Financial sector output and employment in Hong Kong and New York City

by Dong He, Ivy Yong, and Peter Lim of the External Department[1]

What is the future role for Hong Kong as an international financial centre in China? A few pointers can be found by analysing the role of New York as a national and global financial hub. The financial sector in New York currently employs twice as many people and generates four times as much output as in Hong Kong. The contrast between the two cities is greatest in the securities industry. New York employs double the number of workers and produces 10 times more output than Hong Kong.

With New York as the reference point, Hong Kong has significant growth potential if it can be positioned successfully as an international financial centre intermediating fund flows both within China and between the Mainland and the rest of the world. And the securities industry provides the biggest catch-up and the greatest potential, by serving the needs of fund raisers and investors from the Mainland, because capital market services do not need to be provided on location – an observation demonstrated by the role of New York's securities industry in the US economy.

I. Introduction

Hong Kong is one of the world's premier financial centres, alongside New York, London, and others. It is currently the 12th largest international banking centre in external assets, the sixth largest foreign exchange market in turnover, the ninth largest stock market in market capitalisation, and Asia's second largest fund management centre in assets-under-management. With increasing economic integration with Mainland China in the past decade, Hong Kong's economy has been experiencing structural changes, moving from a manufacturing-based economy to a services-centred one. The financial services industry has been designated a "pillar" industry that will be a key driver of growth in output and employment.

How much room is there for Hong Kong's financial services industry to grow? And, can Hong Kong craft a new role for itself in the process of capital account liberalisation on the Mainland that will create income and employment for Hong Kong? With greater liberalisation there is likely to be fewer controls on the flow of capital to and from the Mainland, resulting in Hong Kong's role being similar to that played by New York as an international financial centre that intermediates funds flows both within a large continental economy and between the city and the rest of the world. To some extent, the mature structure of employment and output in New York provides a useful reference point for Hong Kong's growth path. This paper discusses where Hong Kong stands at present in comparison with such a reference point, to shed light on the question, how the growth potential can be realised?

Section II compares the output and employment structures of the financial sectors in Hong Kong and New York. Section III examines the role of New York's financial sector in the American national and international economy. Section IV analyses the factors that contribute to the differences between the two cities. And section V concludes with the policy implications of the findings.

[1] Nicholas Kwan, former senior manager, contributed to the article when he was on the staff of HKMA.

II. Relative sizes of the financial sectors in Hong Kong and New York City

For the purpose of comparing the economic and employment structures of the financial services sector in Hong Kong and New York, this paper focuses on three key variables: (i) employment, (ii) contribution to economic output, and (iii) contribution to tax revenue. As shown in Table 1, New York's financial sector employs around 10% of the city's total workforce, with about half of them employed in the securities industry. On average, the financial sector contributes close to one-third of total economic output, of which about 70% comes from the securities industry. The financial sector is also a significant source of tax revenue in New York, accounting for around one-third of total business income tax revenue, with the bulk coming from the banking and securities industries.

TABLE 1

New York City - financial sector contributions

	1993	1996	1999	2003
Employment ('000persons)	**3,291.2**	**3,369.2**	**3,620.7**	**3,531.7**
- Financial services	360.4	354.3	364.5	318.7
(% of total)	*(11%)*	*(11%)*	*(10%)*	*(9%)*
- Banking @	129.8	116.8	106.6	92.2
	(4%)	*(3%)*	*(3%)*	*(3%)*
- Securities and other financial investments and related services @	158.3	168.9	193.7	169.3
	(5%)	*(5%)*	*(5%)*	*(5%)*
- Insurance	72.3	68.6	64.2	57.2
	(2%)	*(2%)*	*(2%)*	*(2%)*
Output (Gross City Product) (in US$ mn)*	**166,621**	**198,000**	**249,356**	**273,518**
- Total financial services	46,638	64,659	88,154	73,242
(% of total)	*(28%)*	*(33%)*	*(35%)*	*(27%)*
- Banking @	10,551	12,360	15,020	12,772
	(6%)	*(6%)*	*(6%)*	*(5%)*
- Securities and other financial investments and related services @	25,490	38,760	58,924	48,857
	(15%)	*(20%)*	*(24%)*	*(18%)*
- Insurance	5,616	6,814	7,749	7,825
	(3%)	*(3%)*	*(3%)*	*(3%)*
Business income tax revenue (in US$ mn)	**1,955**	**2,369**	**2,716**	**2,952**
- Total financial services	879	998	972	916
(% of total)	*(45%)*	*(42%)*	*(36%)*	*(31%)*
- Banking	405	418	377	418
	(21%)	*(18%)*	*(14%)*	*(14%)*
- Securities and other financial investments and related services	451	549	572	n.a.
	(23%)	*(23%)*	*(21%)*	
- Insurance	23	31	24	n.a.
	(1%)	*(1%)*	*(1%)*	

