007.4	123872.4	168376.2	190010.5	180214.11
Philippines - Ps mn	25958.542	21223.763	18550.315	23566.516	28947.758	40150.207
Singapore - S$ mn	153178.78	117450.75	101933.59	146102.74	171578.2	172492.64
Thailand - Bt mn	29490.095	36351.014	46172.571	119063.87	115406.76	123539.11
ASEAN - US$ mn	352041.94	317923.08	320485.26	511570.96	579163.67	597509.64
NAFTA - US$ mn	16070629	14681629	11776552	15282754	17673188	18058619
USA – US$ mn	15104040	13854620	11098100	14266270	16323730	16506452
United Kingdom - £ mn	2580626.2	2179319.2	1856535.7	2470035.3	2796370.1	2840555.6
Euro Zone - US$ mn	5426029.1	4315712.3	3504952.8	4957763.2	6815147.5	7318832
EU – US$ mn	8506625.5	6866154.8	5701269.7	7926073.5	10330917	10941530
Mercosur - US$ mn	465386.94	448111.7	290007.84	377490.32	516488.69	711288.72

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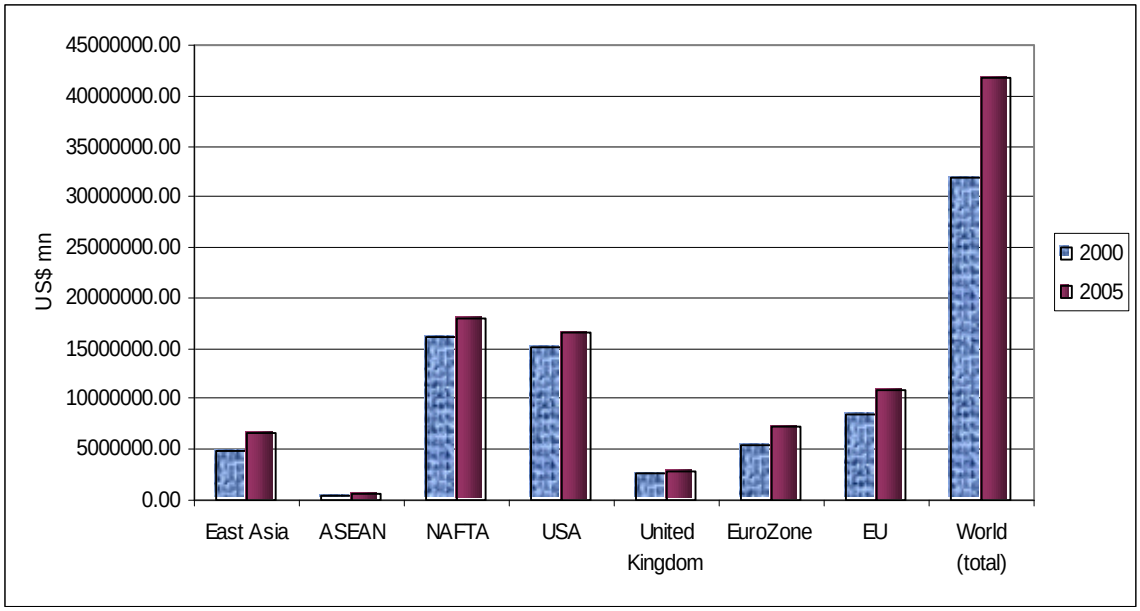
The lack of depth in the equity market is also regarded as one of the culprits of the crisis in 1997/1998. Since the crisis, the East Asia equity markets show more integration with the US market, than with each other (see Table 6). It is thus very clear fund managers would prefer to place their money in the US equity markets, and with that comes much of financial outflows from East Asia heading for the US market. In the pre-crisis period the equity market was very weak and were negatively correlated with some the of the bellwether indices like the NASDAQ and the NYSE of the US (average correlation of 0.021), and the Euronext Brussel of European market (average correlation of 0.066). In the post-crisis period, the market indices for the East Asia countries were highly and strongly correlated with the US (average correlation of 0.602) and the European (average correlation of 0.441) market.

Figure 6 Absolute Value of Market Capitalization (US$ Million)



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4.2 East Asian Debt Markets Still Relatively Shallow and Lack Integration

The reforms by ASEAN+3 have worked, but it is still not possible to say that Asia has deep and liquid bond markets, despite the fact that the scale of regional bond market expanded more than 4.5 times (annual amount) in 2005 (see Figure 7). Most of the growth in the bond markets has been in the Korean and Chinese markets. In terms of its ratio to GDP, East Asian bond markets have increased from 16.5% to 48.0% over the last eight years. The reason why these markets are not that integrated is that the major pension and long-term funds in the Region are not yet significant buyers of each other's bonds. This is partly due to conservative investment policies, but also an ignorance of each other's markets.

In currency terms, the US dollar and the Euro still dominate the international bond markets. Together, they accounted for around 90% of total issues in the first quarter of 2005.

Table 6 Stock Market Indices Integration: Pre-and Post Crisis Period

Pre-Crisis (1990-1997)

