Asia's Financial Competitiveness

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I. Rise of Asia

1. Asia's growing share of global GDP

As we can see from Figure 1, Asia's share of global GDP has grown from 25.4% in 2000 to 28.7% in 2012. Excluding Japan, Asia's share has nearly doubled, growing from 10.7% to 20.3%. Whereas Japan was probably the only Asian country that could have been called a major economy in 2000, by 2012 China had overtaken Japan in terms of GDP and Japan's share of global GDP had declined slightly.

Although India is often referred to as a major Asian economy on a par with China, its GDP is still only just over 20% that of China and just over 30% that of Japan,

Figure 1: Asian (nominal) GDP as a percentage of global GDP

	2000		2012 (est.)		2012/2000
	($bn)	(%)	($bn)	(%)	(×)
Global total	31823.2	100	71277.4	100	2.2
US	9817.0	31	15653.4	22	1.6
EU	8483.0	27	16414.5	23	1.9
Asia	8079.7	25.4	20477.8	28.7	2.5
Asia (ex Japan)	3410.9	10.7	14493.4	20.3	4.2
China	1198.5	3.8	8250.2	11.6	6.9
Japan	4668.8	14.7	5984.4	8.4	1.3
India	461.9	1.5	1946.8	2.7	4.2
Korea	512.0	1.6	1151.3	1.6	2.2
Indonesia	165.5	0.5	894.9	1.3	5.4
Taiwan	321.4	1.0	466.1	0.7	1.5
Thailand	122.7	0.4	377.0	0.5	3.1
Malaysia	93.8	0.3	238.0	0.3	2.5
Hong Kong	169.1	0.5	225.0	0.3	1.3
Singapore	92.7	0.3	222.7	0.3	2.4
Philippines	75.9	0.2	188.7	0.3	2.5
Pakistan	74.1	0.2	174.9	0.2	2.4
Bangladesh	47.0	0.1	104.9	0.1	2.2
Vietnam	31.2	0.1	103.6	0.1	3.3
Sri Lanka	16.3	0.1	49.7	0.1	3.0
Myanmar	8.9	0.0	43.0	0.1	4.8
Nepal	5.9	0.0	15.8	0.0	2.7
Brunei	6.2	0.0	13.0	0.0	2.1
Cambodia	3.7	0.0	11.6	0.0	3.1
Laos	1.7	0.0	6.3	0.0	3.7
Mongolia	1.1	0.0	6.1	0.0	5.6
Maldives	0.6	0.0	1.9	0.0	3.1
Bhutan	0.4	0.0	1.4	0.0	3.5
East Timor	0.3	0.0	0.6	0.0	2.1

Source: IMF

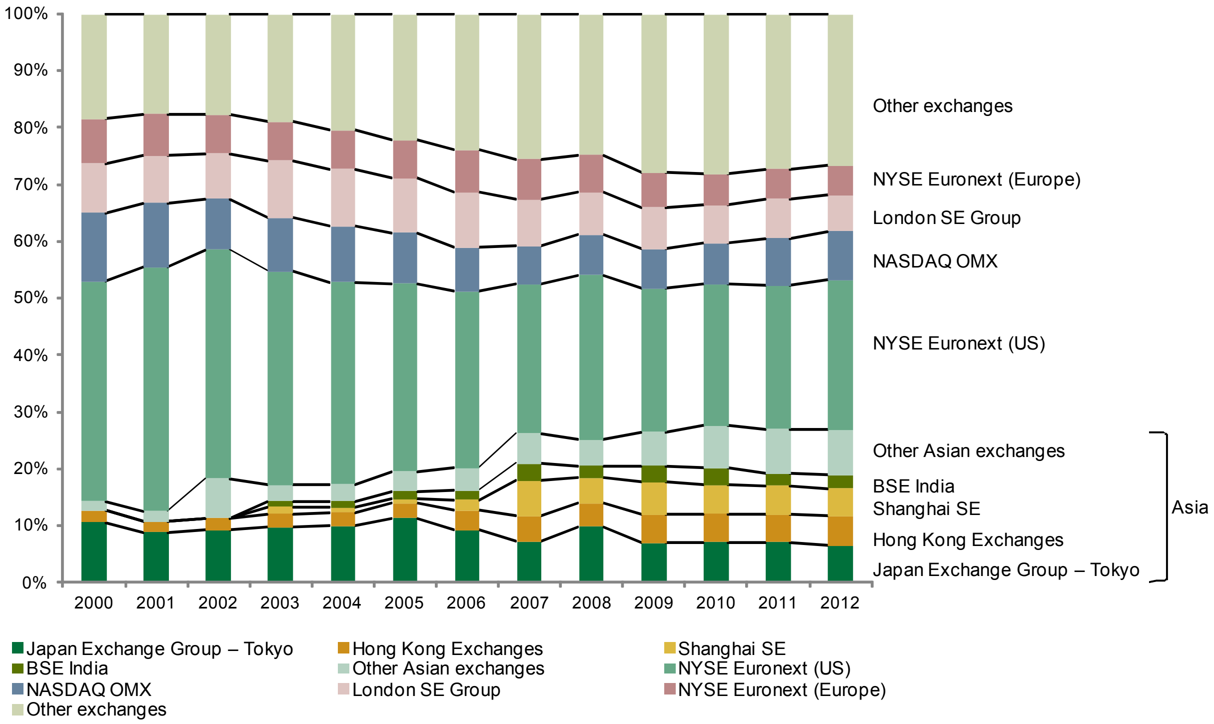
partly because it embarked on economic reform about 10 years later than China. That said, between 2000 and 2012, its GDP grew by 320%, overtaking that of Korea. Similarly, during the same period, Indonesia's GDP grew by 440%, overtaking that of Hong Kong and Taiwan and making it a major Asian economy almost on a par with Korea. Finally, the GDP of countries such as Mongolia and Myanmar, while still quite low, has grown at an unusually rapid rate.

2. The development of Asia's securities markets

Reflecting this growth in Asian GDP has been the increasing importance of Asian financial markets to the global economy. As a percentage of global market capitalization the market capitalization of the domestic companies listed on Asia's main stock exchanges has risen from 14% in 2000 to 26% in 2012, gradually reflecting Asia's growing share of global GDP (Figure 2). As of 2012, 10 of the world's top 30 stock exchanges in terms of the market capitalization of their listed domestic companies were Asian (Figure 3). Particularly noteworthy in comparison with their position in 2003 has been the rise of stock exchanges in China, Indonesia and the Philippines.

In contrast, stock exchanges in places such as London, Germany, Switzerland and Spain have dropped down the rankings, reflecting the impact of the financial crisis

Figure 2: Each stock exchange's share of market capitalization of listed domestic stocks



Note: 1. Only data from stock exchanges with up-to-date data have been collected.
2. The data for the London Stock Exchange include those for the Italian stock exchange.
Source: World Federation of Exchanges

Figure 3: World's main stock exchanges (ranked by market capitalization)

