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Hong Kong *and* Shanghai
Yesterday, Today, and Tomorrow

Robert N. McCauley and Eric Chan

1.1 Introduction

At some point in the not distant future, China will ease its capital controls and make the yuan renminbi fully convertible into foreign currencies. Shortly after, Shanghai will reemerge as an international financial center. Amid a broader debate over the competitiveness of major international financial centers (McKinsey and Company 2006; Mainelli and Yeandle 2007), the prospect of Shanghai's reemergence has sharpened speculation regarding the relationship between Shanghai and the established international financial center that has reverted to Chinese sovereignty, Hong Kong (Wong 2007; Bradsher and Barboza 2007; Meyer 2007).

This study argues that Hong Kong will gain stature as an international financial center when China is more open financially and Shanghai returns as a competing center. This thesis is in the tradition of Kindleberger (1974), who argued that federal states can support more than one financial center. The thesis that the development of an onshore international financial center can contribute to the development of a nearby offshore international financial center is in some ways the inverse of that of Rose and Spiegel (2007), who argue that offshore competition can spur the onshore center.

This thesis is developed in relation to historical evidence of the last century, the current range and intensity of financial activity in the two centers,

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and a prospective analysis of the evolution of China's international balance sheet and Hong Kong's share therein. The method is eclectic, depending on rankings based on nosecounts of banks and their links for the historical comparison, multidimensional measures of balance sheets and trading activity for the current comparison, and regression analysis for projecting the future.

The analysis is in three parts. The next section builds on the analysis of 1900 to 1980 in Reed (1981) to demonstrate that Hong Kong ranked higher among international banking centers in the twentieth century when China was financially open, that is, before and just after the Second World War. The following section supplements and updates the careful study of Jao (2003) with data from the Bank for International Settlements (BIS; 2002, 2005) and from Ho, Ma, and McCauley (2005), to emphasise the current gap between Hong Kong and Shanghai, especially in the trading of foreign exchange and derivatives. The value of Hong Kong's legal and regulatory institutions is discussed by reference to the gap between the valuations of firms listed on the Hong Kong and Shanghai stock exchanges. The following section draws on Lane (2000) and Cheung et al. (2006) to fit a Kuznets curve relating international banking assets and liabilities to real income and openness in order to assess the potential growth of China's international banking activity. Then BIS and Hong Kong data are used to estimate the share that Hong Kong can be expected to enjoy. A final section concludes that China's financial opening and Shanghai's consequent reemergence as an international financial center promise to raise Hong Kong's standing vis-à-vis London and New York.

1.2 Hong Kong and Shanghai as International Financial Centers, 1900 to 1980

Reed (1981) based his analysis on five variables that combine the number of banks in a financial center and their links to other financial centers (see appendix A for complete definitions). The first two of these count the number of locally headquartered banks and their international links. In particular, both the number of internationally active banks that are headquartered in the center and the number of their links through affiliates to other international financial centers are counted. The other three variables focus on the presence in the center of private and foreign banks. In particular, the number of merchant or investment bank offices is counted. In addition, the number of offices in the center of large, internationally active banks that are headquartered outside the center is counted. Finally, in parallel with the count of links to other centers of locally headquartered banks, the links to international financial centers through offices of large, internationally active banks headquartered elsewhere are counted.

Rankings based on these measures may be far from ideal, but they do

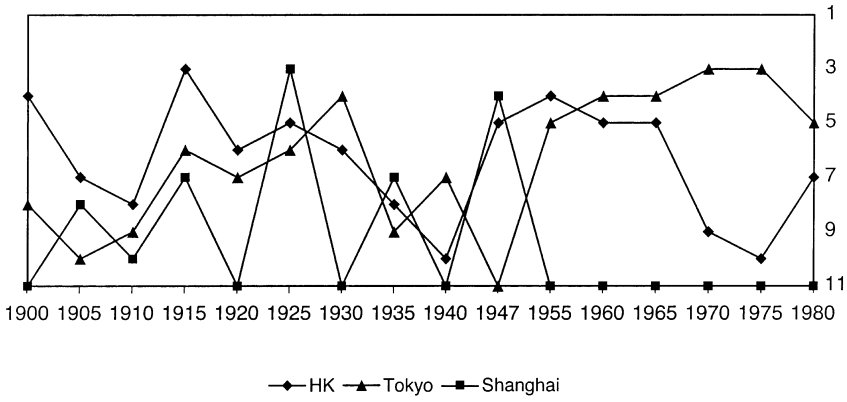

Fig. 1.1 Ranking of international financial centers
Source: Reed (1981).
Notes: 11 denotes not in the top ten. Yokohama and Tokyo are considered one center.

have the advantage of having been assembled on a consistent basis for most of a century. In particular, Reed ranked the world's international financial centers on this basis for sixteen selected years between 1900 and 1980, inclusive, at generally five-year intervals.

Reed's rankings consistently put London and New York in the top positions. Asian financial centers, including Hong Kong, Shanghai, Singapore, Tientsin, Tokyo, and Yokohama, fell into the second or third tier of centers. Focusing on the three Asian centers of Hong Kong, Shanghai, and Tokyo,[1] figure 1.1 shows that Hong Kong started the century as the preeminent Asian center, only to fall behind first Shanghai then Yokohama (aggregated with Tokyo in the graph) before World War II. Then, after 1960, Tokyo emerged as the preeminent center in Asia.

In terms of the comparison between Hong Kong and Shanghai, Reed found that internationally active banks were better represented and more connected to other centers in Hong Kong than in Shanghai. Reed put Shanghai ahead of Hong Kong in two years, 1925 and 1947. But even apart from the Second World War and the Mao years, Shanghai did not make the international top ten in 1900, 1920, and 1930, while Hong Kong always placed.