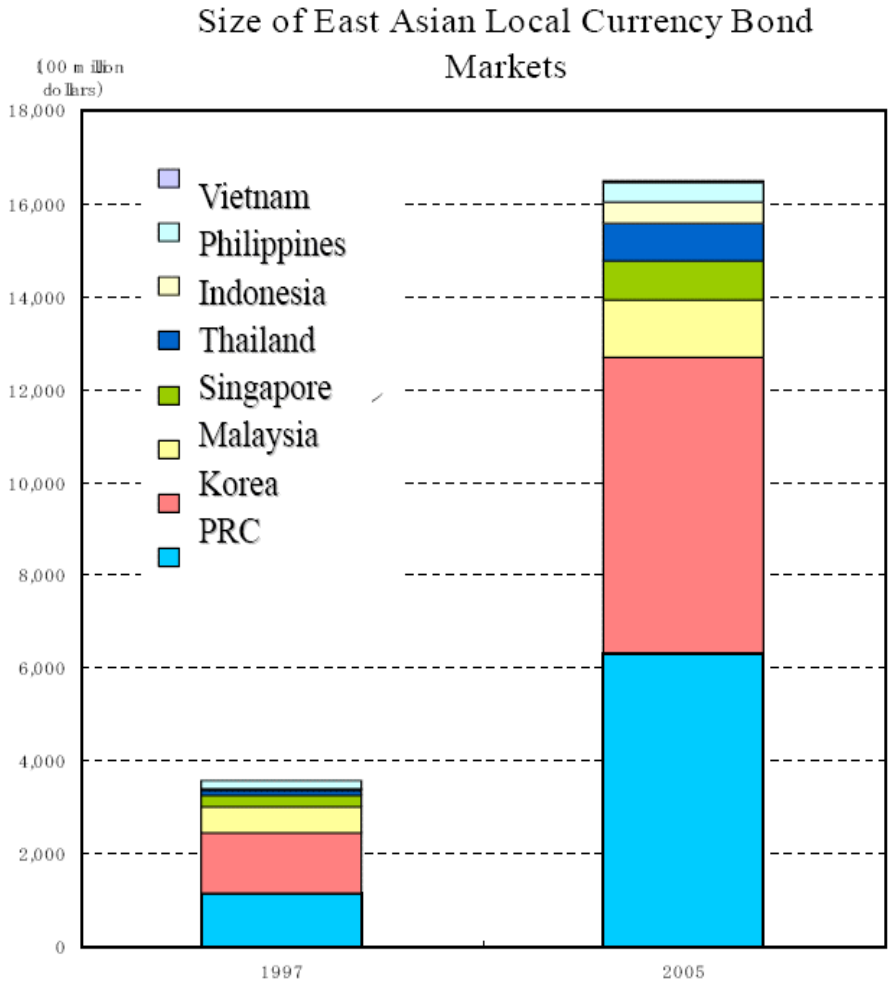
	JP	ROK	CH	HK	TW	ID	MY	PH	SG	TH	US	UK	EU
JP	1												
ROK	0.430	1.000											
CH			1.000										
HK				1.000									
TW	-0.432	-0.129			1.000								
ID	-0.065	0.366			0.531	1.000							
MY	-0.103	0.535			0.373	0.870	1.000						
PH	-0.259	0.459			0.588	0.832	0.952	1.000					
SG	-0.159	0.562			0.428	0.751	0.935	0.958	1.000				
TH	0.132	0.868			-0.022	0.489	0.745	0.676	0.817	1.000			
US	-0.714	-0.546			0.741	0.297	0.157	0.366	0.212	-0.343	1.000		
UK	-0.748	-0.347			0.788	0.471	0.380	0.576	0.443	-0.089	0.964	1.000	
EU	-0.702	-0.511			0.834	0.368	0.189	0.401	0.248	-0.296	0.978	0.962	1

Post-Crisis Period (1998-2005)

	JP	ROK	CH	HK	TW	ID	MY	PH	SG	TH	US	UK	EU
JP	1												
ROK	0.724	1.000											
CH	-0.453	0.212	1.000										
HK	0.854	0.639	-0.240	1.000									
TW	0.748	0.592	-0.372	0.528	1.000								
ID	0.547	0.886	0.264	0.635	0.405	1.000							
MY	0.557	0.835	0.314	0.761	0.445	0.931	1.000						
PH	0.801	0.601	-0.543	0.595	0.820	0.580	0.469	1.000					
SG	0.925	0.742	-0.269	0.956	0.737	0.657	0.765	0.714	1.000				
TH	0.274	0.713	0.409	0.398	0.352	0.842	0.811	0.391	0.457	1.000			
US	**0.755**	**0.647**	**-0.201**	**0.840**	**0.490**	**0.737**	**0.724**	**0.745**	**0.788**	**0.495**	1.000		
UK	0.856	0.304	-0.724	0.711	0.639	0.145	0.189	0.712	0.731	-0.132	0.666	1.000	
EU	0.713	0.563	-0.408	0.499	0.546	0.539	0.364	0.855	0.538	0.196	0.793	0.693	1.000

Source: World Federation of Exchanges

Figure 7



Source: Sakakibara (2006) based on data from Asia Bond Monitor, March 2006

5. Key Challenges Beyond ASIAN Bond Markets Initiatives (ABMI)

We now come to why it is so difficult to push ahead with capital market integration, which is clearly part of the whole game plan for greater regional integration. There are many hindrances that could be observed and hindrances that are non-observable. It is too easy to say that political will alone will solve these barriers to integration. Indeed, there are those who question whether there is a need to integrate regionally, since one has a choice to integrate globally.

Just as the single most important problem in financial markets is information asymmetry, the single most important obstacle to market integration is the huge differences in Initial Conditions within East Asia. Firstly, there are at least five economies with OECD level incomes per capita and level of sophistication (Japan, Korea, Singapore, Hong Kong SAR, and Taiwan), whilst there are still relatively poor

and underdeveloped economies such as Cambodia, Laos, Myanmar and Vietnam (CLMV).

Secondly, Japan is still the largest economy in Asia by a significant factor. Despite the fast growth of China, Japan's GDP is roughly equal to the rest of East Asia put together and its financial assets are roughly double the rest of Asia put together. Hence, Japan will play a crucial role in whatever shape Asian integration takes, but the historical legacies of conflicts with the rest of the Region play an important obstacle to common understanding. No integration effort in Asia can succeed without some kind of detente in understanding between Japan and its neighbours, similar to that between Germany and the rest of Europe.

Thirdly, even as there is now recognition that the Yen would have difficulty displacing the dominant roles of the US Dollar and the Euro in global financing, no integration can proceed smoothly also without resolving whether there should be an Asian Currency Unit and how this could evolve and under what monetary or central banking arrangements?

We work towards a constructive step forward by re-thinking Asian integration in terms of its key principles of integration, its architecture and the "process" by which integration occurs.

