

# Revenue and Cost Trends of Global Stock Exchanges and HKEx

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November 2002

## Summary

- According to the Cost and Revenue Survey (C&R Survey)<sup>2</sup> conducted by the World Federation of Exchanges (FIBV) on their members, exchange revenues totalled US\$6.9 billion in 2000, an increase of 80% from 1995. The amount then fell to US\$6.4 billion in 2001. Trading revenues, which constituted 43% and 41% of the total in 2000 and 2001 respectively, underpinned such movements. In fact turnover of the FIBV member exchanges increased by some 2.7 times between 1995 and 2000. Some of the turnover growth was attributable to price effect, as reflected by the 59% growth in the MSCI World Free Index during the same period.
- HKEx earned a relatively large share of revenue from services provision, a trend of the global industry as well. The 14% contribution of listing revenues to total revenues in 2001 was largely in line with other FIBV member exchanges. However, trading revenues accounted for only 18% of the total revenue of HKEx.
- One feature of the revenue structure of HKEx is its relatively high dependence on investment income, which constituted 18% of total revenues in 2000 and 21% in 2001. The share was 7% for the industry globally in 2000 and 2001.
- In recent years, exchanges have committed resources to upgrade electronic trading and settlement systems, thus boosting growth in system costs. HKEx was in line with this trend, with the share of IT expenses rising from 16% in 1999 to 23% in the first half of 2002.
- The share of staff costs and related expenses of HKEx has remained at 45% since 1999.
- It should be noted that the exchanges covered by the C&R Survey have different lines of businesses from operating solely a cash market to integrated exchanges with clearing houses and depository agents. Hence the revenue and cost structures identified from the C&R Survey may not be strictly comparable to those of HKEx.

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<sup>2</sup> The C&R Survey has been conducted by the FIBV on an annual basis since 1990. Exchanges covered by the Survey may vary due to changing membership and different response rates over the years.

## Introduction

- The objective of this paper is to compare the revenue and cost trend of HKEx relative to other exchanges. While the aggregate data for overseas exchanges was sourced from the C&R Survey, data for HKEx is obtained from its published financial statements. It should be noted that the exchanges participating in the C&R Survey have different lines of businesses from operating solely a cash market to integrated exchanges with clearing houses and depository agents. Hence the revenue and cost structures identified from the C&R Survey may not be strictly comparable to those of HKEx.
- Globalization, advances in technology and the growing popularity of online trading have led to an emergence of demutualized and listed exchanges. At the end of 2001, 14 out of the 51 member exchanges that responded to the C&R Survey were demutualized, while another nine exchanges were listed<sup>3</sup>. HKEx was demutualized in March 2000 and listed in June 2000. A summary of the revenue and cost structures of exchanges categorized by ownership structure is provided in the Appendix.

## Revenues

### Revenue Trend of the Industry

- According to the C&R Survey, total revenues of the reporting member exchanges of the FIBV rose 80% between 1995 and 2000 (Table 1), but retreated 8.1% in 2001.

**Table 1 — Revenues of Exchanges Covered by the C&R Survey (US\$ million)**

	1995	1996	1997	1998	1999	2000	2001	% Change		
								2000/ 1995	2001/ 1996	2001/ 2000
<b>Total Revenues</b>	<b>3,830</b>	<b>4,380</b>	<b>4,837</b>	<b>5,121</b>	<b>6,464</b>	<b>6,911</b>	<b>6,352</b>	<b>+80%</b>	<b>+45%</b>	<b>-8.1%</b>
<i>Of which</i>										
- Listing revenues	671 (18%)	797 (18%)	797 (16%)	902 (18%)	1,020 (16%)	1,048 (15%)	992 (16%)	+56%	+25%	-5.3%
- Trading revenues	1,268 (33%)	1,597 (36%)	1,958 (40%)	2,002 (39%)	2,726 (42%)	2,959 (43%)	2,624 (41%)	+133%	+64%	-11.3%
- Services revenues	1,376 (36%)	1,342 (31%)	1,400 (29%)	1,498 (29%)	1,781 (28%)	2,102 (30%)	2,068 (33%)	+53%	+54%	-1.6%
- Other revenues	458 (12%)	587 (13%)	593 (12%)	725 (14%)	944 (15%)	806 (12%)	828 (13%)	+76%	+41%	+2.7%

Remark: Only important segment revenues have been highlighted in the C&R Survey. Inter-segment eliminations and revenue items contributing to a minor share of the total are not stated. As such segment revenues do not add up to the revenue total. Also see footnote 2.

Source: C&R Survey

- The engine underpinning the revenue growth in the late 1990s was trading revenues. In 2000, trading revenues constituted 43% of the total revenues (33% in 1995), and were 1.3 times more than in 1995. The growth in trading revenues was attributable, amongst various factors, to the equity market boom, the merger of the derivatives and cash markets under the member exchanges, the growing popularity and diversity of exchange-traded products, and the upgrade of financial infrastructure by the exchanges.
- Turnover of the FIBV member exchanges increased by some 2.7 times between 1995 and 2000. During the same period, global equity prices rose about 59%, as reflected by the MSCI World Free Index. This indicated that some of the turnover growth was attributable to price effect.