The most striking aspect of these rankings, though, is the relationship between Hong Kong's ranking and Shanghai's presence as a competitor. Shanghai was no competition for Hong Kong during the Second World War and the years after the founding of the People's Republic. During these years, Hong Kong averaged a ranking of 5.8 on Reed's measure (where London was ranked number one). In the years that Shanghai was, from an international banking perspective, out of the picture, Hong Kong was ranked

1. See Meyer (2007).

Table 1.1 **Ranking of Hong Kong and Shanghai as international banking centers, 1900–1980 (top ranked center is ranked number one)**

	Hong Kong	Shanghai	Difference
Shanghai active (1900–35, 1947)	5.8	8.0[a]	2.1
Shanghai inactive (1940, 1955–80)	7.1		
Difference	–1.3		

Sources: Reed (1981) and authors' calculations.

[a]A rank of 11 is assigned to Shanghai in the years that it did not make the top ten. If only the years when Shanghai made the top ten were included, then Shanghai would show an average ranking of 6.2 in the top row while Hong Kong would show an average ranking of 6.0.

7.1 (see table 1.1). On this showing, Hong Kong did not benefit as an international banking center from the absence of Shanghai.

The result should not be surprising. Narrowly speaking, if banks headquartered in Shanghai tended to have affiliates in Hong Kong, then Hong Kong would have tended to rise on Reed's measure. More broadly, the engagement of China with the world's trading and financial system raised the weight in that system of East Asia and the ranking of those financial centers that served it.

The suggestion conveyed by this look at Hong Kong and Shanghai as international banking centers in the last century is that Hong Kong was generally more populated with international banking units and more connected to other international banking centers than Shanghai. More striking, however, is the suggestion of complementarity between the two centers. Hong Kong seemed to have done better as an international banking center when Shanghai was open for business. The next section turns to the current comparison of Hong Kong and Shanghai, in which Shanghai is handicapped by the substantial restrictions on international capital mobility between China and the rest of the world.

1.3 Hong Kong and Shanghai as International Financial Centers Today

This section extends and updates the quite comprehensive comparative profile of Hong Kong and Shanghai as financial centers provided by Jao (2003). It starts with Professor Jao's profile based on 2002 data and adds to it some data from the triennial central bank survey compiled by the BIS, mostly concerning over-the-counter derivatives. It then updates the extended profile to end-2005 (except the data from the triennial survey, which cover April 2004). Finally, the current advantage of Hong Kong's institutions and openness is measured by the price gap between the opportunity cost that the Chinese authorities pay for listings of Chinese companies in Hong Kong.

Jao's conclusion from his profile was stark: "Here, all indicators show that Shanghai was dwarfed by Hong Kong" (19). One could footnote this

conclusion, for example, by noting that Hong Kong has no counterpart to Shanghai's commodity exchanges, which could eventually challenge the London-based commodity exchanges. It is hard, however, to argue against Professor Jao's assessment. Indeed, when the comparison is broadened in what follows to include derivative trading, his conclusion actually gains strength. For instance, while billions of dollars worth of interest rate swaps were traded every day in Hong Kong in April 2001 and 2004, the first renminbi swap had not yet been contracted then.[2]

But the question arises, particularly after the celebrated increase in the market capitalization of the Shanghai stock exchange in 2007, how firmly did this conclusion hold in middecade? It turns out that the updating of Professor Jao's comparison to 2005 does little damage to his conclusion.

As an international banking center, Shanghai lags Hong Kong (table 1.2). It must be admitted that broad, mostly domestic, banking aggregates, like the deposits and loans on the first and third rows of table 1.2, grew at a much faster rate in Shanghai than in Hong Kong over the years 2002 to 2005, as one would expect given the more rapid economic growth on the mainland. However, such growth tells more about Shanghai as a domestic financial center than as an international financial center.[3] Even using China-wide data on cross-border interbank positions, Shanghai engagement with the international interbank markets remained moderate in 2005, at levels only about a third of those observed in Hong Kong (see rows "Due to" and "Due from banks abroad" in table 1.2). On this showing, Shanghai has a way to go to become a major international banking center.

From the comparison of banking positions, the spotlight shifts to the trading of foreign exchange and derivatives (table 1.3). At the outset, it should be recognized that it is possible for an international financial center to operate largely on the basis of foreign currencies: consider the position of London before the abolition of exchange controls on sterling in 1979. But London was well established as an international financial center before the imposition of those controls, and policy sought to revive that role even under the capital controls. In contrast, policy drove practically all international banks out of Shanghai in the years after the founding of the People's Republic. For instance, Lu (2007) tells the story of the strained relations between the Hong Kong Shanghai Bank and the mainland authorities.

2. The first renminbi interest rate swap was contracted in connection with the Asian Development Bank's (ADB) sale of a so-called panda bond denominated in renminbi to Chinese investors in October 2005. The ADB reportedly exchanged its ten-year fixed coupon payments for floating rate payments based on the one-year deposit rate in China.

3. Liu and Yang (2005) argue that Shanghai's performance as a domestic financial center can be judged as unsatisfactory by the low ratio of loans to deposits in the Chinese banking system. It is certainly true that nominal lending rates well below the Chinese economy's growth rate suggest that domestic financial intermediation has serious problems. But by Liu and Yang's criterion, Hong Kong banks would be judged to have done a great job amid rising asset prices in the early to mid-1990s (with a loan-to-deposit ratio in excess of one) and a poor job since (with a low loan-to-deposit ratio).