In sum, we have to go back to basic principles for integration: -

- Why should we integrate?
- For Whom should we integrate?
- How should we begin the "process" of integration?

Following on recent work, we now use Network Theory and Nobel Laureate Douglass North's Institutional Framework to think about the process of integration. If we agree with North, then the process of economic change is all about common mindsets.

Following North[4], we understand that the "process" of economic change involves institutional and organizational evolution, and this has an architecture, that is: -

- All economies and markets are path dependent, based on initial conditions shaped by geography, demography, history and culture.
- Different institutions and organizations evolve differently in response to changes in environment (competition/warfare, globalization, global warming etc) and to social beliefs about how to respond to these changes.
- "Organizations ... are groups of individuals bound by some common purpose to achieve objectives." North (200)
- "Institutions affect the performance of the economy by their effect on the costs of exchange and production. The major role of institutions in a society is to reduce uncertainty by establishing a stable (but not necessarily efficient) structure to human interaction". North (2005).

[4] See particularly North (2000) and North (2005)

- Markets are networks and network behaviour conforms to certain power laws[5].
- Whether each member joins an institutional or organization depends on its perception of its importance in the ultimate Network or Institutional Architecture and the benefits/risks or costs to the member.

5.1 Markets are Networks

There is increasing recognition that markets are actually networks, across which participants trade property rights, such as equity, currency and the like. If this is true, then networks conform to Metcalf's Law, which states that the "value" or "power" of a network increases in proportion to the square of the number of nodes on the network. This phenomenon explains why economies or corporations try to expand as fast as possible, in order to maximize the value of their network and gain economies of scale. Growth can be achieved through acquisition or mergers, so that integration is only part of growth strategy.

Physicists, such as Barabasi, were first to point out that nodes do not link at random – there is a "preferential attachment coefficient". In other words, there are reasons why nodes link with other nodes to form hubs, because of the efficiency of certain hubs. Faster connection through a hub means that transaction costs are reduced to the benefit of all users.

Because networks grow through linkages, the architecture of network has what Barabasi call a "scale-free, self-organizing behaviour". It is path driven; because the way a network evolves through alliances, acquisitions or failure reflect its history and experience.

Networks also exhibit "winner-take-all" power laws where highly linked hubs dominate in number of links, whereas small nodes have few links.

Network Theory is superior to the neo-classical economic theory in understanding institutional change because self-organizing behaviour involves both maximizing behaviour as well as survival behaviour. Nodes (or market participants) in the face of huge information asymmetry do not just maximize utility; they have difficulty evolving strategies simply to survive. Hence, coalition behaviour is also survival behaviour in the face of a common threat. Integration reduces risks through sharing or distribution of risks throughout the network.

Finally, the scale-free growth or decline of networks through expansion, coalition or collapse is a more dynamic depiction of competition and cooperation behaviour in markets. Markets are fundamentally shaped by the competition between hubs for links with nodes, reflecting Metcalf's Law. Every hub tries to be the dominant hub, whilst other hubs may ally in order to prevent that happening. They compete through what we have called elsewhere "Network Altruism", which is not true altruism. This is discussed in the next section.

[5] See Barabasi (2003) and Castell (1999).

To sum up, neo-classic theory is a special case of a perfect network, across which there are no transaction costs, with perfect information and nodes link at random. Once these conditions are relaxed with information asymmetry, high transaction costs and preferential attachment, markets behave as we currently observe them, with all their imperfections, idiosyncrasies and rise and falls.

As Douglass North conceptualizes in historical terms, markets are network institutions that are path dependent, driven by ever changing and interactive behaviour between market participants acting as hubs or nodes. This switching of allegiance to different networks clearly mean that markets as networks are dynamic and always in transition or motion.

5.2 Preferential Linkage vs. Network Altruism

We now use Network Theory to explain the motivations for integration or disintegration. As Barabasi pointed out, nodes do not join hubs at random – they do so because the hub provides superior benefits relative to costs (relative to other hubs). The fundamental truism of markets is huge information asymmetry, not only in terms of FLOW costs of search, but also the STOCK of knowledge, which covers individual experience and institutional experience, the latter being the collective wisdom gained through history and bitter experience of wars, disasters and crises. From the demand side, nodes do not link at random, because they search to link with the hub, which offers the best benefits with the lowest risks.

On the other side of transactional exchange, the supply side of Hubs implies that they must be able to provide "Network Altruism" due to the Cluster Effect. They offer benefits to the user nodes through economies of scale, superior technology, standardization and lower transaction costs. The more a Hub can offer superior benefits in order to induce "preferential attachment", the more links and the more value generation through Metcalf's Law. This phenomenon has become commonly understood because websites such as Hotmail, Yahoo and Google each compete intensely through giving superior or free service in order to attract users.

Once users link with a particular hub, there are obvious costs in switching, and users will only shift once the benefits of shifting clearly outweighs the costs of remaining with a particular Hub. Nodes enjoy such "Altruism", but fear that the dominant hub may exploits its monopolistic powers and tax them, so that they hedge also links with other hubs with less obvious benefits. In other words, node-hub linkage suffers from the same Principal-Agent trust dilemma in corporate governance. How does the node know that the hub will not betray its trust?

Consequently, every network must have its "rules of the game" in which the players all obey rules that create social good and prevent free rider or social losses. Although the Hub can provide that enforcement benefit cheaply, there must be a rule to check and "regulate the regulator".

To sum up this overview of Network Theory, we conclude that before integration can begin, there must be a process to find out what benefits, costs, and areas of

commonality can be shared, including products, platforms, rules, who to enforce and what checks and benefits are there for everyone.

5.3 Network Architecture

There are fundamentally three types of network architecture: the centralized star network, where there is a single dominant hub, the distributed network where there are several large competing hubs, and an Internet structure, which is truly flat and self-organizing. Figures 8–10 provide three distinct forms of network architecture: (a) Centralized (Star) Network, with a dominant player (*e.g.* Microsoft); (b) Decentralised Network with several larger hubs and allows more choices (*e.g.* airports as regional hubs); (c) Distributed Network with no key hub (*e.g.* World Wide Web or the Internet).