	2003		2012		2012/2003
	(Ranking)	($mn)	(Ranking)	($mn)	(×)
NYSE Euronext (US)	1	11,328,953.1	1	14,085,944.1	1.2
NASDAQ OMX	4	2,844,192.6	2	4,582,389.1	1.6
Japan Exchange Group - Tokyo	3	2,953,098.3	3	3,478,831.5	1.2
London SE Group	2	3,040,663.6	4	3,396,504.9	1.1
NYSE Euronext (Europe)	5	2,076,410.2	5	2,832,188.5	1.4
Hong Kong Exchanges	10	714,597.3	6	2,831,945.9	4.0
Shanghai SE	12	360,106.3	7	2,547,203.8	7.1
TMX Group	7	910,230.6	8	2,058,838.7	2.3
Deutsche Börse	6	1,079,026.2	9	1,486,314.8	1.4
Australian SE	11	585,529.7	10	1,386,874.0	2.4
BSE India	15	279,092.8	11	1,263,335.5	4.5
SIX Swiss Exchange	8	727,102.8	12	1,233,438.9	1.7
BM&FBOVESPA	18	234,560.0	13	1,227,447.0	5.2
Korea Exchange	13	298,248.1	14	1,179,419.5	4.0
Shenzhen SE	20	152,872.5	15	1,150,172.3	7.5
NASDAQ OMX Nordic Exchange	14	291,933.2	16	995,719.2	3.4
BME Spanish Exchanges	9	726,243.4	17	995,088.5	1.4
Johannesburg SE	16	260,748.3	18	907,723.2	3.5
Moscow Exchange		NA	19	825,340.5	NA
Singapore Exchange	21	148,502.6	20	765,078.0	5.2
Mexican Exchange	22	122,533.0	21	525,056.7	4.3
Bursa Malaysia	19	160,814.2	22	466,587.6	2.9
Indonesia SE	30	54,659.1	23	428,222.6	7.8
Saudi Stock Exchange		NA	24	373,374.8	NA
IMKB	28	67,896.9	25	315,197.5	4.6
Santiago SE	25	86,525.9	26	313,325.3	3.6
Colombia SE		NA	27	262,101.3	NA
Oslo Børs	24	95,919.9	28	242,764.9	2.5
Philippine SE	37	23,175.7	29	229,316.6	9.9
Warsaw SE	39	37,020.3	30	177,408.4	4.8

Note: As for Figure 2.
Source: World Federation of Exchanges

and the increase in financial regulation this has led to.

Figure 4 plots the per capita GDP of Asian countries against the ratio of the market capitalization of their domestic companies to their GDP. Because of a tendency for financial intermediation to become less dependent on the banking system and increasingly dependent on securities markets as an economy develops, the ratio of market capitalization to GDP is often seen as an indicator of the maturity of a country's financial markets.

Of the Asian countries and territories plotted in Figure 4, those with the most advanced economies[1] are Japan, Hong Kong, Singapore and Korea. If, however, we take account of their GDP in absolute terms (Figure 1), Hong Kong and Singapore can be seen to have large securities markets relative to the size of their economies. This is particularly true of Hong Kong. Japan, on the other hand, while having a large economy, has a lower ratio of market capitalization to GDP than the US.

Malaysia, while having the fifth-largest per capita GDP after the above four Asian economies, has the third-largest ratio of market capitalization to GDP in Asia after Hong Kong and Singapore, confirmation of the rapid development of its securities market.

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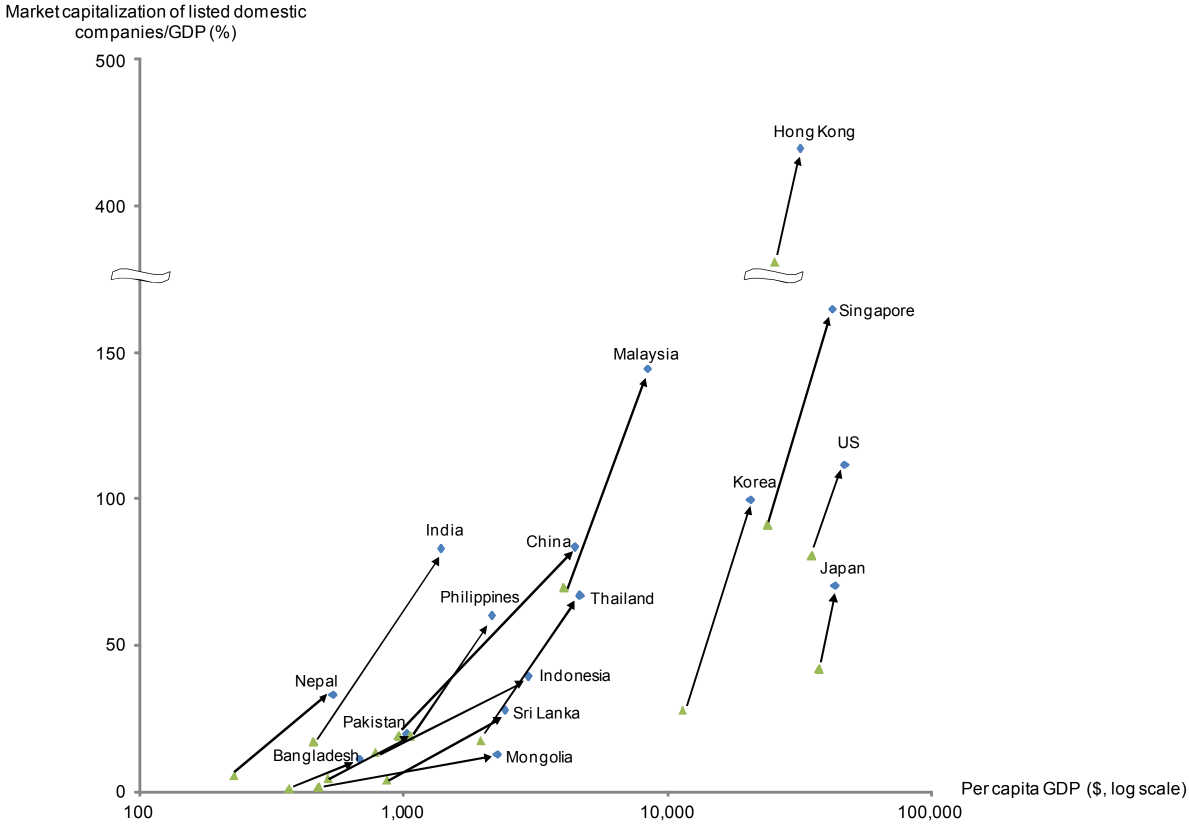
[1] Those classified by the IMF as "advanced economies."

Figure 4: Per capita GDP and market capitalization of listed domestic companies/GDP



Note: The arrows indicate the change between 2000 and 2010.
Source: Nomura Institute of Capital Markets Research, from World Bank, Global Financial Development Database

While China and India are classified as developing economies, the development of their securities markets and the size of their economies mean that, as we can see in Figure 3, their stock markets are among the most important in the world. The ratio of the market capitalization of Indonesia's stock market to the country's GDP has not increased as much relative to the increase in its per capita GDP as that of many other Asian economies. If the ratio of its market capitalization to its GDP continues to increase, the sheer size of its economy suggests to us that its securities market is likely to become more important in global terms.

As we have seen, Asia paints a diverse picture in terms of the size of its economies, the degree of their development, and the degree of development of their securities markets. Generally speaking, however, we expect Asian financial markets to become even more competitive for a number of reasons, including (1) a continuing high rate of economic growth in Asia, (2) the importance Asian economies (at one time only the more advanced ones, now even the relatively small developing ones) attach to their financial markets, (3) the economic difficulties facing the EU and its single currency, and (4) the continuing imposition of regulatory constraints on US and European financial markets.

II. The ranking of Asian financial markets

The growing importance of Asian economies in the field of finance is reflected in international surveys. In this paper we consider the ranking of Asian financial markets in terms of the Z/Yen Group's Global Financial Centres Index and the World Economic Forum's *Global Competitiveness Report*.

1. The Global Financial Centres Index

The Global Financial Centres Index (GFCI) rates the world's financial centers and has been published every six months since March 2007. The ratings are based partly on "instrumental factors" (i.e., external indices) and partly on an online questionnaire. The instrumental factors include not only market access-related factors such as market capitalization, value of share trading, value of bond trading, total net assets of mutual funds, domestic credit provided by banks (as % of GDP) but also people-related factors such as graduates in social science, business and law, and the UN's human development index, business environment-related factors such as the ease of doing business index, wages, tax rates and economic freedom, infrastructure-related factors such as office occupancy costs, telecommunication infrastructure and transport networks, and general competitiveness-related factors such as various indices of urban competitiveness. The scores on each of these are added together to produce a rating.

The online questionnaire, on the other hand, which is accessed from the Z/Yen Group's website and relies on responses from global financial professionals, is used to rate financial centers. The GFCI published in March 2013, for example, reflects 23,000 ratings received during the 24 months to December 2012.