Table 1.2 Banking assets and liabilities in Hong Kong and Shanghai (US$ billions)

	Hong Kong		Shanghai	
	2002	2005	2002	2005
Deposits	425.5	524.6	169.6	289.0
Foreign currency deposits	189.4	250.1	20.7	23.9
Loans	266.4	298.1	127.5	208.1
Foreign currency loans	66.2	83.9	14.3	30.0
Loans abroad	31.2	39.4		
Due to banks abroad	180.9	200.7	32.3[a]	76.1[a]
Due from banks abroad	257.0	325.6	79.7[a]	110.5[a]
Clearing house turnover	39.5	79.0		
Interbank market turnover	20.6	31.8	5.7	11.5
Memo: no. of depository institutions	224	199	72	130
Domestic	99	77	18	46
Foreign	125	122	54	84

Sources: Hong Kong: Hong Kong Monetary Authority (HKMA) Annual Report, Quarterly Bulletin, and Monthly Statistical Bulletin; Hong Kong Monthly Digest of Statistics; Hong Kong Annual Report; Hong Kong Stock Exchange Fact Book; Hong Kong Securities and Futures Commission Annual Report. Shanghai: Shanghai Statistical Yearbook; Shanghai Economy Yearbook; China Statistical Yearbook; China Securities and Futures Statistical Yearbook; BIS.

[a]China figures.

Note: Blank cell means not reported.

Whatever the possibilities in principle, in practice the gap between Hong Kong and Shanghai in trading foreign exchange and derivatives is wider than that in banking (table 1.3). The modal transaction in the exchange-traded Shanghai spot currency market in 2004 must have been the purchase of dollars against renminbi by the authorities. Most trading by non-residents occurred offshore in the nondeliverable forward market, with no connection to payment flows on the mainland by construction (Ma, Ho, and McCauley 2004; Ho, Ma, and McCauley 2005; Debelle, Gyntelberg, and Plumb 2006). Currency options and swaps were absent.

Moreover, the development of derivatives markets in fixed income and equity in China has been inhibited by a cautious official approach that reflects a bad experience with bond futures trading in the 1990s. Stock index futures remained to be introduced in 2005. As noted, only in commodity futures did Shanghai have an edge on Hong Kong. Indeed, because China represents the fastest growing and probably most volatile source of demand for commodities, it is not inconceivable that Shanghai traders might have some informational advantages over their commodity-trading counterparts in London and New York. For now, however, derivatives are more studied than traded in Shanghai.

Turning from foreign exchange and derivatives to capital market development, Shanghai has yet to derive the full measure of advantage over Hong

Table 1.3 **Foreign exchange and derivatives turnover in Hong Kong and Shanghai (US$ billions)**

	Hong Kong		Shanghai	
	2002	2005	2002	2005
Foreign exchange daily turnover[a,b]	68.351	105.979		0.61[c,d]
Spot	18.968	35.648	0.34	0.61[c,d]
Forward/swaps	47.855	66.514	—	
Options	1.030	2.846	—	—
Cross-currency swaps	0.498	0.971	—	—
Of which, domestic currency	24.578	27.614		0.61[c]
Spot	3.455	4.406		
Forward/swaps	21.122	22.828		
Options		0.213		
Cross-currency swaps		0.167		
Over-the-counter fixed income derivatives[a,b]	2.641	11.217		
Forward rate agreements	0.531	0.318		
Interest rate swaps	1.895	9.594		
Interest rate options	0.215	1.305		
Exchange traded derivatives				
Stock index futures (no. of contracts, daily average)	19,602[e]	40,205[e]	—	—
Commodity futures	—	—	1.98	3.24

Sources: Hong Kong Stock Exchange Fact Book; Shanghai Statistical Yearbook; BIS Triennial Survey (2002, 2005).

[a]April 2001 for 2002.

[b]April 2004 for 2005.

[c]China figures.

[d]Ho, Ma, and McCauley (2005) estimated that the daily renminbi turnover would be US$ 3.6 billions, in which US$ 2.9 billions would be spot turnover, if the unreported bank-customer transactions were taken into account.

[e]Hang Seng Index futures.

Blank cell means not reported. Dash means nil.

Kong from its very large government debt (table 1.4). Turnover of government paper other than People's Bank bills remained low, with trading awkwardly divided between the stock exchange and an over-the-counter interbank market. Fixed income mutual funds and insurers' holdings of bonds were growing very rapidly but from a low base. As noted, fixed income derivatives were absent in 2005, although the development of repo markets had allowed the possibility of short-sales. As for the international profile of the Chinese bond market, policy generally prevented foreign investment in renminbi-denominated bonds.[4]

4. A limited exception was the Pan Asia Index Fund (EMEAP 2006; Ma and Remolona 2005). Another exception to the noninternationalized nature of the Chinese bond market was the issuance of the panda bond by the Asian Development Bank in October 2005.

Table 1.4 Capital market indicators in Hong Kong and Shanghai

	Hong Kong		Shanghai	
	2002	2005	2002	2005
Debt market (US$ billion)				
Outstanding debt instruments	68.3	99.2	366.3[a]	910.9[a]
Government	16.4	17.7	215.2	610.7
Foreign	11.5	15.7	0.0	1.2
Other				
Turnover	2.9	3.5	15.5[a]	3.2[a]
Stock market (US$ billion)				
Market capitalisation	456.4	1,046.3	306.4	286.2
Daily turnover	0.83	2.35	0.84	0.99
Equity funds raised	13.0	38.5	0.67	0.37
Memo: no. of listed firms	812	934		
Domestic	802[b]	925[b]	715	834
Foreign	10[c]	9[c]		
Fund management				
Assets under management	342.1	667.6		
Memo: no. of unit trusts or mutual funds	1,965[d]	1,998[e]		
Domestic	91[d]	103[e]	25	26
Foreign	1,874[d]	1,895[e]	—	
Insurance				
Premium income (US$ billion)	11.4	17.7	2.9	4.1
No. of insurance companies	195	175	36	70
Domestic	96	89	21	46
Foreign	99	86	15	24

Sources: Hong Kong: Hong Kong Monetary Authority (HKMA) Annual Report, Quarterly Bulletin, and Monthly Statistical Bulletin; Hong Kong Monthly Digest of Statistics; Hong Kong Annual Report; Hong Kong Stock Exchange Fact Book; Hong Kong Commissioner of Insurance Annual Report; Hong Kong Securities and Futures Commission Annual Report. Shanghai: Shanghai Statistical Yearbook; Shanghai Economy Yearbook; China Statistical Yearbook; China Securities and Futures Statistical Yearbook; Asian Development Bank; BIS.