Barabasi and others have shown there are trade-offs between different structures in terms of efficiency versus robustness. An Internet structure is widely distributed and can be much more resilient than a Star structure, where breakdowns in the key hub could cause network failure as a whole.

Figure 8 Centralized (Star) Network – dominant player

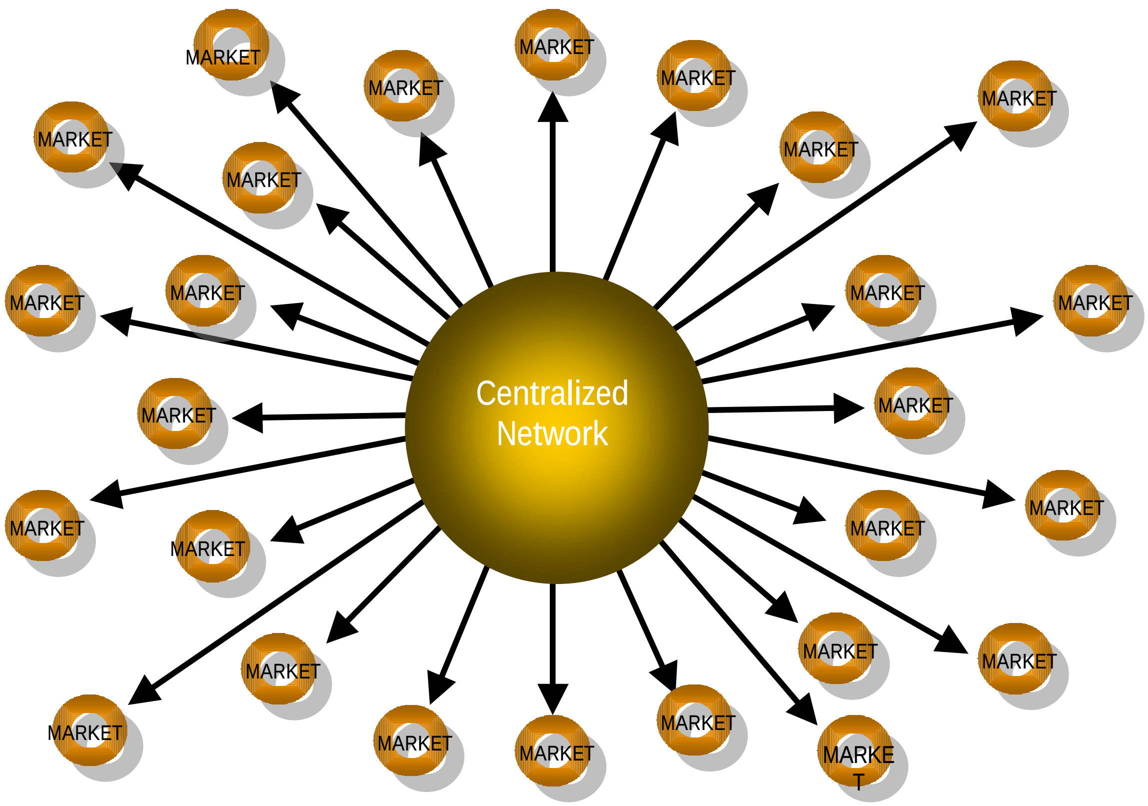


Figure 9 Decentralized Network – several larger hubs – more choice

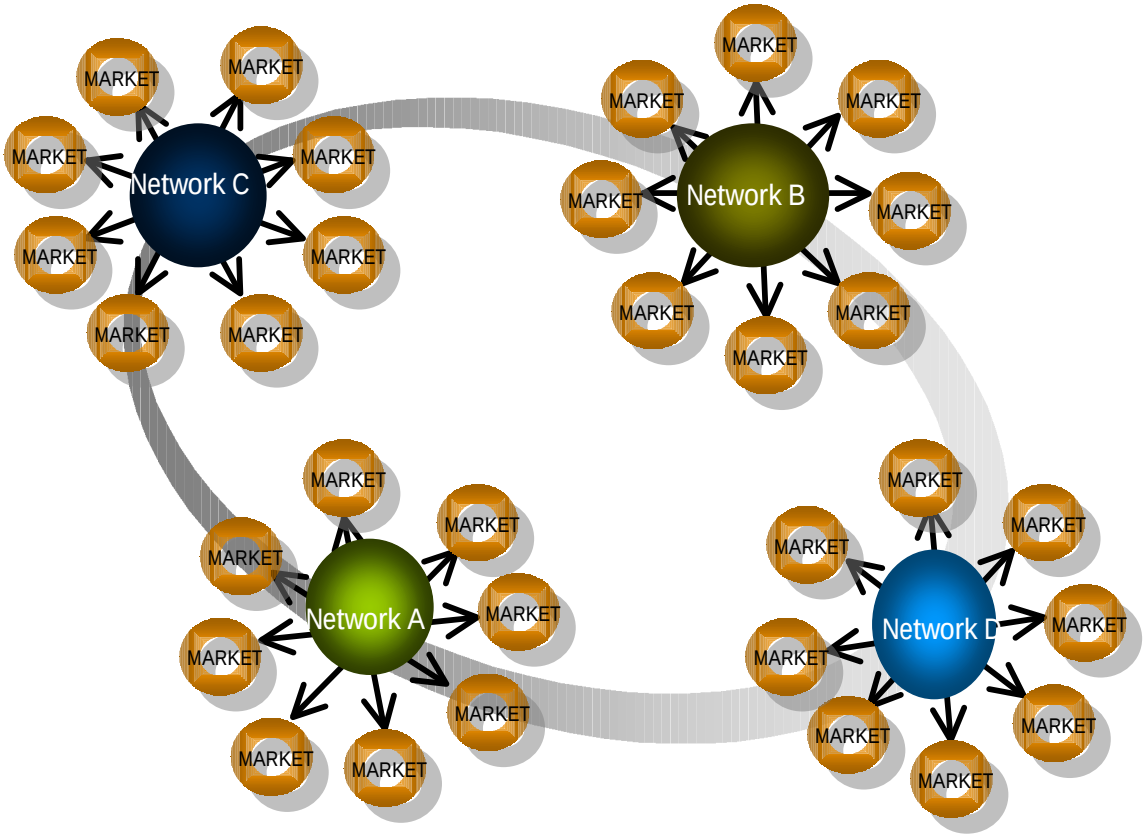
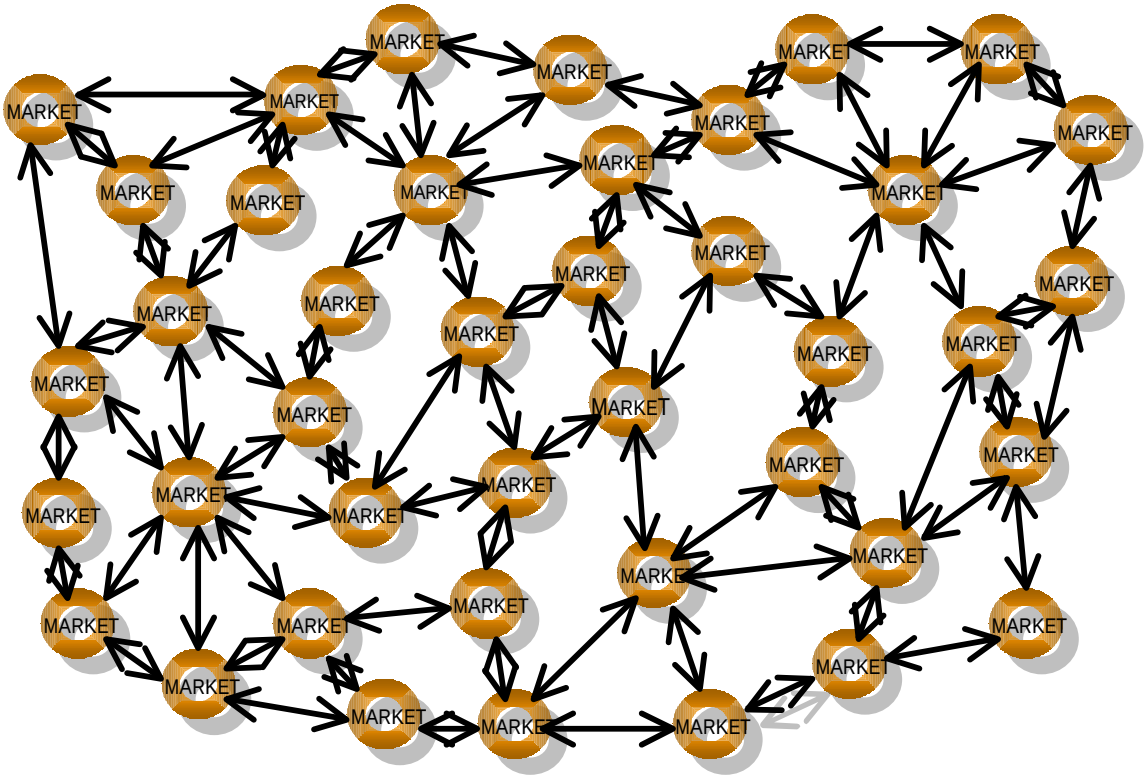


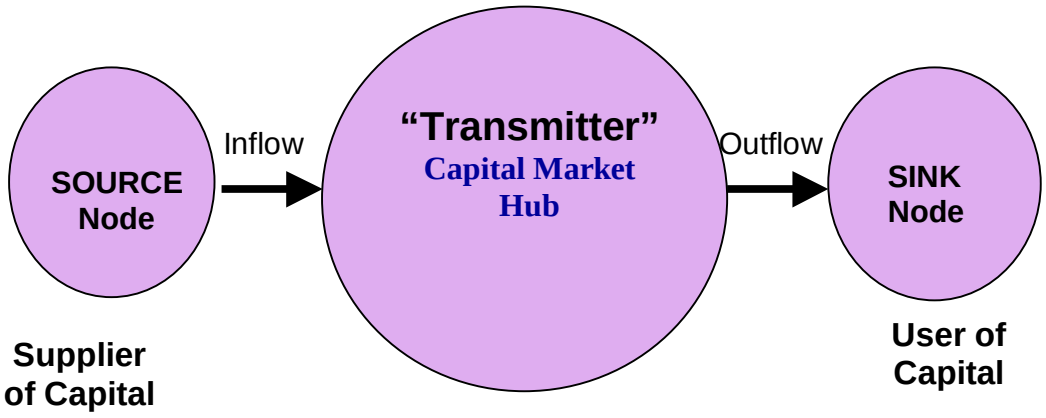
Figure 10 Distributed Network – Internet – no key hub



5.2 Applying Network Theory to Capital Markets

We are now in a position to apply Network Theory to the capital market. We start with a microstructure of a network, that is a hub that behaves as the transmitter, and it is linked with a source node (that supplies), and a sink node (that receives). Synonymously, capital markets are hubs to facilitate links and flows of capital with the aim of providing capital transactions at lower trading costs and with better protection of property rights (Figure 11).

Figure 11 Capital Markets act as Hubs to Facilitate Links and Flows at Lower Transaction Costs with Better Protection of Property Rights



Node-link-hub reduces transaction costs and brings benefits to all users

We now incorporate the ideas of "Institutional Change" as propounded by North:

-

- According to North, institutional and organizational development is path dependent, with each organization or institution seeking to develop according to its own interests (adaptive efficiency or survival).
- Networks link together to share common beliefs, benefits or reduce risks and overcome common threats.
- Hence, network architecture matters – whilst star network is efficient, smaller nodes fear that the dominant hub will extract monopolistic powers and tax them.
- Consequently, the process of integration depends on a reiterative game of each member (node) evaluating whether to join a particular group (ASEAN, ASEAN+3, ASEAN+6 etc), versus joining other groups (APEC, NAFTA, EU etc).
- In the end, it is about identifying common interests and recognizing self-interest (what are the benefit/risks of integration into a larger network?).