@ *The coverage of Hong Kong's data is slightly different from that of New York. For data on Hong Kong, investment banking activities (e.g. arrangements of Initial Public Offering) are included in the banking sector. However, for New York data, investment banking activities are included in securities and other financial investments and related services.*

* *Private Earnings, which include income earned by employees and proprietors, are used as a proxy for Gross City Product or output of the city.*

Sources: New York State Dept. of Labor, New York City Dept. of Finance, Bureau of Economic Analysis.

In Hong Kong, the financial sector employs about 5% of total workforce, with more than half employed in the banking industry (Table 2). The financial sector contributes about 12% of total economic output, with the banking industry accounting for close to 70% of this. Preliminary government estimates indicate the financial services sector contributes approximately 23% of total corporate income tax revenue.

The financial sector of New York is larger than that of Hong Kong on almost all fronts, employing twice as many people and generating four times as much output as in Hong Kong, despite the fact that the total workforce of New York is only 9% larger than that of Hong Kong. Per capita output of financial sector workers in New York is twice the level of Hong Kong workers. The financial sector in New York also contributes 8% more in the share of income tax, although the absolute amount of income tax paid by the sector to New York is smaller due to tax sharing arrangements between the city, and the state and federal governments.[2] In Hong Kong, the Government is mandated by the Basic Law to retain all tax revenues.

TABLE 2

Hong Kong - financial sector contributions

	1993	1996	1999	2003
Employment ('000persons)*	**2,857.5**	**3,079.7**	**3,116.8**	**3,222.6**
- Financial services*	129.8	149.5	170.9	166.8
(% of total)	*(5%)*	*(5%)*	*(5%)*	*(5%)*
- Banking*@	72.9	78.6	80.4	71.5
	(3%)	*(3%)*	*(3%)*	*(2%)*
- Securities and other financial investments and related services*@	12.7	42.9	49.9	55.3
	(0.4%)	*(1%)*	*(2%)*	*(2%)*
- Insurance*	21.5	28.0	40.5	40.0
	(1%)	*(1%)*	*(1%)*	*(1%)*
Output (GDP at factor cost) (in US$ mn)	**111,105**	**152,252**	**154,468**	**154,476**
- Total financial services	11,560	15,638	17,020	18,995
(% of total)	*(10%)*	*(10%)*	*(11%)*	*(12%)*
- Banking @	8,578	12,032	12,611	13,058
	(8%)	*(8%)*	*(8%)*	*(8%)*
- Securities and other financial investments and related services @	1,782	2,140	2,856	3,651
	(2%)	*(1%)*	*(2%)*	*(2%)*
- Insurance	1,200	1,467	1,553	2,286
	(1%)	*(1%)*	*(1%)*	*(1%)*
Corporate income tax revenue (in US$ mn)	**5,110**	**6,418**	**4,833**	**6,256**
- Total financial services				1,410
(% of total)				*(23%)*

* *1996-2003 data based on Composite Employment Estimate. 1993 data based on Quarterly Survey of Employment and Vacancies due to the absence of sub-sector breakdown. The QSEV has a smaller coverage and excludes the civil service.*