Figure 5 lists financial centers according to their ranking in the March survey for each year since 2007. Figure 6 plots the ranks of the Asian financial centers covered by the survey and includes the results of the September survey.

According to the survey results published in March 2013, Hong Kong came third after London and New York, followed by Singapore in fourth place, Tokyo in sixth place, and Seoul in ninth place. Of these Asian financial centers, Hong Kong and Singapore have ranked third or fourth almost every year. Tokyo has also ranked among the top financial centers but has done better in recent years than in 2007 and 2008. Seoul's rank has jumped in recent years.

Kuala Lumpur's rank has also jumped in recent years. We attribute this, at least in part, to Malaysia's efforts to promote Islamic finance. Shanghai, on the other hand, which ranked in the top 10 between 2010 and 2012, has dropped a long way in the latest survey. This is true not only of Shanghai but also of other Chinese financial centers, including Beijing and Shenzhen.

Bangkok, Mumbai, Jakarta, and Manila have continued to drop down the rankings. We attribute this, at least in part, to the inclusion of new financial centers such as those in Latin America and Central and Eastern Europe in the survey.

Figure 5: Global Financial Centres Index (GFCI)

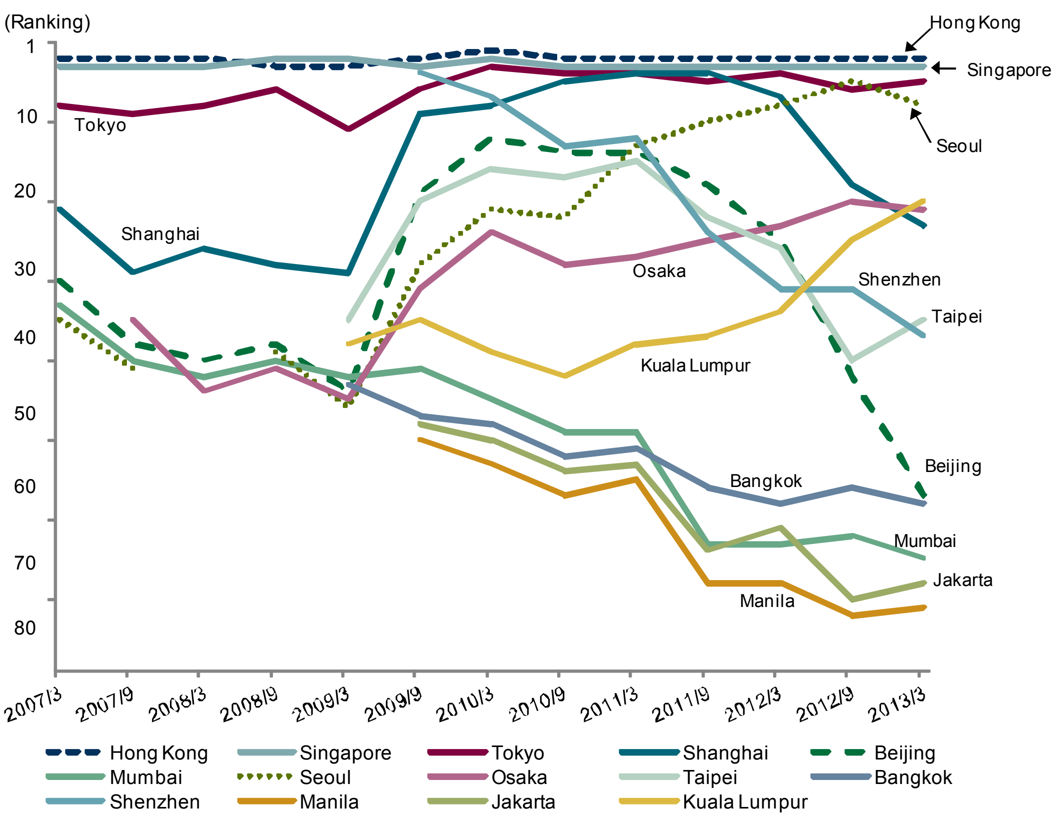
	2007/3	2008/3	2009/3	2010/3	2011/3	2012/3	2013/3
(Ranking)	Center	Center	Center	Center	Center	Center	Center
1	London	London	London	London	London	London	London
				New York			
2	New York	New York	New York	Hong Kong	New York	New York	New York
3	Hong Kong	Hong Kong	Singapore	Singapore	Hong Kong	Hong Kong	Hong Kong
4	Singapore	Singapore	Hong Kong	Tokyo	Singapore	Singapore	Singapore
5	Zurich	Zurich	Zurich	Chicago	Shanghai	Tokyo	Zurich
6	Frankfurt	Frankfurt	Geneva	Zurich	Tokyo	Zurich	Tokyo
			Chicago		Chicago		
7	Sidney	Geneva	Frankfurt	Geneva	Zurich	Chicago	Geneva
8	Chicago	Chicago	Boston	Shenzhen	Geneva	Shanghai	Boston
			Dublin	Sidney			
9	Tokyo	Tokyo	Toronto	Shanghai	Sidney	Seoul	Seoul
			Guernsey		Toronto		
10	Geneva	Sidney	Jersey	Toronto	Boston	Toronto	Frankfurt
11	Paris	Boston	Luxembourg	Frankfurt	San Francisco	Boston	Chicago
12	Toronto	San Francisco	Tokyo	Boston	Frankfurt	San Francisco	Toronto
	San Francisco						
13	Boston	Dublin	Sidney	Beijing	Shenzhen	Frankfurt	San Francisco
				San Francisco			
14	Edinburgh	Paris	San Francisco	Washington DC	Seoul	Geneva	Washington DC
15	Cayman Islands	Toronto	Isle of Man	Jersey	Beijing	Washington DC	Vancouver
				Luxembourg	Washington DC		
16	Bermuda	Jersey	Paris	Paris	Taipei	Sidney	Montreal
	Melbourne		Edinburgh				
17	Channel Islands	Luxembourg	Washington DC	Taipei	Paris	Vancouver	Calgary
18	Washington DC	Edinburgh	Cayman Islands	Guernsey	Luxembourg	Montreal	Luxembourg
19	Montreal	Guernsey	Dubai	Vancouver	Vancouver	Munich	Sidney
20	Dublin	Washington DC	Amsterdam	Isle of Man	Jersey	Melbourne	Vienna
		Isle of Man		Dubai			
21	Amsterdam	Glasgow	Vancouver	Montreal	Melbourne	Jersey	Kuala Lumpur
				Melbourne			
22	Shanghai	Amsterdam	Montreal	Seoul	Munich	Paris	Osaka
		Dubai		Edinburgh			
				Cayman Islands			
23	Dubai	Cayman Islands	Hamilton	Dublin	Montreal	Luxembourg	Dubai
	Luxembourg			Bermuda			
24	Vancouver	Gibraltar	Melbourne	Munich	Guernsey	Osaka	Shanghai
	Madrid	British Virgin Islands					
	Stockholm						
25	Milan	Bermuda	Munich	Osaka	Dubai	Stockholm	Melbourne
		Melbourne					
26	Brussels	Montreal	Stockholm	Amsterdam	Edinburgh	Beijing	Paris
27	Helsinki	Shanghai	Glasgow	Qatar	Qatar	Taipei	Munich
28	Oslo	Stockholm	Brussels	British Virgin Islands	Osaka	Calgary	Jersey
29	Copenhagen	Vancouver	Gibraltar	Stockholm	Amsterdam	Dubai	Oslo
		Brussels	British Virgin Islands				
30	Vienna	Munich	Shanghai	Brussels	Dublin	Wellington	Qatar
					Stockholm		
31	Beijing	Bahamas	Bahamas	Sao Paulo	Isle of Man	Guernsey	Guernsey
32	Wellington	Monaco	Monaco	Copenhagen	Bermuda	Shenzhen	Stockholm
				Bahrain			
33	Rome	Milan	Copenhagen	Vienna	Madrid	Amsterdam	Riyadh
34	Mumbai	Bahrain	Oslo	Wellington	Cayman Islands	Vienna	Amsterdam
	Warsaw				Wellington		
35	Prague	Helsinki	Milan	Madrid	British Virgin Islands	Kuala Lumpur	Monaco
	Lisbon			Oslo			
36	Seoul	Johannesburg	Taipei	Milan	Brussels	Copenhagen	Taipei
37	Budapest	Madrid	Vienna	Monaco	Milan	Edinburgh	Milan
			Bahrain		Vienna		
38	Moscow	Vienna	Helsinki	Rome	Sao Paulo	Qatar	Shenzhen
39	Athens	Copenhagen	Kuala Lumpur	Helsinki	Kuala Lumpur	Oslo	Abu Dhabi
40		Oslo	Qatar	Kuala Lumpur	Copenhagen	Cayman Islands	Rome
					Glasgow		
41		Beijing	Madrid	Glasgow	Rome	Glasgow	Cayman Islands
42		Qatar	Johannesburg	Gibraltar	Bahrain	Helsinki	Wellington
43		Mumbai	Mumbai	Johannesburg	Rio de Janeiro	Bermuda	Isle of Man
				Rio de Janeiro			
44		Rome	Bangkok	Malta	Monaco	Isle of Man	Sao Paulo
45		Osaka	Beijing	Mexico City	Mexico City	British Virgin Islands	Copenhagen
46			Osaka	Mumbai	Oslo	Dublin	Brussels
47			Seoul	Bahamas	Johannesburg	Brussels	British Virgin Islands
48			Sao Paulo	Mauritius	Prague	Abu Dhabi	Rio de Janeiro
49			Rome	Bangkok	Gibraltar	Madrid	Hamilton
					Helsinki		
50			Wellington	Prague	Mumbai	Sao Paulo	Glasgow