- This implies that larger hubs will have to engage in Network Altruism (providing benefits to smaller nodes in order to attract them into their network.

Integrating the Network Theory and with North's Institutional Change framework, we can derive five key issues which are discussed in detail below, in what we call the Five Degrees of Separation: -

(1) Common Vision vs. "Winner-Take-All".
(2) Common Standards and Common Rules – whose rules?
(3) "Principal-Agent" Dilemma – how to align incentives?
(4) Lower Transaction Costs – how to lower barriers to network transactions with each other?
(5) Common Processes – how to achieve institutional convergence?

(1). Common Vision vs. "Winner-Take-All"

The first degree of separation is about the benefits and risks of the **"Winner-Take-All" effect**. This effect has contradictory forces. Whilst it is clearly beneficial to the winning hub, the fear of "Winner-Take-All" works against integration, because smaller nodes fear market dominance. This suggests that having a single person or one country's vision of what Asian market integration is a sure sign that that vision will not be realized.

We need a Shared Vision. That Vision, which could take the form of common standards, principles, products or platform, must be owned or strongly accepted by the majority of potential members. Since we do not know what that Vision is like, we must begin the Process of consultation, cooperation and learning to work together and to trust each other (Sheng, EABER Op-Ed 2006).

Since there exists huge disparity in stages of development between the largest and the smallest of the East Asian economies or capital markets, a common vision must be developed in order to reconcile these disparities.

We conclude that in order for Network Integration to work, the larger members have to demonstrate Altruism by contributing to alleviate disparities with the smaller and poorer members. The best example of Network Altruism is the fact that Germany funding more than its fair share of the 1% of the Annual EU budget which is distributed for various EC agriculture and other subsidies. The smaller EU members have benefited considerably from this generosity and access to the larger EU market.

Although Network Altruism can take the form of bilateral or multilateral aid or grants, we believe that contributions should aim at increasing public goods for the Region as a whole, *e.g.* education, basic health, communications, environmental protection, *etc*. These would include building common social infrastructures to alleviate regional poverty.

Moreover, we believe that a possible way to think about a Shared Vision is to avoid thinking exclusively about zero-sum game "Red Ocean" strategies in competing in traditional businesses, but to work toward win-win "Blue Ocean" green-field businesses,

such as derivative markets, where there could be common ownership without disturbing current vested interests.

(2). "Common Standards"

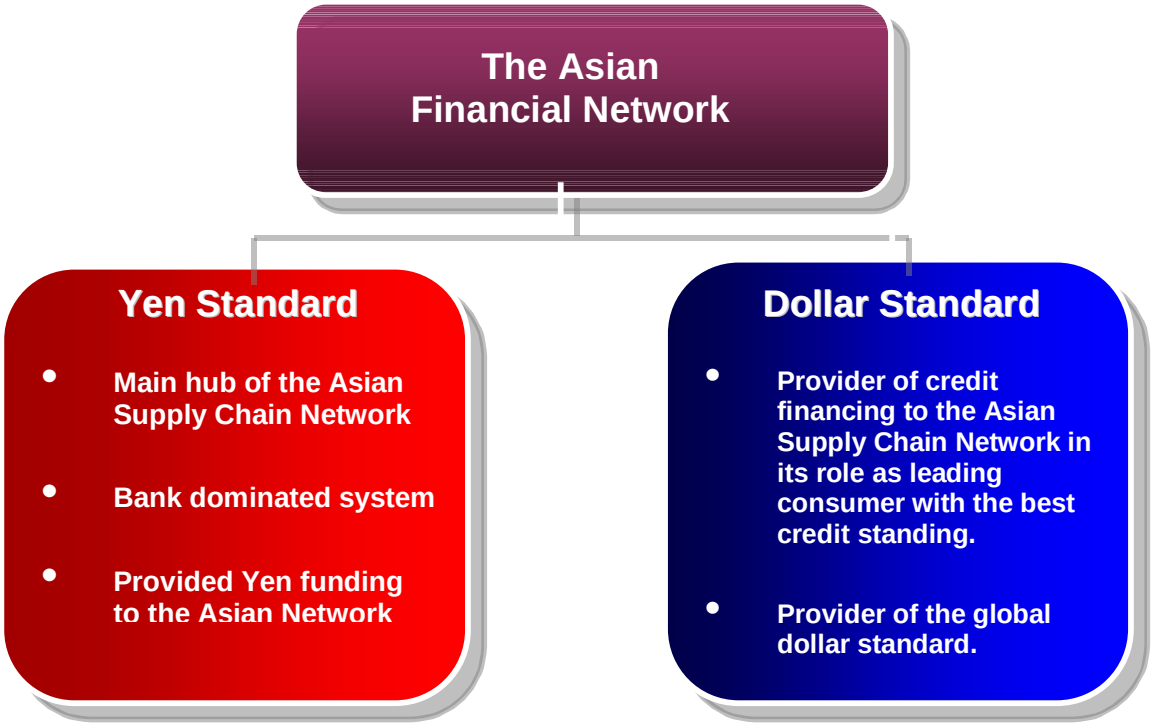
The second degree of separation is about Common Standards. Markets need common standards for greater efficiency. For example: The creation of single market for the European Union has made Europe the fastest growing mergers and acquisitions. In 2006, five of the world's top ten mergers and acquisitions took place in Europe and the value of the European deals exceeded those in America for the first time (*The Economist*, January 27 2007).