@ *The coverage of data on Hong Kong differs slightly from New York. For data on Hong Kong, investment banking activities (e.g. arrangements of Initial Public Offering are included in the banking sector. However, for New York data, investment banking activities are included in securities and other financial investments and related services.*

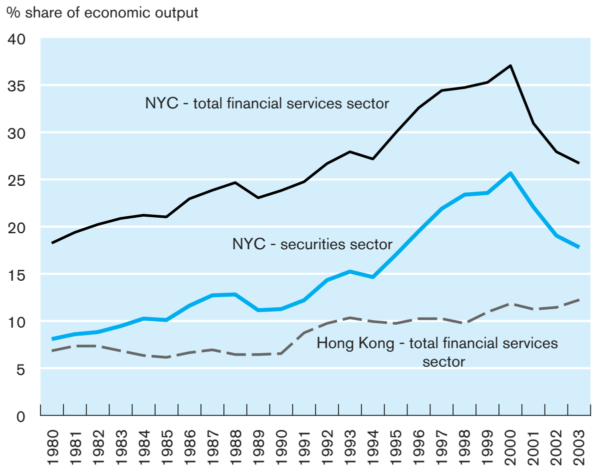
Sources: CEIC, Hong Kong Census and Statistics Dept., HKSAR Govt. estimates.

[2] It is difficult to ascertain the total tax contribution of New York's financial sector to all levels of government given the complex US tax system. However, according to IMF Government Financial Statistics, operating revenues (including transfers) were shared among the US federal, state and local governments in the proportion of 42:31:27 in 2001. Based on this sharing ratio, actual business income tax contributed by the financial sector to all levels of government could be several times larger than the amount contributed to the New York City government.

The marked difference between the financial sector structures of the two cities lies in the securities industry. In New York, the industry employs more than three times the number of people employed in Hong Kong and accounts for around 20% of the city's economic output, compared with Hong Kong's 2% contribution (Chart 1). The output value of securities firms in New York, at US$48.9 billion in 2003, was over 10 times more than that of Hong Kong. It should be noted that while New York hosts many global headquarters of major financial firms, the employment and output data listed here in principle only account for those residing in, and attributable to, the city. It does not include non-New York employees and their output contribution.[3] In other words, the difference in employment and output shares between the financial sectors of Hong Kong and New York is not mainly due to statistical aberration caused by headquarters effects, i.e. the inclusion of non-New York employees and revenues in headquarter reports.

CHART 1

GDP shares of financial sectors compared



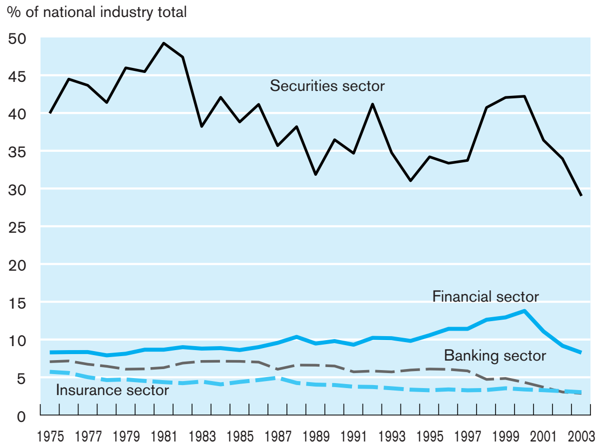
Sources: New York State Dept. of Labor, New York City Dept. of Finance, Bureau of Economic Analysis; CEIC.

III. Contribution of the financial sector in New York City to the US economy

In aggregate, the financial sector of New York accounted for 8% of the sector's national output in 2003. This output share has remained stable throughout the past two decades, except for the late 1990s when the TMT (technology, media, and telecommunications) bubble boosted the share to 14% in 2000. This aggregate measure, however, marks substantial variation across different sub-sectors. New York-based securities firms played a significant role in the country, accounting for 29% of the industry's output in the US in 2003. In contrast, output of New York-based banks and insurance firms only accounted for 3% of the national industry total. For the banking and insurance industries, New York-based firms actually suffered a mild, but steady decline in their importance in terms of output shares. (Chart 2)

CHART 2

Shares of New York City in US financial sector output



Sources: New York State Dept. of Labor, New York City Dept. of Finance, Bureau of Economic Analysis; CEIC.