Notes: Blank cell means not reported. Dash means nil.

[a]China figures.

[b]All China incorporated enterprises with H shares listed in the Hong Kong Stock Exchange are included.

[c]Counted as foreign companies if incorporated overseas and have a majority of business outside Hong Kong SAR and China.

[d]March 2003.

[e]March 2006.

Given the headlines in 2007 that the market capitalization of the Chinese stock exchanges had surpassed those of the rest of Asia, table 1.4 offers a reminder of how things were in 2005. The market capitalization of the Shanghai exchange was about a quarter of that of the Hong Kong exchange, and turnover was less than half. Fund-raising in the market through 2005 re-

mained negligible. Again, the Chinese equity markets were very insular, with only about $10 billion of Qualified Foreign Institutional Investor inflow permitted. Table 1.4 classifies the listings of mainland firms on the Hong Kong Stock Exchange as domestic. If these are taken to be foreign listings, then the primary market offerings on the Hong Kong Stock Exchange emerge as the most international in the world (fig. 1.2).

In terms of price action, both the mainland equity and bond markets moved without reference to global markets, as represented by the Standard and Poor's 500 or U.S. Treasury bonds (fig. 1.3). In striking contrast is the high correlation of Hong Kong bond and stock markets with global movements.

Underlying Hong Kong's current advantage are not only China's capital controls but also Hong Kong's legal system; regulation, including accounting and disclosure standards; and clearing and settlement systems. The value that the mainland authorities themselves place on Hong Kong's institutions can be read from pricing differences between the Hong Kong and Shanghai stock exchanges. The willingness of the mainland authorities to pay for Hong Kong institutions is more evident in recent years owing to greater overlap between the firms traded in Hong Kong and Shanghai.

For a long time there has been evidence of pricing differences between the Hong Kong and Shanghai exchanges that suggested that the mainland authorities were paying an opportunity cost for Hong Kong listings. In particular, Chinese-based enterprises in Hong Kong have long traded at price-earnings ratios well below those of the Shanghai A shares (fig. 1.4). But drawing inferences from this pricing difference was never straightforward:

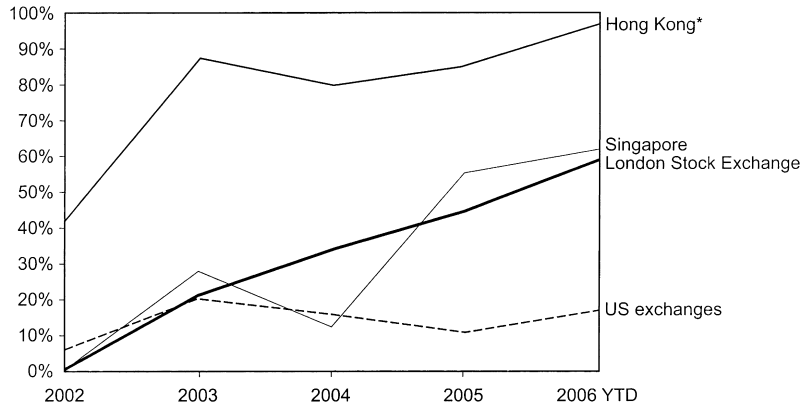

Fig. 1.2 Share of initial public offerings (IPOs) by foreign companies in major stock exchanges: Percent of total IPO value

Source: McKinsey and Company (2006, 47).

Notes: Mainland Chinese IPOs considered "foreign" for Hong Kong purposes. Year-to-date data complied as of November 2, 2006.

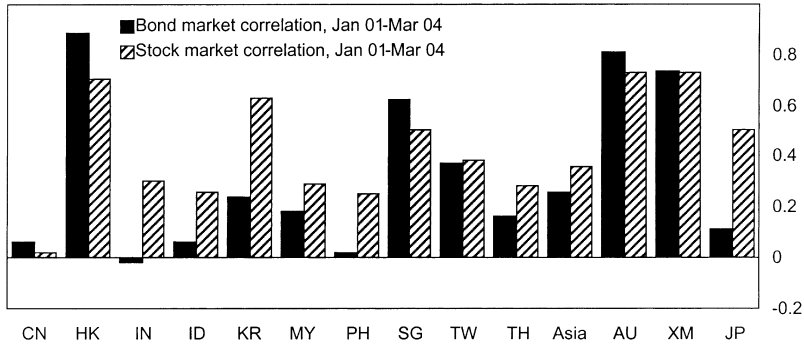

Fig. 1.3 Bond and stock market correlations with the U.S. markets

Source: McCauley and Jiang (2004).

Notes: CN denotes China; HK, Hong Kong; IN, India; ID, Indonesia; KR, Korea; MY, Malaysia; PH, the Philippines; SG, Singapore; TW, Taiwan, China; TH, Thailand; Asia, Asia local bond index of HSBC; AU, Australia; XM, the euro area; JP, Japan. Bond market correlation is based on weekly changes in benchmark yields at Thursday closing for Asia and Wednesday closing for U.S. Treasuries. Stock market correlation is based on weekly changes in stock market price indexes at Thursday closing from Asia and Wednesday closing for the S&P 500. The period is from January 2001 to March 2004.

Fig. 1.4 Price-earning ratio for HSI China Enterprises Index and Shanghai A-share Index

Source: Bloomberg.

the selection of shares to be listed in one or another market was by no means random.