Figure 5: Global Financial Centres Index (GFCI) (cont.)

	2007/3	2008/3	2009/3	2010/3	2011/3	2012/3	2013/3
(Ranking)	Center	Center	Center	Center	Center	Center	Center
51			Lisbon	Jakarta	Warsaw	Mexico City	Madrid
					Malta		
52			Prague	Buenos Aires	Bangkok	Milan	Helsinki
53			Warsaw	Lisbon	Mauritius	Rio de Janeiro	Buenos Aires
54			Moscow	Manila	Jakarta	Warsaw	Edinburgh
55			Athens	Warsaw	Buenos Aires	Johannesburg	Mexico City
					Lisbon		
56			Budapest	Moscow	Manila	Prague	Dublin
57				Riyadh	Bahamas	Bahrain	Istanbul
58				St Petersburg	Moscow	Rome	Beijing
59				Tallinn	St Petersburg	Bangkok	Bangkok
60				Budapest	Riyadh	Monaco	Gibraltar
61				Athens	Istanbul	Istanbul	Prague
62				Istanbul	Budapest	Jakarta	Johannesburg
63				Reykjavik	Athens	Gibraltar	Warsaw
64					Tallinn	Mumbai	Bahrain
65					Reykjavik	Moscow	Moscow
66						Mauritius	Mumbai
67						Buenos Aires	Panama
68						Lisbon	Malta
69						Manila	Jakarta
70						Riyadh	Mauritius
71						Tallinn	Tallinn
72						Malta	Manila
73						St Petersburg	Bahamas
74						Budapest	St Petersburg
75						Bahamas	Cyprus
76						Reykjavik	Lisbon
77						Athens	Reykjavik
78							Budapest
79							Athens

Note: Some center names have been abbreviated.
Source: Z/Yen Group, Global Financial Centres Index

Figure 6: Ranking of Asian financial centers



Source: Z/Yen Group, Global Financial Centres Index

2. World Economic Forum's ranking of financial market development

The World Economic Forum's *Global Competitiveness Report* ranks the countries of the world according to the following 12 "pillars" (i.e., determinants) of productivity: institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labor market efficiency, financial market development, technological readiness, market size, business sophistication, and innovation. These rankings, which reflect the total score on each of these pillars, regularly attract the attention of the media.

Like the GFCI, this report's scores are based on a combination of external indices and an opinion survey. The opinion survey is administered in each country by a partner institute of the World Economic Forum and involves an average of 100 respondents assigning a score ranging from 1 to 7.

The ranking in terms of financial market development is based on an aggregate score for the following eight factors: (1) availability of financial services, (2) affordability of financial services, (3) financing through local equity market, (4) ease of access to loans, (5) venture capital availability, (6) soundness of banks, (7) regulation of securities exchanges, and (8) a legal rights index. While the first seven of these are based on the opinion survey, the eighth is the legal rights index produced by the International Finance Corporation (a member of the World Bank Group) and the World Bank, and one of the components used to calculate their ease of doing business index, a measure of the ease of doing business in different countries[2].

Figure 7 ranks countries in terms of their financial market development for 2008–2012. Hong Kong and Singapore typically vie for the top two places. In the latest (2012) survey they are followed, in third place, by South Africa, which has shot up the rankings in the past few years, followed by Finland in fourth place, New Zealand in fifth place, and Malaysia in sixth place, a rather surprising result. Malaysia came third in the 2011 survey.

The UK and the US, on the other hand, came 13th and 16th, respectively, further down the rankings than in the GFCI survey. Japan came 36th after Austria and Mauritius, while Korea came lower than China, the Philippines, Cambodia and Indonesia.

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2 http://www.doingbusiness.org/

Figure 7: Financial market development

Ranking	2008	2009	2010	2011	2012
1	Hong Kong	Hong Kong	Hong Kong	Singapore	Hong Kong
2	Singapore	Singapore	Singapore	Hong Kong	Singapore
3	New Zealand	New Zealand	Australia	Malaysia	South Africa
4	Denmark	Australia	Finland	South Africa	Finland
5	UK	South Africa	Norway	Norway	New Zealand
6	Australia	Malaysia	Luxembourg	Australia	Malaysia
7	Ireland	Finland	Malaysia	Switzerland	Norway
8	Sweden	Denmark	Switzerland	Luxembourg	Australia
9	US	Luxembourg	South Africa	Finland	Switzerland
10	Canada	Norway	New Zealand	Israel	Sweden
11	Netherlands	Canada	Malta	Sweden	Canada
12	Finland	Sweden	Canada	New Zealand	Luxembourg
13	Norway	Malta	Sweden	Canada	UK
14	Bahrain	Switzerland	Israel	Bahrain	Qatar
15	Israel	Israel	Cyprus	Malta	Malta
16	Malaysia	India	France	Saudi Arabia	US
17	Luxembourg	Montenegro	India	Denmark	Israel
18	Malta	Cyprus	Denmark	France	Bahrain
19	Germany	Puerto Rico	Qatar	Qatar	Taiwan
20	Iceland	US	Bahrain	UK	Netherlands
21	Switzerland	France	Panama	India	India
22	Qatar	Panama	Saudi Arabia	US	Saudi Arabia
23	Belgium	Netherlands	Austria	Netherlands	Panama
24	South Africa	UK	Namibia	Taiwan	Kenya
25	France	Belgium	UK	Cyprus	UAE
26	Panama	Mauritius	Netherlands	Kenya	Oman
27	Cyprus	Austria	Kenya	Panama	France
28	Estonia	Slovakia	Montenegro	Belgium	Chile
29	Chile	Estonia	Mauritius	Barbados	Puerto Rico
30	Puerto Rico	Bahrain	Oman	Oman	Denmark
31	Slovakia	Namibia	US	Austria	Belgium
32	Mauritius	Chile	Poland	Japan	Germany
33	Austria	UAE	UAE	UAE	Barbados
34	India	Trinidad and Tobago	Belgium	Poland	Austria
35	Montenegro	Qatar	Taiwan	Montenegro	Mauritius
36	Spain	Germany	Germany	Namibia	Japan
37	Korea	Kenya	Slovakia	Chile	Poland
38	Barbados	Barbados	Barbados	Peru	Cyprus
39	Latvia	Peru	Japan	Germany	Estonia
40	Botswana	Japan	Puerto Rico	Puerto Rico	Montenegro
41	UAE	Zambia	Chile	Estonia	Guatemala
42	Japan	Czech Republic	Peru	Mauritius	Sri Lanka
43	Portugal	Oman	Trinidad and Tobago	Brazil	Thailand
44	Kenya	Poland	Guatemala	Botswana	Turkey
45	Peru	Ireland	Estonia	Sri Lanka	Peru
46	Slovenia	Jamaica	Jamaica	Guatemala	Brazil
47	Czech Republic	Botswana	Botswana	Slovakia	Slovakia
48	Jordan	Slovenia	Czech Republic	China	Namibia
49	Thailand	Thailand	Zambia	Trinidad and Tobago	Rwanda
50	Oman	Spain	Brazil	Thailand	Zambia
51	Kuwait	Brazil	Thailand	Zambia	Honduras
52	Trinidad and Tobago	Jordan	Sri Lanka	Jamaica	Latvia
53	Namibia	Saudi Arabia	Lebanon	Czech Republic	Botswana
54	Nigeria	Taiwan	Jordan	Rwanda	China
55	Zambia	Malawi	Brunei	Turkey	Jamaica
56	Lithuania	Romania	Spain	Honduras	Brunei
57	Indonesia	Nigeria	China	Brunei	Czech Republic
58	Taiwan	Korea	Tunisia	Lebanon	Philippines
59	Jamaica	Ghana	Portugal	Kuwait	Ghana
60	Romania	Latvia	Ghana	Latvia	Trinidad and Tobago
61	Hungary	Indonesia	Turkey	Ghana	Mexico
62	Malawi	Portugal	Indonesia	Morocco	Uganda
63	Croatia	Kuwait	Kuwait	Hungary	Morocco
64	Brazil	Pakistan	Malawi	Spain	Cambodia
65	Sri Lanka	Sri Lanka	Vietnam	Jordan	Jordan
66	Mexico	Azerbaijan	Bangladesh	Uganda	Lebanon
67	Greece	Guatemala	Honduras	Bangladesh	Colombia
68	Poland	Brunei	Hungary	Colombia	Nigeria
69	Ghana	Hungary	Rwanda	Indonesia	Gambia
70	Costa Rica	El Salvador	Uruguay	Pakistan	Indonesia
71	Pakistan	Bangladesh	Azerbaijan	Philippines	Korea
72	El Salvador	Lithuania	Uganda	El Salvador	Hungary
73	Saudi Arabia	Mexico	Pakistan	Vietnam	Pakistan
74	Bulgaria	Tanzania	Morocco	Cambodia	Liberia