[3] In practice, tax and administrative considerations would affect the accurate booking and attribution of earnings (output) by financial firms headquartered in New York between the city and other areas, including overseas. It is difficult to ascertain how much and in what way such bookings have affected the earnings statistics. But in late 2004, the US Congress granted a one-year tax break to US companies to encourage them to repatriate their earnings kept outside the country. Private analysts estimate such earnings could amount to US$300 billion. Given no better alternative, we have to base our study on the official data, but caution is needed in using this data.

The much higher contribution of the securities industry to the output of New York than to the output of other parts of the country indicates that, in contrast to the banking and insurance industries, capital market services do not need to be provided on location. This is particularly relevant in the equity and debt markets, where advances in information and communications technology have reduced the need for location-specific financial services. Thus New York has been able to capture the main share of capital market activities in the overall US economy.

Compared with most other key world financial centres, New York has a relatively large financial sector with nearly 30% share of Gross City Product. For example, the financial sectors of London and Frankfurt account for only about 14% and 20% of their respective Gross City Products, one-third to half of New York's size. Such a difference could be due to the distinctive feature of New York as a prime international financial centre, on top of its role as a national financial hub. This is evident from the city's role as the world's top foreign exchange and derivatives trading centre, handling one-fifth and one-half of the world's daily turnover in 2004.

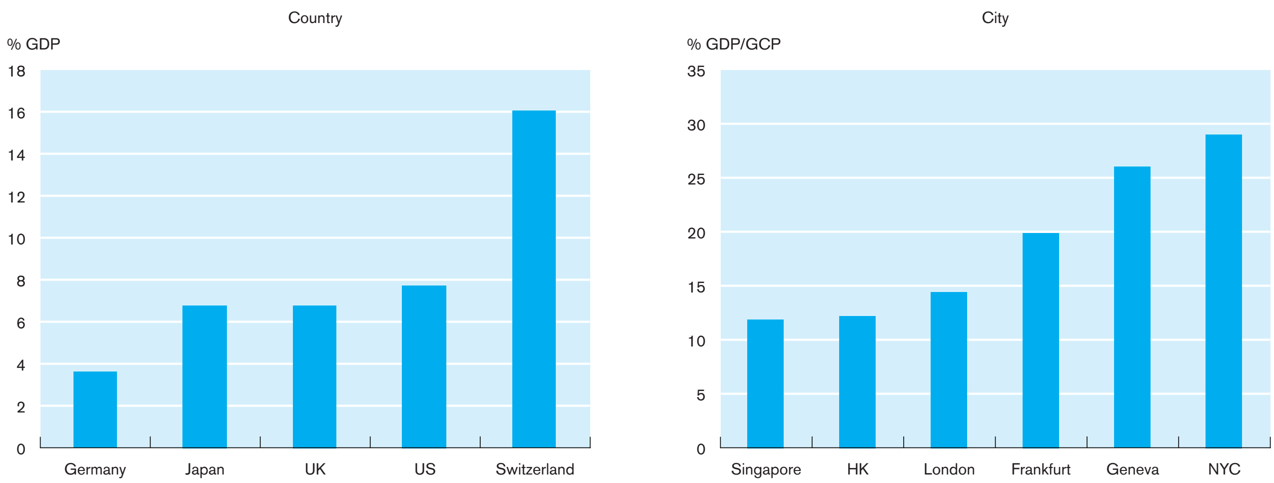
IV. Factors underlying differences between Hong Kong and New York City

Among the different financial sub-sectors, the securities industry is the single largest contributor to the difference between the economic structure of New York and Hong Kong. By comparison, the differences between the banking and insurance industries of the two cities are relatively mild, both in employment and share of output. To understand the difference between the financial sectors of New York and Hong Kong, it is necessary to know the difference in their respective securities industries.