Competition between markets is also about competition in standards, e.g. HDVD vs. Blu-ray standards. For example, one of the vulnerabilities in Asia is that we have one global supply chain with two standards, dollar and yen (Figure 12). There are clearly too many national currencies, national rules and regulations, with different market standards that create market segmentation, illiquidity and high transaction costs. We completely understand that in order to converge towards common standards, some degree of loss of national sovereignty will have to occur, resulting in national regulators and policy-makers becoming less protective of their domestic markets from competition. Clearly, a necessary but not sufficient condition for Common Standards is a Shared Vision, entailing a massive change in mindsets of policy-makers.

Moving towards Common Standards involves two possible paths – Harmonization as practiced in the EU Common Market, or Mutual Recognition, which recognizes the current national disparities, but each country works steadfastly towards Converge towards some Common Standards. Indeed, since there already exists global standards of regulation, monetary and corporate governance, that is, the Financial Stability Forum's Core Standards, there is strictly speaking no need to re-invent the wheel.

Indeed, not only would it be extremely expensive for Asia to evolve its own separate set of standards, Asians would need to work together to achieve closer convergence with global standards in order to have sufficient clout or influence to change or modify global standards. The clear advantage of working towards global standards is that there is choice of using either regional or global integration. Each country is offered a choice of standards. Some may move faster towards global standards, whereas others may opt for a lower regional standard.

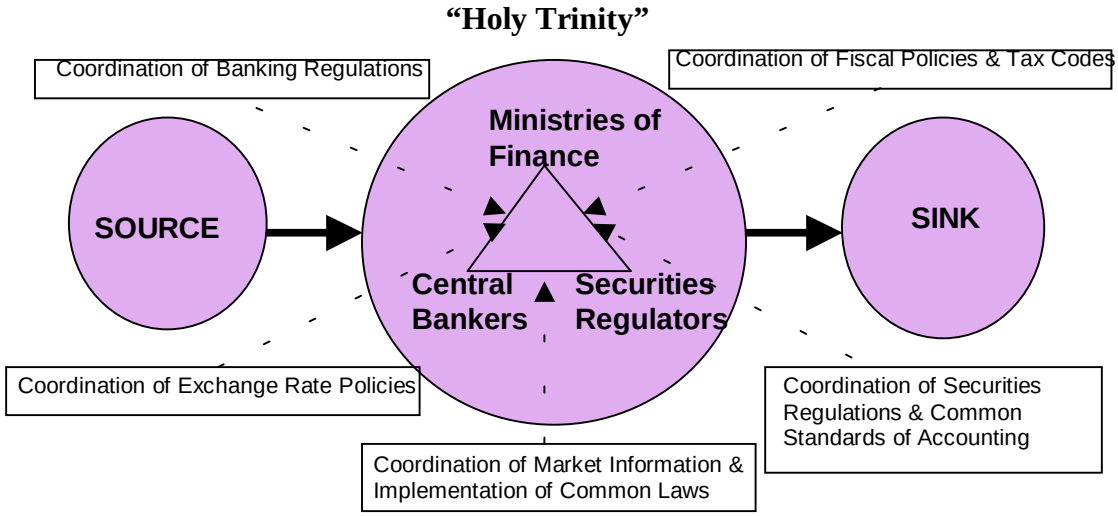
Figure 12 The Asian Financial Network



The evolution of Common Standards also carries a domestic dimension (Figure 13). For example, the development of a Common Standard in the financial sector would require the coordination of the all regulations and laws by the jurisdictions: the ministry of finance, the central bank and the securities regulators. It is the failure to coordinate interests that often stands in the way of common standards.

Figure 13 "Common Standards" – the Domestic Dimension

- To ensure Common Standards in financial sector, there requires the coordination of the all regulations and laws by the three governing bodies: (1) Ministry of Finance, (2) Central Bankers and (3) Securities Regulators of the East Asia governments**.**



(3) Principal-Agent Dilemma – Alignment of Incentives

The third degree of separation is the principal-agent dilemma of deciding which should be the dominant Asian Time-Zone Financial Hub? This is ultimately a question that only competition and cooperation would decide, but any currently agreed institutional framework would create perceptions by members that this would give advantages through which one of the regional financial markets would advance as the winning hub.

The best recent example is current the Asian "Noodle Bowl" of Bilateral Free Trade Agreements. Even though everyone agrees that a multilateral FTA agreement would be the ideal solution, in practice, there are now at last count 150+ bilateral agreements. Although this looks chaotic, this is in fact scale free networking in practice. Only when there are huge amounts of bilateral links would common hubs and standards emerge.

Hence, what we need to learn from this experience in building trust in Principal-Agent problems of delegating national authority to any regional organization (e.g. regional equity or derivative exchange) is to align incentives for common outcomes. In other words, the regional institution or organization (hub) must demonstrate that it would behave fairly to all members and induce cooperative behaviour, through different options, such as: -

- Having common ownership of the Hub
- Allowing development of several Hubs, with each specializing in different products and services
- Winner Hub distributing greater public goods and showing more Network Altruism
- A commonly agreed mechanism to ensure that Principal-Agent can resolve disputes when benefits and interests are not aligned (e.g. common surveillance?)