For some years, however, some firms listed in Hong Kong have been allowed to list in Shanghai as well, and these permit an apples-to-apples comparison. At first, these cross-listed firms were smallish ones with low

turnover or large state ownership. But over time, larger firms with more liquid shares and lower state ownership have been listed. As a result, it has become sensible for the Hang Seng Index Company to compile a weighted average index of the pricing premium of Shanghai prices over Hong Kong prices for firms listed on both exchanges. The index started in January 2006, with only one firm that met the criteria of sufficient market capitalization, trading, and nonstate ownership share.[5] This capitalization-weighted index of cross-listed large firms shows the share prices in Shanghai going to a substantial premium over the prices for the same shares in Hong Kong in 2007 (fig. 1.5). The substantial gap in valuations of the identical shares in Hong Kong and Shanghai led Joseph Yam, chief executive of the Hong Kong Monetary Authority, to suggest that some arbitrage mechanism like depository receipts be allowed in order to allow the operation of the law of one price (Joseph Yam 2007; Miao and Peng 2007). In the event, the mainland authorities in 2007 increased the foreign investment quotas for qualified domestic institutional investors (banks, insurers, and mutual funds) to $42 billion and permitted investment into equities as well as fixed income, but proposals to allow a "through train" of investment by mainland retail investors into Hong Kong listed shares were sidetracked. This easing of capital controls would permit Chinese residents to invest in Hong Kong-listed shares, but the prospect of same has not brought prices in the two markets into line.

As long as the premium remains, a decision by the mainland authorities to allow a listing in Hong Kong entails a substantial opportunity cost. By revealed preference, this cost has as its compensation the legal, regulatory, and market context of Hong Kong.

This interpretation gains strength from reports that the State Administration of Foreign Exchange on the mainland is not permitting firms that have initial public offerings in Hong Kong to repatriate the proceeds. Shirley Yam (2007) reported the case of China Railway Engineering Group, a state-owned constructor of railways, which is to list simultaneously in Hong Kong and Shanghai:

> It is okay to give Hong Kong a cut in the listing pie. It is okay to let foreign investors share the profits of the effective monopoly. It is okay to put a major state-owned enterprise under the regulation of an outsider. But foreign money is not okay. (B12)

This policy, said to be applied to private Chinese enterprises that have listed in Hong Kong recently, makes it very clear why the mainland authorities are willing to "leave money on the table" in Hong Kong. It is not a mercantilist hankering for foreign exchange. We attach little weight to the

5. These criteria produce a sample with less divergent valuations than the universe of shares cross-listed on the two exchanges. Peng, Miao, and Chow (2007) find that, on average, over the period since July 2005, the Shanghai prices of cross-listed shares trade at a premium of 77 percent over the same shares in Hong Kong.

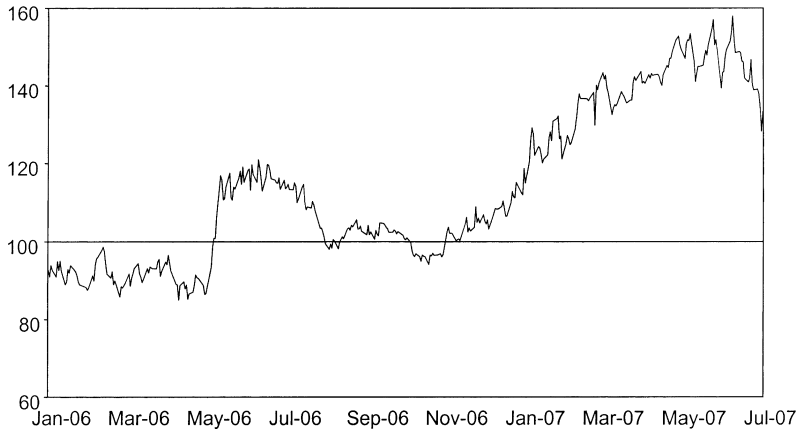

Fig. 1.5 Hang Seng China AH Index—Premium Index
Source: Hang Seng Indexes Company Limited.

desire to give Hong Kong a cut in the listing pie, that is, underwriting fees. Rather, the opportunity cost of listing a state-owned enterprise in Hong Kong is the purchase price of the Hong Kong regulation and the Hong Kong (and thereby global) equity analysis.

In sum, extension and update of Jao's comparison confirm his finding that Shanghai hardly registers as an international banking center. Still, Shanghai's role as a domestic financial center is growing rapidly, and the surge over the past couple of years of equity prices has drawn international attention, if not international funds or listings, to its stock exchange. The fact that the mainland authorities have been willing to continue to list shares of big Chinese firms in Hong Kong despite the increasingly clear evidence of the substantial cost of doing so has testified to the value that they place on the Hong Kong market's advantages, be they matters of law, regulation, or market participation. Less remarked has been the recent increase in the value of cross-border deposits and loans held by Chinese banks, especially vis-à-vis banks. The next section considers the implications for Shanghai and Hong Kong were such deposits and loans to grow in line with China's output and trade.

1.4 The Future of Shanghai and Its Implications for Hong Kong

This section investigates the near future of Shanghai as an international financial center. It focuses on only one form of international finance, namely stocks of cross-border bank claims.

At present, the international financial position of China reflects the history and the continued efficacy of capital controls (Ma and McCauley 2008). Even though cross-border bank flows, especially those between

banks, have been less regulated than portfolio flows, nevertheless, the stock of international bank claims and liabilities of China is smaller than it would be without various restrictions.

How much larger? This section addresses this question by estimating the relationship between the sum of crossborder bank assets and liabilities in relation to gross domestic product (GDP), on the one hand, and the level of income and the openness of the underlying economy on the other. Following Lane (2000) and Cheung et al. (2006), the sample of economies on which this relationship is estimated is that of the Organization for Economic Cooperation and Development (OECD) economies on the ground that these economies generally have reduced or eliminated controls on the international mobility of capital. The estimated relationship is then used as a benchmark for how China's stocks of international bank assets and liabilities might be expected to evolve as capital controls are removed.