In the 1970s, New York's securities industry used to account for only 4% of its output (Gross City Product), restrained by a decade-long consolidation after the introduction of Nasdaq and automation of the over-the-counter market in the early 1970s, and the removal of fixed commissions in 1975.[4] Since the 1980s, however, the industry has experienced phenomenal growth, notwithstanding cyclical downturns in 1989 and 2001-02. Between 1980 and 2000, the industry's output expanded 12-fold to

CHART 3

Financial sector sizes compared*



*2002 or latest available data. Definitions may vary due to different sources.
Sources: CEIC; Frankfurt Economic Development GmbH; Swiss Federal Department of Finance.

[4] A more competitive environment after the removal of fixed commissions and the introduction of Nasdaq forced securities firms, many of them sole proprietorships or partnerships, to merge and build up their capital bases to compete for institutional, IPO and market-making businesses. This reduced the number of NYSE members from over 500 in 1972 to 361 in 1978, while the number of NASD members stagnated at 3,000. [SIA, Vol.XXVI, No.4, pp.5-8]

US$71 billion from US$5.6 billion, raising the industry's share of New York's output from 8% in 1980 to 26% in 2000. A similar pattern can be observed in the business income tax contribution of the securities sector, which more than tripled in 13 years to US$611 million in 2000. This upward trend was disrupted in 2001-02 by the bursting of the TMT bubble, as well as the events of 11 September 2001. But the latest indicators show that the industry has already resumed its upward momentum.[5]

Several factors were responsible for the spectacular growth of the securities industry in New York and the US as a whole over the past two decades:

a. The transformation from a cottage industry of many small partnerships to an amalgamation of sophisticated securities corporations during the 1970s, which provided the securities industry with a solid base of capital and management to capture the growth opportunities that followed. Although the first publicly held securities firm was created in the 1930s, it was only in the 1970s that the large securities firms like Merrill Lynch and DLJ moved away from partnership and proprietorship into public ownership.

b. Deregulation of the US financial sector, signified by the progressive collapse of the Glass-Steagall Act and the introduction of a new Gramm-Leach-Bliley Act in 1999, which allowed cross-holding among banks, securities firms and insurers. This fostered unprecedented mergers and acquisitions (M&As) between high-margin brokers and large banks and insurers, opening up many new businesses like mutual funds and asset-backed securities for large securities firms.

c. Globalisation of the world economy, especially among the financial sector and the EU. This promoted cross-border M&As and securities trading. Between 1980 and 2000, the value of global M&A deals rose 187 times, US purchases and sales of foreign securities jumped 103 times, while foreign purchases and sales of US securities increased 84 times.

d. Extended economic upturn and sustained strong performance of the financial markets. Between 1980 and 2000, the Dow jumped 10 times, the turnover value of the NYSE and Nasdaq increased 70 times. Market capitalisation of the NYSE, AMEX and Nasdaq increased 10 fold, in line with a 250% increase in US nominal GDP.

e. Technological advances and financial innovation, highlighted by the proliferation of programme trading, mutual funds, internet trading and exponential growth of derivative business, which ballooned 18 times in the 1990s.

During the same period, some of these factors also affected Hong Kong, although to varying degrees. For example, Hong Kong also enjoyed sustained economic growth during the 1980s and early 1990s, until it was hit by the Asian financial crisis in 1997/98. Globalisation and technological advances also brought significant change to Hong Kong's financial landscape, marked by the increased presence of international financial firms and the upgrading of financial infrastructure including electronic clearing and trading platforms.

However, there are also distinct features that differentiate Hong Kong from New York in the development of their securities industries. These features include:

a. A small economic base. Hong Kong's US$165-billion GDP is about half the size of New York's US$300-billion economy. More importantly, in terms of economic hinterland, the US GDP is about six times the size of the Mainland's, and there is a major difference in the broader hinterland of the global market served by New York and the regional market served by Hong Kong.