Figure 7 Financial market development (cont.)

Ranking	2008	2009	2010	2011	2012
75	Brunei	Macedonia	Philippines	Bulgaria	Malawi
76	Turkey	Bulgaria	Gambia	Tunisia	Kuwait
77	Tunisia	Croatia	Slovenia	Malawi	Romania
78	Philippines	Colombia	El Salvador	Portugal	Armenia
79	Georgia	Costa Rica	Colombia	Uruguay	Macedonia
80	Vietnam	Turkey	Swaziland	Korea	Bulgaria
81	Colombia	China	Romania	Gambia	El Salvador
82	Bangladesh	Vietnam	Egypt	Macedonia	Spain
83	Macedonia	Greece	Korea	Mexico	Paraguay
84	Honduras	Egypt	Nigeria	Romania	Senegal
85	Ukraine	Iceland	Costa Rica	Tanzania	Tanzania
86	Bosnia and Herzegovina	Uganda	Latvia	Nigeria	Guyana
87	Gambia	Tunisia	Macedonia	Croatia	Lithuania
88	Uruguay	Uruguay	Croatia	Paraguay	Vietnam
89	Serbia	Honduras	Lithuania	Lithuania	Swaziland
90	Zimbabwe	Albania	Tanzania	Swaziland	Uruguay
91	Italy	Gambia	Bulgaria	Costa Rica	Nepal
92	Azerbaijan	Serbia	Cambodia	Egypt	Croatia
93	Morocco	Philippines	Greece	Guyana	Georgia
94	Tanzania	Cambodia	Serbia	Azerbaijan	Seychelles
95	Guatemala	Georgia	Benin	Armenia	Bangladesh
96	Paraguay	Morocco	Mexico	Serbia	Dominican Republic
97	Kazakhstan	Armenia	Paraguay	Italy	Iceland
98	Guyana	Zimbabwe	Ireland	Benin	Azerbaijan
99	Benin	Nepal	Dominican Republic	Georgia	Portugal
100	Nicaragua	Italy	Albania	Nepal	Serbia
101	Dominican Republic	Guyana	Italy	Suriname	Costa Rica
102	Uganda	Lesotho	Guyana	Slovenia	Egypt
103	Albania	Paraguay	Moldova	Dominican Republic	Côte d' Ivoire
104	Moldova	Bosnia and Herzegovina	Cape Verde	Zimbabwe	Moldova
105	Nepal	Dominican Republic	Zimbabwe	Moldova	Cameroon
106	Egypt	Ukraine	Nepal	Senegal	Gabon
107	Armenia	Nicaragua	Senegal	Albania	Suriname
108	Burkina Faso	Benin	Georgia	Iceland	Ireland
109	China	Kyrgyz Republic	Nicaragua	Cape Verde	Zimbabwe
110	Mongolia	Senegal	Armenia	Greece	Ecuador
111	Senegal	Kazakhstan	Kyrgyz Republic	Belize	Italy
112	Russian Federation	Suriname	Côte d' Ivoire	Ecuador	Benin
113	Côte d' Ivoire	Côte d' Ivoire	Bosnia and Herzegovina	Kyrgyz Republic	Mali
114	Suriname	Ecuador	Lesotho	Nicaragua	Ukraine
115	Kyrgyz Republic	Mongolia	Ecuador	Ireland	Kazakhstan
116	Venezuela	Argentina	Mozambique	Ukraine	Nicaragua
117	Argentina	Burkina Faso	Kazakhstan	Syria	Burkina Faso
118	Lesotho	Mozambique	Bolivia	Côte d' Ivoire	Kyrgyz Republic
119	Bolivia	Russian Federation	Ukraine	Tajikistan	Bosnia and Herzegovina
120	Mali	Cameroon	Iran	Lesotho	Albania
121	Syria	Bolivia	Ethiopia	Kazakhstan	Cape Verde
122	Mozambique	Libya	Iceland	Bolivia	Lesotho
123	Tajikistan	Syria	Cameroon	Iran	Iran
124	Cameroon	Mali	Syria	Bosnia and Herzegovina	Tajikistan
125	Ecuador	Madagascar	Russian Federation	Ethiopia	Sierra Leone
126	Mauritania	Venezuela	Argentina	Argentina	Bolivia
127	Ethiopia	Ethiopia	Tajikistan	Russian Federation	Mongolia
128	Madagascar	Tajikistan	Burkina Faso	Mozambique	Slovenia
129	East Timor	Mauritania	Mongolia	Mongolia	Ethiopia
130	Cambodia	East Timor		Cameroon	Russian Federation
131	Libya	Chad	Madagascar	Burkina Faso	Argentina
132	Algeria	Algeria	Venezuela	Venezuela	Greece
133	Chad	Burundi	Mali	Mali	Venezuela
134	Burundi		Angola	Madagascar	Mozambique
135			Algeria	Chad	Guinea
136			East Timor	Angola	Mauritania
137			Chad	Algeria	Chad
138			Mauritania	Mauritania	Madagascar
139			Burundi	East Timor	East Timor
140				Haiti	Libya
141				Burundi	Haiti
142				Yemen	Algeria
143					Yemen
144					Burundi
145					Angola
146					Belize
147					Syria
148					Tunisia