How would Hong Kong share in China's deepened financial relations with the rest of the world? Cheung et al. (2006) used a gravity model to estimate the Hong Kong stock market's attraction to portfolio outflows from the mainland. Here, a simpler approach is taken, relying on the level and trend of the Hong Kong share in the BIS, reporting bank claims and liabilities vis-à-vis China. In short, the current high share of Hong Kong in China's international banking assets and liabilities suggests that China's international opening would benefit Hong Kong to a disproportionate extent.

The following subsection reports the results of the benchmark regression of international banking positions on a small set of economic variables for the OECD countries. Then data on China's income level and openness are used to produce an estimate of the size of China's unconstrained international banking positions in 2005 and 2012. Then, data from the Hong Kong Monetary Authority and the BIS are combined to produce a projection of the Hong Kong share of China's international banking assets and liabilities. A final section considers in more general terms the relationship between Shanghai and Hong Kong over a longer horizon.

1.4.1 International Banking Positions in the OECD

How large would China's international banking position be were policy as liberal as those found in the advanced economies? This question can be approached by relating international banking positions to income and economic openness in the OECD economies.

Following Lane (2000), the dependent variable is defined as the sum of cross-border banking loans and deposits in relation to GDP. Independent variables are taken to be the log of GDP per capita, measured at market prices, economic openness, defined as the sum of imports and exports as a fraction of GDP, domestic credit as a share of GDP, and the interest differ-

ential between the relevant currency and the U.S. dollar at the three-month maturity. In addition are entered dummy variables for financial centers (Luxembourg, Switzerland, and the United Kingdom) and for the euro area. The latter dummy is to take into account the sharp rise in the cross-border banking positions that took place after the introduction of the euro as a result of the unification of the areawide short-term money market. Data for the dependent variable are obtained from the BIS and the International Monetary Fund (IMF) and for the other variables from the IMF.

In common with other such analyses, the results are much improved excluding Luxembourg from the sample (table 1.5). For the resulting sample, GDP per capita and openness, as well as the dummies for the euro area and for the financial centers, all come in as significant and show the expected signs. Neither interest rates nor the depth of domestic credit market enter significantly. Excluding the lower income countries, namely Mexico, Slovakia, and Turkey, does not materially affect the results, though it does raise the coefficient on GDP per capita noticeably. Overall, the goodness of fit is comparable to that of the more inclusive regression analysis of the total international investment position as reported by Lane (2000, 522).[6]

As a check for robustness, we repeated the exercise excluding Ireland from the sample as well (appendix B). The results were similar with regard to the sign and significance of the estimated coefficients. The somewhat lower estimated coefficient on GDP per capita implies somewhat smaller growth of China's cross-border bank deposits and loans, but leaves the broad result qualitatively similar.

At the suggestion of David Cook, we experimented with net foreign assets as an explanatory variable. However, this variable did not prove to be statistically significant. David Cook also suggested that we check the "out of sample" fit of the results on table 1.5 for Taiwan, China. In fact, the model result overstates international bank loans and deposits for this economy.[7]

1.4.2 China's Projected International Banking Position

Were China's international banking balance sheet to respond to its growing real income in line with the tendency in the OECD, it could experience very rapid growth. In particular, if the nominal GDP of China were

6. Lane's goodness of fit for the total international investment position than for direct investment or portfolio positions may suggest that his implied goodness of fit for the major nondirect investment, nonportfolio position item, namely bank flows, is as high or higher than the level reported in table 1.5.

7. According to the estimated coefficients in column (4) or (6) of table 1.5, the estimated cross-border banking loans and deposits for Taiwan would be 60.3 percent or 52.8 percent of GDP, compared to the actual number of 40.0 percent. The shortfall may reflect limitations on financial interactions with the mainland and the channeling of cross-Strait banking activity through Hong Kong.

Table 1.5 **Estimated determinants of cross-border bank deposits and loans in the Organization for Economic Co-operation and Development excluding Ireland (stock of deposits plus loans in relation to GDP at end 2005)**

	Full sample		Sample without Luxembourg		Sample without Luxembourg, Mexico, Slovakia, Turkey	
	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	–2431.183*	–1091.584	–521.626*	–471.462**	–577.918*	–692.508**
	(0.068)	(0.272)	(0.052)	(0.019)	(0.062)	(0.013)
Openness	2.675	2.478	0.995***	0.848**	1.075***	1.028***
	(0.117)	(0.133)	(0.005)	(0.012)	(0.007)	(0.007)
GDP/Capita	233.507	89.993	46.010*	45.553**	50.793*	65.672**
	(0.088)	(0.349)	(0.091)	(0.019)	(0.102)	(0.013)
Euro area	223.546*	189.860	55.050**	46.444*	46.542	45.536*
	(0.088)	(0.137)	(0.037)	(0.068)	(0.107)	(0.079)
Financial center	899.985***	909.721***	280.171***	283.936***	273.562***	280.447***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Interest rate	29.370		5.184		0.492	
	(0.187)		(0.232)		(0.939)	
Domestic credit/GDP	–1.314		0.261		0.283	
	(0.338)		(0.332)		(0.319)	
Adjusted R^2	0.533	0.521	0.691	0.680	0.684	0.698
No. of observations	30	30	29	29	26	26

Source: IMF, Direction of Trade, International Financial Statistics, World Economic Outlook; BIS; authors' calculations.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

to grow by 13 percent, with 10 percent nominal growth reinforced by a trend nominal appreciation of the renminbi against the dollar of 3 percent, then dollar GDP per capita could grow at 12.5 percent. In table 1.6, this scenario (given the coefficient of less than one-half estimated in column [4] of table 1.5) would produce a 5.4 percent per annum growth in international bank positions in relation to GDP. If trade is assumed to decelerate from a rate of growth of 20 percent by 2 percent per annum, then it at first contributes to additional international bank positions and then reduces them. On these assumptions, the mainland's cross-border bank position could quintuple over seven years to half of GDP, or $2.7 trillion.