[5] In 2003, the pre-tax net income of NYSE and NASD firms doubled from 2002 to US$24.1 billion, return on equity of NYSE firms rebounded from 8% in 2002 to 19.1%.

b. Restricted market access. Because the Mainland's capital account has remained tightly controlled, the penetration of Hong Kong-based securities firms into its hinterland is much more restricted than that between New York and the rest of the US. This factor further limits the effective size of the economic base on which to build Hong Kong's securities industry.

c. Limited breadth and depth of capital markets. Relatively underdeveloped fixed income and derivative markets in Hong Kong and the region pose another major restraint to the development of Hong Kong's securities industry. The size of Hong Kong's bond market is less than 0.5% of the US in outstanding bonds, while the turnover of exchange-traded futures and options contracts in Hong Kong is less than 1% of the US. Although Hong Kong's equity market capitalisation appeared relatively large at 457% of GDP in 2003, it represented only 45% of the combined GDP of Hong Kong and Mainland China, which was one-third the ratio of the market capitalisation of the three exchanges of New York in terms of the US GDP. Given that Mainland-based companies now account for about one-quarter of Hong Kong's market capitalisation, it makes sense to use the combined GDP of Hong Kong and the Mainland as the basis for comparison (Table 3).

d. Weakness in the corporate and industry structure. Limited capital and management resources, especially that of the many local or regional securities companies, and market impediments such as fixed commission systems and a weak base of institutional investors could also have restricted the industry's development.

V. Implications for Hong Kong's financial sector

The New York experience demonstrates the significant growth potential of the financial sector of a prime financial centre that serves a large hinterland, both nationally and internationally. Hong Kong's financial sector could enjoy substantial growth if its differences with New York (listed above) were to be reduced, especially in the securities industry.

Among the various restraints highlighted - weakness in corporate and market structures, and the limited breadth and depth of the local and regional financial markets - will take time to address. On the other hand, improving access to the economic hinterland could provide a relatively quick source of growth, especially given the Mainland's high economic growth and its relatively underdeveloped financial services. In addition, increased access by Hong Kong's financial firms to the Mainland would be complementary in nature given the Mainland's need for more effective mobilisation and allocation of capital to support its high economic development.

TABLE 3

Capital markets compared (2003)

	Hong Kong	NYC*
Equity market capitalisation (US$ bn)	715	14,266
(% of GDP)	457% (45%)	130%
Equity market turnover (US$ bn)	296	17,323
Bonds outstanding (US$ bn)	96	20,715
(% of GDP)	61%	188%
Corporate capital raised in equity and bond markets (US$ bn)	49	3,631
Foreign exchange turnover (US$ bn/daily; April 2004)	102	461
Futures & options contracts traded on exchanges (millions)	15	2,173

* *Aggregate of NYSE, NASDAQ & AMEX for equity market capitalisation and turnover; others are US national total due to data availability; ( ) % of total GDP of Hong Kong and China.*

Sources: Bank for International Settlements; World Federation of Exchange; Securities Industry Association; Securities and Futures Commission of Hong Kong

The concentration of the US securities industry in New York reflects the fact that capital market services do not need to be provided on location due to advances in computer and telecommunications technologies. Hong Kong is already the prime destination for fund raisers from the Mainland. If it can successfully position itself and take full advantage of the opportunities arising from further capital account liberalisation on the Mainland, for example, by capturing the lion's share of services catering to capital outflows from the Mainland, the growth potential of Hong Kong's securities industry could be realised.

Further expansion of Hong Kong's financial sector would support higher economic growth and living standards, given the sector's relatively high productivity that supports highly-paid jobs. However, low labour intensity in the financial sector could mean slow job creation, as seen from the New York experience where financial employment dropped 11% despite a 65% rise in output over the past decade. Such labour problems could be aggravated if the highly paid financial sector jobs were to be filled by professionals from outside Hong Kong because of the to inability of the local education system to provide sufficient and appropriate talent to support rapid financial sector growth. In New York, the unemployment rate has remained well above the national average, notwithstanding rapid financial sector expansion. This emphasises the need for co-ordinated development in education and labour markets to support the underlying structural changes.