Source: World Economic Forum, *Global Competitiveness Report*

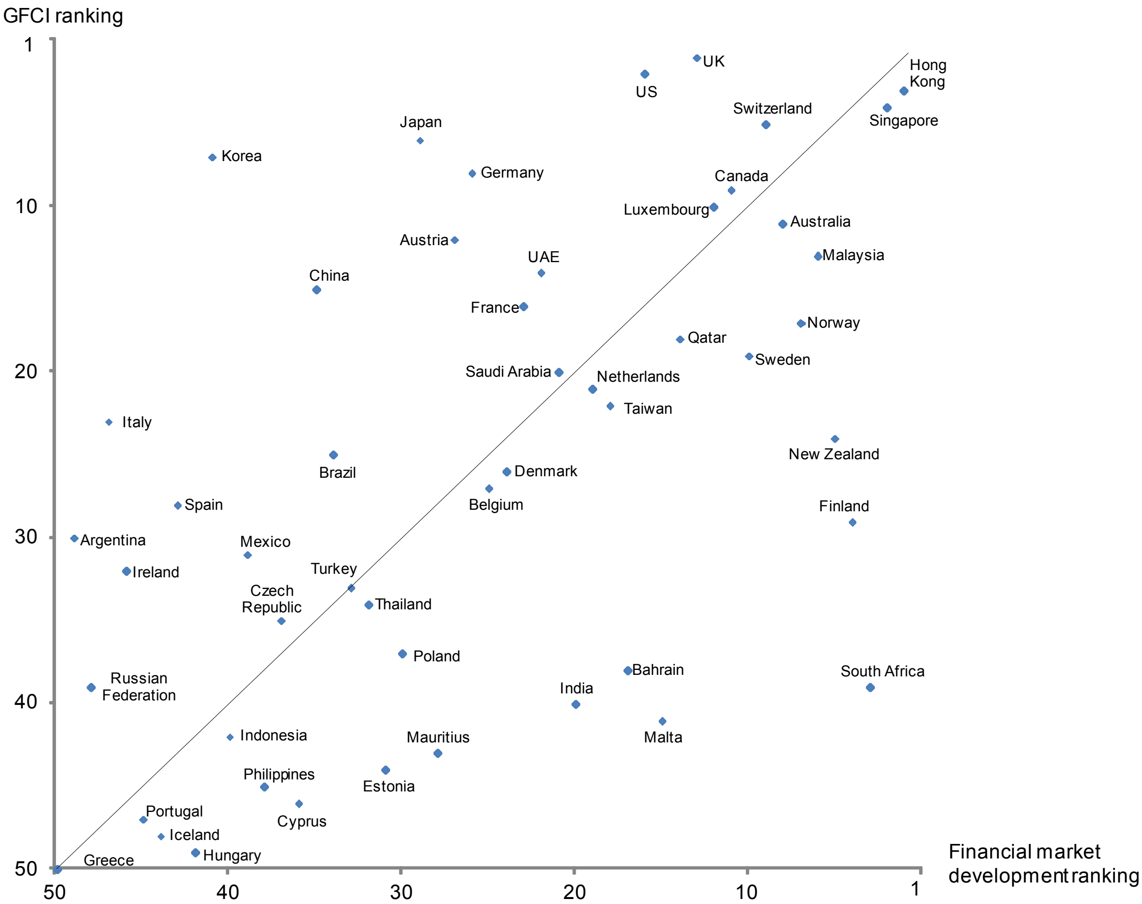
III. Shortcomings of the financial market ranking

1. Reliance on subjective assessments

Figure 8 compares the GFCI's rankings with the World Economic Forum's rankings for financial market development. We have tried to make the two comparable by replacing the city names of the former with country names and excluding offshore financial centers, which are not included in the latter. In addition, we have rearranged the resulting rankings.

One of the features of Figure 8 is that countries with a large GDP (e.g., the US, the UK, Germany, Japan, China, Korea and Italy) tend to have a relatively low ranking for financial market development. One exception to this is India.

Figure 8 Comparison of Global Financial Centres Index (GFCI) and financial market development ranking



Note: 1. The GFCI is as of March 2013, while the World Economic Forum's financial market development ranking is from the WEF's 2012 report.
2. We have replaced the financial centers in the GFCI report with the names of the corresponding countries and territories, and adjusted the rankings to cover only those countries and territories covered by both reports.

Source: Nomura Institute of Capital Markets Research, from Z/Yen Group, Global Financial Centres Index 2013 and World Economic Forum, *Global Competitiveness Report* 2012-2013

As we have mentioned, the World Economic Forum's ranking for financial market development is an aggregate of the results of an opinion survey on seven different areas and an external index for one area. Unlike the GFCI, it does not take into account the size of a country's financial markets. We think this is probably one of the reasons for the low ranking of some countries for financial market development, even though they have large financial markets.

This is not to say that a more accurate result could not be obtained even without using objective data to produce rankings: namely, by asking suitable respondents giving suitable responses questions that reflected a better balance between qualitative and quantitative factors. We therefore take a closer look at how countries are ranked for financial market development.

Figure 9 lists the scores for each of the components of financial market development of the top five countries in terms of financial market development followed by those of other Asian countries as well as the UK and the US. As we have already mentioned, all of these components except the legal rights index are based on an opinion survey.

We can see that the top-ranking countries have particularly high scores for soundness of banks, regulation of securities exchanges, and the legal rights index. However, the question remains on what basis the survey's respondents gave their scores, on a scale from 1 to 7, for soundness of banks and regulation of securities exchanges. Objective indicators such as non-performing loan ratios could have been used to measure soundness of banks. However, no such measures have been used.

Figure 9 Breakdown of financial market development scores

	Ranking	Availability of financial services	Affordability of financial services	Financing through local equity market	Ease of access to loans	Venture capital availability	Soundness of banks	Regulation of securities exchanges	Legal rights index
1	Hong Kong	6.2	6.0	5.7	4.4	4.5	6.5	5.7	10
2	Singapore	6.1	5.8	5.1	4.7	4.4	6.5	6.0	10
3	South Africa	6.4	5.2	5.4	3.5	3.1	6.7	6.5	10
4	Finland	5.9	5.5	4.5	4.4	3.9	6.5	6.1	8
5	New Zealand	5.8	5.2	4.5	4.2	3.5	6.6	5.3	10
6	Malaysia	5.6	5.4	4.9	4.4	4.0	5.7	5.3	10
13	UK	6.4	5.3	5.0	3.1	3.8	4.6	5.2	10
16	US	6.0	5.3	4.6	3.8	4.1	5.0	4.8	9
19	Taiwan	5.6	5.9	5.3	3.9	4.1	5.4	5.5	5
31	Belgium	6.0	5.1	4.1	3.8	3.5	4.4	5.0	7
36	Japan	5.2	5.0	4.6	3.1	3.0	5.4	4.7	7
42	Sri Lanka	5.3	5.0	5.5	2.6	2.2	5.9	5.1	4
43	Thailand	5.1	4.8	4.4	3.6	2.9	5.6	4.7	5
54	China	4.6	4.6	3.9	3.1	3.5	5.1	4.3	6
56	Brunei	4.8	4.6	2.4	3.5	3.1	5.5	3.9	7
58	Philippines	5.0	4.8	4.2	3.1	2.7	5.7	4.6	4
64	Cambodia	4.4	4.2	2.8	3.1	2.9	4.8	3.6	8
70	Indonesia	4.8	4.4	4.4	3.9	3.6	4.6	4.4	3
71	Korea	4.2	4.6	3.5	2.2	2.2	4.6	4.0	8
73	Pakistan	4.0	3.7	3.8	2.9	2.8	4.9	4.4	6
88	Vietnam	4.3	4.0	3.4	2.4	2.3	4.2	3.3	8
91	Nepal	3.9	3.7	3.9	2.5	2.4	4.2	3.6	7
95	Bangladesh	4.0	3.7	4.0	2.4	2.0	4.6	3.0	7
127	Mongolia	3.8	3.5	2.8	1.8	1.7	4.3	2.8	6
139	East Timor	2.7	2.8	2.2	2.4	2.2	4.0	2.5	2

Source: World Economic Forum, *Global Competitiveness Report* 2012-2013

Similarly, in the case of regulation of securities exchanges, a certain degree of objectivity could have been obtained by using the same measure for several different items that need to be regulated. However, we have no way of knowing to what extent the international comparisons are valid as no details of the actual questions have been published. For example, we have no way of knowing exactly why the US has scored 4.8 for regulation of securities exchanges while South Africa has achieved a top score of 6.5.