1.4.3 Hong Kong's Share of China's Projected International Banking Position

Such an outcome could represent a lot of business for banks in Hong Kong. To see this, consider what share that Hong Kong might end up with of the $2.7 trillion in China's international banking assets and liabilities projected for the end of 2012. While Cheung et al. (2006) had to estimate how investment in Hong Kong would depend on the size of the market and its distance from the investor, the present estimation is much more straightforward. Inspection of Hong Kong's share of China's external assets and liabilities suggests that Hong Kong's share, after a prolonged decline from the time of the Asian financial crisis until early 2003, has stabilized at about 40 percent (fig. 1.6).

It remains to be demonstrated how such an increase in Hong Kong's international balance sheet would affect its standing vis-à-vis New York and London.[8] At this stage, suffice it to say that China's rapid growth and further financial integration with the world economy, like rapid growth and further financial integration in East and South Asia in general, can be expected to boost the region's financial centers, including Hong Kong.

1.4.4 Looking Ahead Further

We have argued in section 1.3 that Hong Kong as a financial center benefits from its legal and regulatory institutions, not least in its attraction of stock market listings from the mainland. In the longer term, the position of Hong Kong *and* Shanghai as financial centers depends on the character of legal and institutional convergence between the Special Administrative Region and the mainland. It may be recalled that under Hong Kong's Basic Law, Hong Kong's legal system is to remain separate from that of the rest of China for the fifty years after 1997. If the law and institutions governing financial markets in Shanghai converge to those characteristic of Hong

8. The effect would be indirect in the case of poll-based ratings like that of Mainelli and Yeandle (2007), which puts Hong Kong third after London and New York. See Cheung and Yeung (2007) for alternative measures of international financial centers.

Table 1.6 **Projection of China's external bank positions excluding Ireland (sum of cross-border bank assets and liabilities)**

			Change in cross-border bank assets and liabilities in relation to GDP due to:		China's external bank positions		Memo: Hong Kong's external positions vis-à-vis China (US$ billions)
	GDP per capita (US$)	Trade/GDP (%)	GDP per capita growth	Trade/GDP growth	Percent of GDP[a]	Billions of US dollars	
2005	1,716	63.4			10.0	224.6	103.3
2006	1,930	67.3	5.4	3.3	18.7	474.3	189.7
2007	2,172	70.3	5.4	2.5	26.6	762.0	304.8
2008	2,443	72.2	5.4	1.6	33.5	1,086.0	434.4
2009	2,749	72.8	5.4	0.5	39.5	1,443.3	577.3
2010	3,092	72.2	5.4	–0.5	44.3	1,830.1	732.1
2011	3,479	70.3	5.4	–1.6	48.0	2,242.8	897.1
2012	3,914	67.1	5.4	–2.6	50.7	2,678.4	1,071.4

Sources: IMF; Hong Kong Monetary Authority; BIS; authors' calculations.

[a]Change is sum of two columns to the left.

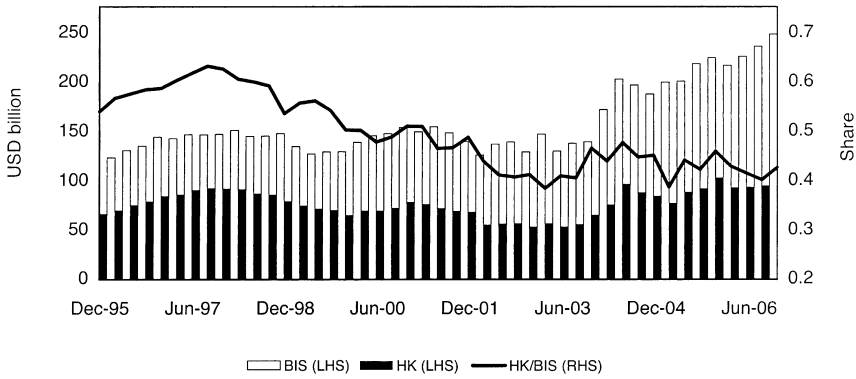

Fig. 1.6 External loans and deposits vis-à-vis China
Sources: Hong Kong Monetary Authority; BIS; authors' calculations.

Kong today, then Shanghai will join Hong Kong as a major international financial center. If, however, the eventual convergence impairs the rule of law and the predictability of the regulatory system in Hong Kong, then both may end up as more national than international financial centres.

In the former case, the maintenance of a separate monetary system in Hong Kong well into the fifty-year period after 1997 need not prove an impediment to Hong Kong's serving China as an international financial center. The relevant analogy might be the role of London vis-à-vis the euro area.[9] It must be admitted that the short-term money market benchmark for the euro area is one grounded in the euro area and not in London (as with U.S. dollar Libor; see McCauley 1999). Nevertheless, London has to a considerable extent become the financial center for the fixed income market of the euro area, notwithstanding the United Kingdom's remaining outside the euro area. The issue of the first offshore renminbi bond in Hong Kong in July 2007 points in this direction.

1.5 Conclusion

It is easy journalism to write the story of the return of Shanghai as an international financial center as a threat to Hong Kong's status as one. To be sure, Hong Kong may well enjoy some advantages that should be seen as transitory. The analogy might be the once-predominant position of the port of Hong Kong in China's external trade, which depended on political decisions rather than practical economics. Hong Kong's share of China's commodity trade is falling continuously. But finance is not the same as

9. The authors are indebted to Andy Rose for this analogy.

goods trade, and Hong Kong's share of China's external bank assets and liabilities is not falling. To write that Shanghai will displace Hong Kong is just dog-bites-man journalism.