(4) Lowering Transactions or Friction Costs

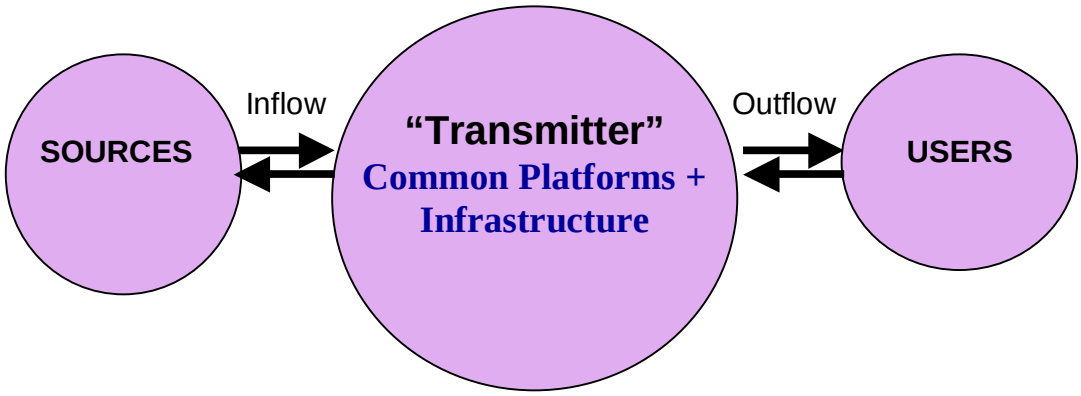
The fourth degree of separation is about lowering transactions or friction costs in regional trading. Markets that have become dominant in global trading do so because they offer the lowest transactions/friction costs for exchanges and transactions and also the best property right protections, *i.e.* market participants are free to transact with relatively few legal or regulatory obstacles or barriers. Many of the barriers or friction costs to higher liquidity are due to regulatory or protective barriers that create market segmentation and therefore lower efficiency.

There is a need to identify a sequencing of convergence of transactions costs so that Asian network effects are maximized. Each market has to identify the key barriers and friction costs and work with others to reduce these costs, taking into consideration the network benefits. In a sense, competition between markets will eventually ensure that each will work towards these objectives. For example, the demutualization of stock exchanges has made them more commercial and profit oriented, and therefore there is greater motivation towards lowering friction costs and seeking benefits of exchange alliances.

The reason for this is due to the high cost of technology in trading, clearing and payment infrastructure. Once built, there are huge economies of scale of sharing common platforms that generate larger market share and liquidity (Figure 14).

Figure 14 Common Platforms Encourage Interconnectivity and Interoperability

- Common technology is now readily available, as well as G-30 Basle/IOSCO standards for real-time platforms (common trading and clearing and settlement/payment systems) that can work together in real time and generate huge common liquidity and high transparency.



(5) Common Processes

Finally, the fifth degree of separation is about Common Processes. Market networks are about building market institutions that would involve political, and social-cultural change. It is also about change management. In Douglass North terminology, we need to change the common "beliefs" so that Asians can share common values, so that Asian institutions, organizations can emerge to shape the future Asian capital market. This is a process that must take into consideration political perceptions and realities.

One of the methods to create the passage of change is by using threat of external competition in order to raise domestic adaptive efficiency and robustness. This would require extensive change of management. This "Change Management" requires massive coordination of many jurisdictions - of balancing vested interests, building coalitions, changing laws, standards, and ultimately market and bureaucratic behaviour. Thus, each economy has responsibility to:

- Using international rules and standards to raise and enforce domestic market standards, codes, and rules of the game; and
- Put in place the property rights infrastructure of a market economy that is fair, transparent, robust, flexible, and efficient.
- In other words, the first step of process reform begins at home!

The above five degrees of separation is a framework for disparate economies to think about how to work together eventually to form an integrated market network. In reality, this is a journey that will take time, since each country must re-engineer huge changes at the micro-macro, institutional, political, social, economic and social levels, before the final "architectured" network can be formed. Several markets already have considerable

join of alliances with other groups, such as APEC, or it can be a process that can move in parallel. There can be many forms of alliances with EU and NAFTA at different levels, without Asian economies making up their mind which path to take.

To repeat, the first step towards any form of integration is to get everyone to share common objectives, common principles, products and platforms. Naturally, this requires a process of discovery. The European Community took more than 50 years, with a common vision articulated by statesmen, such as Monet, before a decision to have political union through a common market and a common market. To be frank, none of us knows what the final architecture and form of Asian integration, particularly capital market integration will be like. Unless Asian economies break down barriers to each other, it is likely that multinational investment banks and securities houses will become the network catalysts.

The other path is a policy-driven initiative, in which the policy makers, the regulators and the private sector work together in process of search, finding commonalities through working and testing each other, sometimes through bilateral alliances, sometimes multi-laterally. Eventually, the path will become clearer. To sum up, **THE PROCESS IS THE PASSAGE**, just as Marshall McLuhan used to say that the medium is the message.

6. Concluding Thoughts

In sum up, using Network Theory and the Douglass North Institutional Economics framework has clarified for us the key issues related to market integration. This is a path dependent process that will involve sharing key beliefs and realizing adaptive efficiency with network robustness. In other words, Asian capital market integration will only work if there are shared benefits and lower risks as an outcome, not when there is a "Winner-Take-All" inequality.

There is an unexpressed feeling that if East Asia wants to achieve global parity with Europe and NAFTA in economic and political status, the region must move to global standards, processes and practices using global rules of the game. The Region must develop superior standards and protection of property rights to even compete with the other standards. We have to be realistic that information and initial condition asymmetry (political and cultural differences) within Asia is so huge that there is no currently common mindset, nor shared vision for serious regional capital market integration.

Some may be disappointed that this paper has not set forth bold visions, because the authors believe that at this stage of the game, no broad vision is possible beyond rhetoric. But there can easily be a shared process of discovery. If there are those of like mind that share in some vision of integrated Asian market, in whatever form it takes, such as this forum and the East Asian Bureau of Economic Research (EABER), then at the national level, there should be more foray to discover the issues and degrees of separation raised by this paper. Those who hope to gain most from greater regional integration, particularly the richer and more advanced economies with stronger institutional capacity need to play a much larger role in helping develop the Asian capital market network as

part of Asian regional development. Smaller markets do not have the resources to make the change without the implicit or explicit help of the bigger markets. The market by itself will not generate the network altruism to make a big difference, although regulatory arbitrage will continue to erode regulatory barriers to network integration. Therefore, governments or perhaps civil society working with bureaucracies may have to make that change. Changing institutional structures itself requires vision, mission, resources and determination. This is about leadership.

Who in Asia has the vision, mission and will to make that change is a subject beyond the scope of this paper.

Kuala Lumpur and Beijing,
16 February 2007.

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