Similarly, it is difficult to see why South Africa should have a higher score for availability of financial services than the US without knowing what financial products and services that are available in South Africa are not available in the US. Such concerns are but one example.

The World Economic Forum's assessments are based on responses to questions administered by experts in each of the countries concerned. However, it is quite possible that respondents in some countries tend to give their own countries high scores while those in other countries tend to give their own countries lower scores.

The GFCI survey tries to avoid this potential bias by not asking respondents to rate financial centers in their own countries. However, this does not solve the problem. The question remains how many respondents have the knowledge and experience to rate financial centers in other countries and are neutral enough to rank them from a proper perspective.

The GFCI report calculates the difference between the average assessment given to a financial center and its overall rating (the average assessment adjusted to reflect the instrumental factors) and calls this "reputation." Figure 10 shows center rankings for reputation from March 2009 to March 2013. In the March 2013 survey Boston was ranked first and Tokyo second, while Seoul ranked first in the three surveys from September 2011 to September 2012. One of the possible reasons why Seoul has done increasingly well overall in recent years, overtaking Tokyo in the September 2012 survey, may have been its rising reputation.

Certainly, the fact that Seoul hosted the G20 summit in 2010 may have drawn it to the attention of international financial market participants. The converse of this is that this sort of ranking is highly sensitive to such factors.

One could say that the disparity between Seoul's high ranking in the GFCI survey and Korea's low ranking in the World Economic Forum survey highlights the limitations of an approach that relies heavily on subjective ratings.

2. Shortcomings of the legal rights index

We would also question the validity of the legal rights index, the only component of the World Economic Forum's global competitiveness rankings that does not rely on its opinion survey. Six countries or territories (Hong Kong, Singapore, South Africa, New Zealand, Malaysia, and the UK) have a maximum (10-point) score for this factor. Although this is converted to 7 points when calculating the overall score to make it

Figure 10 Changes in reputation

2009/3			2009/9			2010/3			2010/9			2011/3			2011/9			2012/3			2012/9			2013/3		
1	Singapore	61	1	Shanghai	65	1	Shenzhen	63	1	Shenzhen	56	1	Shanghai	34	1	Seoul	35	1	Seoul	82	1	Seoul	67	1	Boston	67
2	Sidney	60	2	Singapore	46	2	Shanghai	55	2	Beijing	43	2	New York	32	2	New York	32	2	Singapore	34	2	Singapore	44	2	Tokyo	63
	Toronto	60																	Shanghai	34						
3	Tokyo	57	3	Hong Kong	41	3	Hong Kong	47	3	Shanghai	39	3	Hong Kong	29	3	Shanghai	31	3	New York	31	3	Toronto	41	3	Singapore	61
				Shenzhen	41								Singapore	29					Hong Kong	31						
4	Jersey	48	4	Sidney	40	4	Isle of Man	43	4	New York	35	4	Chicago	25	4	Singapore	29	4	Toronto	27	4	New York	40	4	Vienna	55
													Frankfurt	25								Hong Kong	40			
5	Zurich	47	5	Toronto	35	5	New York	37	5	Singapore	33	5	London	24	5	Hong Kong	26	5	Zurich	24	5	Shanghai	37	5	Hong Kong	51
	Guernsey	47		Beijing	35														Geneva	24						
6	Isle of Man	43	6	New York	34	6	Singapore	36	6	Zurich	28	6	Zurich	23	6	Chicago	25	6	London	22	6	San Francisco	32	6	Kuala Lumpur	49
													Toronto	23		Toronto	25		San Francisco	22						
																Frankfurt	25									
7	Chicago	42	7	Tokyo	33	7	Beijing	33	7	Taipei	26	7	Sidney	22	7	London	23	7	Chicago	20	7	Zurich	31	7	New York	44
										Hong Kong	26		Geneva	22		Zurich	23		Vancouver	20		Chicago	31			
										London	26											Vancouver	31			
8	Hong Kong	41	8	Seoul	32	8	London	32	8	Sidney	25	8	Boston	15	8	Geneva	21	8	Tokyo	19	8	Tokyo	30	8	Monaco	41
	New York	41											San Francisco	15												
9	San Francisco	39	9	Zurich	31	9	Jersey	31	9	Geneva	24	9	Tokyo	14	9	Boston	20	9	Frankfurt	18	9	Boston	28	9	Zurich	39
				Chicago	31					Toronto	24		Seoul	14					Kuala Lumpur	18						
10	Geneva	37	10	Vancouver	29	10	Seoul	30	10	Chicago	23	10	Shenzhen	12	10	San Francisco	19	10	Sidney	16	10	Sidney	27	10	Toronto	33
11	Edinburgh	34	11	Frankfurt	27	11	Guernsey	28	11	Tokyo	18	11	Washington DC	11	11	Tokyo	18	11	Boston	15	11	Kuala Lumpur	26	11	San Francisco	31
	Luxembourg	34																								
12	Boston	32	12	Geneva	23	12	Zurich	23	12	Frankfurt	17	12	Beijing	9	12	Sidney	17	12	Jersey	14	12	Geneva	25	12	Geneva	
				Taipei	23																					
13	Frankfurt	31	13	San Francisco	22	13	Tokyo	22	13	San Francisco	15	13	Taipei	2	13	Jersey	14	13	Stockholm	11	13	London	24	13	Chicago	29
				Guernsey	22					Washington DC	15		Paris	2											Qatar	29
										Boston	15															
14	Dublin	27	14	Boston	21	14	Chicago	20	14	Dubai	4				14	Melbourne	8	14	Washington DC	4	14	Frankfurt	23	14	London	27
							Sidney	20		Luxembourg	4														Sidney	27
15	Paris	21	15	Jersey	20	15	Toronto	19							15	Vancouver	7	15	Melbourne	0	15	Jersey	18	15	Seoul	25
																Stockholm	7					Dubai	18		Frankfurt	25
16	London	14				16	Frankfurt	15							16	Wellington	5				16	Washington DC	11	16	Vancouver	22
						17	San Francisco	14																	Oslo	22
						18	Geneva	12																		
							Boston	12																		

Source: Z/Yen Group, Global Financial Centres Index

the same as the factors covered by the opinion survey, there are no cases where a country has achieved the maximum score for any of the other factors. As a result, the legal rights index has a significant impact on the overall score.

Moreover, of the eight factors used to calculate financial market development, the average of the five efficiency indicators ((1)-(5)) constitutes 50% of the final score. In contrast, the average of the three trustworthiness/confidence indicators (soundness of banks, regulation of securities exchanges, and the legal rights index) constitutes the remaining 50% of the final score. In other words, each of the trustworthiness/confidence indicators has 70% more effect on the final score than each of the five efficiency indicators.

As we have already mentioned, the legal rights index is the same as the one used by the World Bank and International Finance Corporation in the computation of its ease of doing business index. In 2008 the World Bank Independent Evaluation Group (IEG) published a report on the World Bank/International Finance Corporation's *Doing Business Report* in which it pointed out that the latter report tended to rank countries with a common law system more highly in terms of ease of doing business than countries with a civil law system[3]. In particular, the IEG report identifies the legal rights index as favoring countries with a common law system.

We can see from Figure 9 that the countries that score 10 out of 10 on this index are the UK itself, which has a common law system, and either members of the Commonwealth or countries with strong historical ties to the UK. If we exclude the

3 World Bank Independent Evaluation Group, *Doing Business: An Independent Evaluation*, 2008

ease of doing business index/legal rights index and aggregate the remaining factors, the result is a very different ranking (Figure 11).

When all is said and done, what the legal rights index measures is mainly the extent to which a country regulates the use of movable property as collateral. According to the aforementioned IEG report, the reason this has attracted attention is the finding of Hernando de Soto that, in the absence of such regulation, people who do not own land that they can use as collateral for loans tend to be excluded from formal financial markets and become impoverished[4].