The man-bites-dog argument of this chapter is that the return of Shanghai might boost Hong Kong as an international financial center. A certain plausibility attaches to this view when it is realized that Hong Kong ranked higher as an international banking center in the last century when Shanghai was in the running than when it was kept out of the game by international war or national politics. With regard to international banking, at least, China's financial integration into the global economy can be expected to bulk up Hong Kong's balance sheet more than that of any other center outside the mainland. There is a good prospect that Shanghai's reintegration into the global financial system will not only narrow the gap between itself and Hong Kong but also narrow the gap between Hong Kong and New York and London.

Appendix A

Reed's Measures of International Banking Preeminence

Reed depends on the following five variables:

1. ***Local bank headquarters:*** The number of large internationally active commercial banks headquartered in the center.
2. ***Local bank direct links:*** The number of foreign international financial centers with direct links to the international financial center through the large internationally active local banks headquartered in the center.
3. ***Private banks:*** The number of private (merchant or investment banks) with an office in the center.
4. ***Foreign bank offices:*** Large internationally active foreign commercial banks with an office in the center.
5. ***Foreign bank direct links:*** Foreign international financial centers with direct links to the international financial center through the large internationally active foreign banks with an office in the center.

Sources are adapted from Reed (1981, 10).

Appendix B

Robustness Check: Excluding Ireland from the Regression

As a robustness test, we estimate our model by excluding Ireland, which is not considered a financial center in our sample but, as a low-tax host to multinational corporate treasuries, has a sizable stock of external deposits and loans in relation to GDP. The estimated results are consistent with our previous findings, with GDP per capita, openness, as well as the dummies for the euro area and for the financial centers all being statistically significant and showing the expected signs, while interest rates and the depth of domestic credit market being insignificant. These results still hold when we leave out the lower-income countries.

Using the estimated coefficients in table 1A.1 as well as our previous assumptions on growth in GDP per capita and trade, we project that China's dollar GDP per capita would generate a 4 percent per annum growth in the country's international bank positions in relation to GDP (table 1A.2). This would boost the mainland's cross-border bank positions to 41 percent of GDP, or US$2.2 trillion, by 2012.

Table 1A.1 **Estimated determinants of cross-border bank deposits and loans in the Organization for Economic Co-operation and Development (stock of deposits plus loans in relation to GDP at end 2005)**

	Full sample		Sample without Ireland and Luxembourg		Sample without Ireland, Luxembourg, Mexico, Slovakia, Turkey	
	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	–2431.183*	–1091.584	–376.310**	–349.185***	–399.858**	–491.194***
	(0.068)	(0.272)	(0.024)	(0.007)	(0.033)	(0.005)
Openness	2.675	2.478	0.805***	0.696***	0.886***	0.849***
	(0.117)	(0.133)	(0.001)	(0.002)	(0.001)	(0.001)
GDP/Capita (log)	233.507	89.993	33.541**	34.279***	35.289*	47.054***
	(0.088)	(0.349)	(0.046)	(0.006)	(0.060)	(0.005)
Euro area	223.546*	189.860	36.669**	30.247*	29.216*	29.293*
	(0.088)	(0.137)	(0.026)	(0.059)	(0.093)	(0.065)
Financial center	899.985***	909.721***	286.705***	290.233***	281.506***	287.585***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Interest rate	29.370		3.495		–0.248	
	(0.187)		(0.186)		(0.948)	
Domestic credit/GDP	–1.314		0.204		0.220	
	(0.338)		(0.213)		(0.193)	
Adjusted R^2	0.533	0.521	0.855	0.842	0.860	0.861
No. of observations	30	30	28	28	25	25

Sources: IMF, Direction of Trade, International Financial Statistics, World Economic Outlook; BIS; authors' calculations.

Note: Numbers in parentheses are *p*-values of the estimated coefficients.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

Table 1A.2 **Projection of China's external bank positions (sum of cross-border bank assets and liabilities)**

			Change in cross-border bank assets and liabilities in relation to GDP due to:		China's external bank positions		Memo: Hong Kong's external positions vis-à-vis China (US$ billions)
	GDP per capita (US$)	Trade/GDP (%)	GDP per capita growth	Trade/GDP growth	Percent of GDP[a]	Billions of US dollars	
2005	1,716	63.4			10.0	224.6	103.3
2006	1,930	67.3	4.0	2.7	16.8	425.5	170.2
2007	2,172	70.3	4.0	2.1	22.9	655.9	262.3
2008	2,443	72.2	4.0	1.3	28.2	913.9	365.6
2009	2,749	72.8	4.0	0.4	32.7	1,196.6	478.7
2010	3,092	72.2	4.0	–0.4	36.3	1,500.6	600.2
2011	3,479	70.3	4.0	–1.3	39.0	1,822.0	728.8
2012	3,914	67.1	4.0	–2.2	40.9	2,157.8	863.1

Sources: IMF; Hong Kong Monetary Authority; BIS; authors' calculations.

[a]Change is sum of two columns to the left.

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Comment David Cook

Introduction

The authors have written a compelling case arguing that Hong Kong will continue to thrive as an international financial center even as the further development of the People's Republic of China could result in the growth of a rival financial center in Shanghai. Certainly, current trends are very positive. The finance, insurance, and business services (FIRE and business services less real estate) sector made up less than 10 percent of Hong Kong's economy in 1990 but had grown to more than 17.5 percent in 2005. This indicates both that integration into the mainland economy has not, in fact, dampened the financial industry in Hong Kong but also that continued performance of the sector is crucial for the overall macroeconomic performance of the Special Administrative Region (SAR).

The authors make three basic points based on past historical data, present trends, and a structural forecast of the future. First, in the prewar era, both Shanghai and Hong Kong were measured as significant international financial centers. Second, by many recent measurements, the depth and breadth of Hong Kong's financial markets continue to exceed that of Shanghai's. Third, China's international banking assets are likely to grow dramatically in the future as the economy develops. If Hong Kong's share of China's international banking continues to hold steady, rapid expansion of Hong Kong's banking will continue.

A central contribution of the chapter is a well-founded prediction of the size of China's external banking assets. The authors estimate a statistical

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