However, the IEG also points out that de Soto's work has been criticized for ignoring the fact that the availability of finance depends not only on the rules governing collateral but also on various factors such as the ability to repay a loan, interest rates, the value of collateral, and the state of development of financial intermediation.

If we take another look at Figure 8, we can see that the countries with a relatively high ranking in the World Economic Forum's *Global Competitiveness Report* (e.g., Singapore, Australia, Malaysia, New Zealand, South Africa, and India) tend to have a UK connection. As we have already mentioned, India is an exception among countries with a large GDP in that its ranking in the World Economic Forum's *Global Competitiveness Report* is higher than that in the GFCI report. It may be the case that not only the use of the legal rights index as a rating factor but also that of regulation of securities exchanges favors countries with a UK connection. While that might be

Figure 11 Financial market development ranking, excluding legal rights index

Main gainers

Country	Adjusted ranking	Original ranking	Change
Italy	86	111	△25
Brazil	22	46	△24
Indonesia	48	70	△22
Portugal	77	99	△22
Philippines	39	58	△19
Egypt	82	102	△20
Turkey	27	44	△17
Sri Lanka	30	42	△12
Kuwait	64	76	△12
Thailand	33	43	△10
Iran	113	123	△10
Saudi Arabia	15	22	△7

Main losers

Country	Adjusted ranking	Original ranking	Change
Ireland	133	108	▼25
Cambodia	88	64	▼24
Vietnam	111	88	▼23
Korea	91	71	▼20
Bangladesh	112	95	▼17
UK	29	13	▼16
Iceland	109	97	▼12
Denmark	41	30	▼11
Nepal	102	91	▼11
Malaysia	16	6	▼10
US	26	16	▼10
Spain	92	82	▼10

Source: Nomura Institute of Capital Markets Research, from World Economic Forum, *Global Competitiveness Report* 2012-2013

4 Hernando de Soto is a Peruvian economist and author of works such as *The Other Path* (1986) and *The Mystery of Capital* (2000) in which he expresses these views and which have heavily influenced the World Bank's policies on development assistance. (In the case of the former work, he has been successfully sued by his co-authors for omitting any reference to them.)

acceptable if it could be demonstrated that such a connection produced better results, whether or not it does is open to question[5].

IV. Lessons from financial market rankings

While, as we have seen, attempts to rank financial markets are not unproblematic, it is clear that Hong Kong and Singapore both rank highly and that a number of other Asian countries and territories have also improved their rankings for financial competitiveness.

Although we have criticized this approach because it is liable to be affected by subjective factors, we cannot deny that, in the real world of business, decisions (e.g., about where to expand) will inevitably involve subjective assessments.

Also, financial rankings tell us more than just rank. For example, Figure 12 lists the instrumental factors that have a high correlation with the GFCI's rankings. We can see from this that financial market data are not the only factors that affect final rankings and that a city or country's competitiveness is also an important factor. We can also see that commodity futures notional turnover is an important factor.

Figure 12 Correlation between Global Financial Centres Index (GFCI) and instrumental factors

	Factor	Description	Source	Correlation coefficient
1	Global Power City Index	Ranks major cities by "comprehensive power"	Institute for Urban Strategies & Mori Memorial Foundation	0.51
2	World Competitiveness Scoreboard	Evaluates countries' economic performance, government efficiency, business efficiency, infrastructure, and ease of doing business	IMD	0.49
3	Global City Competitiveness	Ranks major cities by competitiveness	EIU	0.48
4	Global Competitiveness Index	Ranks countries for overall competitiveness	World Economic Forum	0.47
5	Banking Industry Country Risk Assessments	Assesses risk of countries' banking sector	Standard & Poor's	0.46
6	Office Occupancy Costs	Survey of global office rents	DTZ	0.44
7	Global Cities Index	Ranks major cities of the world	AT Kearney	0.44
8	City Global Image	Ranks image of major cities of the world	KPMG	0.40
9	Connectivity	Ease of flying to other cities	EIU	0.37
10	Commodity Futures Notional Turnover	Commodity futures turnover	World Federation of Stock Exchanges	0.35
11	Citizens Domestic Purchasing Power	Compares purchasing power in different cities	UBS	0.34
12	Price Levels	Compares price level of different cities	UBS	0.33
13	Business Environment	Evaluates quality and attractiveness of doing business in different countries	EIU	0.32
14	Capital Access Index	Evaluates ease of raising business capital	Milken Institute	0.32
15	IT Industry Competitiveness	Compares competitiveness of IT industry in different countries	BSA/EIU	0.29

Source: Z/Yen Group, Global Financial Centres Index March 2013

5 A series of papers by La Porta, R., F. Lopez−De−Silanes, A. Shleifer and R. Vishny (e.g., "Legal Determinants of External Finance," Journal of Finance, 52 (1997): pp1131-50 and "Law and Finance," Journal of Political Economy, Vol.106(1998): pp1113-1155) has attracted attention by arguing that countries with common law systems have more

Similarly, Figure 13 gives the correlations between the World Economic Forum's financial market development pillar and the scores of the 11 other pillars of global competitiveness. From this we can see that the factor that correlates most closely with financial market development is goods market efficiency. This, in turn, is based on factors such as intensity of local competition, tax system, number of procedures required to start a business, agricultural policy costs, prevalence of trade barriers, and prevalence of foreign ownership.

Japan ranks 20th in terms of its overall rating for goods market efficiency. However, a breakdown of that pillar shows that it ranks second in terms of intensity of local competition, 113th in terms of the impact of its tax system, 87th in terms of number of procedures required to start a business, 142nd in terms of agricultural policy costs, 115th in terms of prevalence of trade barriers, and 90th in terms of prevalence of foreign ownership.

All this suggests that, if Asian financial markets are to achieve significantly higher ratings, Asian countries will not only have to carry out financial reforms but also pursue business-friendly, open-door policies, make their cities more attractive, and foster not only their stock and bond markets but also other markets such as commodity futures.

Figure 13 Correlation of 12 pillars of competitiveness

	1. Institutions	2. Infrastructure	3. Macroeconomic environment	4. Health and primary education	5. Higher education and training	6. Goods market efficiency	7. Labor market efficiency	**8. Financial market development**	9. Technological readiness	10. Market size	11. Business sophistication	12. Innovation
1	1	0.79	0.42	0.59	0.72	0.87	0.69	**0.78**	0.77	0.25	0.82	0.82
2	0.79	1	0.42	0.80	0.90	0.78	0.51	**0.68**	0.93	0.54	0.85	0.82
3	0.42	0.42	1	0.36	0.39	0.41	0.36	**0.41**	0.40	0.31	0.37	0.37
4	0.59	0.80	0.36	1	0.89	0.62	0.35	**0.52**	0.80	0.49	0.69	0.63
5	0.72	0.90	0.39	0.89	1	0.74	0.50	**0.66**	0.92	0.53	0.83	0.81
6	0.87	0.78	0.41	0.62	0.74	1	0.70	**0.84**	0.78	0.36	0.87	0.79
7	0.69	0.51	0.36	0.35	0.50	0.70	1	**0.60**	0.56	0.13	0.58	0.63
8	0.78	0.68	0.41	0.52	0.66	0.84	0.60	**1**	0.69	0.41	0.79	0.72
9	0.77	0.93	0.40	0.80	0.92	0.78	0.56	**0.69**	1	0.50	0.86	0.86
10	0.25	0.54	0.31	0.49	0.53	0.36	0.13	**0.41**	0.50	1	0.58	0.54
11	0.82	0.85	0.37	0.69	0.83	0.87	0.58	**0.79**	0.86	0.58	1	0.93
12	0.82	0.82	0.37	0.63	0.81	0.79	0.63	**0.72**	0.86	0.54	0.93	1

Source: Nomura Institute of Capital Markets Research, from World Economic Forum, *Global Competitiveness Report* 2012-2013

developed economies and capital markets than countries with civil law systems. However, there has been considerable criticism of and disagreement with their analysis and views.