<sup>3</sup> The nine exchanges are Hellenic Exchanges SA (Athens), ASX (Australia), Deutsche Bourse (Germany), Euronext, HKEx, London Stock Exchange (UK), SGX (Singapore), Stockholm Stock Exchange (Sweden) and Santiago Stock Exchange (Chile).

- In 2001, trading revenues were affected by the sharp decline in global turnover (-27%) and the reduction of transaction levies and fees. This decline contributed some 5% of the 8.1% fall in the total revenues in 2001.
- **Services revenues** (i.e. revenues generated from clearing and settlement, depository and computer services, membership fees and provision of market information) were the second largest source of revenues and saw steady growth between 1995 and 2001. The dissemination of market data and information revenues, which accounted for 42% of the total services revenues in 2000, explained part of the growth.
- Against the backdrop of the buoyant equity markets in 2000, **listing revenues** increased only slightly as a result of keen competition for new listings amongst exchanges and the subsequent reduction in listing fees. This revenue source declined by 5.3% in 2001 amidst a sharp reduction in the number of initial share offerings around the globe.

### Revenue Trend of HKEx

- Compared to other exchanges, HKEx has a more diversified revenue structure. **Trading revenues** of HKEx have been contributing a smaller share to total revenue (24% in both 1999 and 2000). The share dropped to 17% in 2001 when market conditions deteriorated.

**Table 2 — Revenues of HKEx by Type (HK\$ million)**

	1999		2000		2001		1 <sup>st</sup> Half 2002		2001/2000	2000/1999
Trading Revenues	427.5	(24%)	548.5	(24%)	351.4	(17%)	166.9	(19%)	-35.9%	+28.3%
Listing Revenues	205.6	(11%)	269.6	(12%)	275.3	(14%)	165.0	(18%)	+2.1%	+31.1%
Services Revenues	569.0	(32%)	914.7	(39%)	779.2	(39%)	342.2	(38%)	-14.8%	+60.7%
Other Revenues	612.8	(33%)	579.5	(25%)	593.0	(30%)	219.1	(25%)	+2.3%	-5.4%
Of which										
Investment Income	473.6	(26%)	414.3	(18%)	414.3	(21%)	135.0	(15%)	0.0%	-12.5%
<b>Total Revenues</b>	<b>1,815.0</b>	<b>(100%)</b>	<b>2,312.2</b>	<b>(100%)</b>	<b>1,998.8</b>	<b>(100%)</b>	<b>893.2</b>	<b>(100%)</b>	<b>-13.6%</b>	<b>+27.4%</b>

Remarks:

(1) For comparison purpose, sources of revenue have been re-categorized. Hence *Other Revenues* stated above include *Investment Revenues*, whereas *Services Revenues* include *Clearing & settlement fees, Depository, custody & nominee services fees, and Income from sale of information*.

(2) Due to changes in accounting policies, the segment revenues in 1999 are not strictly comparable to those since 2000.

Source: annual and interim reports of HKEx

- **Services revenues**, the single largest item of revenues for HKEx, surged 61% when the merger of trading and clearing houses took place in 2000. They accounted for 39% of its total revenue in 2001, higher than the average of the FIBV member exchanges of 33%, reflecting HKEx's additional revenues generated from its clearing operations after the merger. SGX, which also adopts an integrated exchange model and provides settlement/depository services and market data dissemination, had services revenues accounting for 73% of its total revenues in 2001<sup>4</sup>. Although services revenues accounted for 33% of the Deutsche Bourse's total revenues in 2001, its clearing house (Clearstream) was only 50% owned by the group<sup>5</sup>.
- Services revenues normally represent a relatively more stable source of income for exchanges as compared to trading, as the latter is directly linked to short-term market performance and investor sentiment.

<sup>4</sup> The share of services revenues is sourced from the annual report of SGX with item revenues re-categorized according to the definition of *Services Revenues* mentioned in the C&R Survey.

<sup>5</sup> Figures based on the annual report of Deutsche Bourse. Also Clearstream has become wholly-owned by Deutsche Bourse since July 2002.

- **Listing revenues** were the only HKEx income stream that managed to remain on the rising trend from 1999 to present. Moreover, this stream contributed an increasing share to total revenues (14% in 2001 and 19% in the first half of 2002).
- The number of new listings in Hong Kong has been relatively stable despite an unfavourable market environment, partly due to the launch of the GEM board in November 1999. Between January 2000 and September 2002, 120 companies were listed on the Main Board, raising a total of HK\$165.1 billion from IPOs. During the same period, 148 companies were listed on the GEM board, raising another HK\$25.2 billion.
- HKEx has a relatively large share of **investment income**. Although investment income was on the downtrend, it still accounted for 21% of the 2001 revenues and was larger than trading revenues. The share of investment income in 2000 and 2001 revenues for the industry globally was less than 7%.

## Costs

### Cost Trend of the Industry

**Table 3 — Costs of Exchanges Covered by C&R Survey (US\$ million)**

	1995	1996	1997	1998	1999	2000	2001	%Change (2001/ 1996)	CAGR (1996- 2001)	%Change (2001/ 2000)
<b>Total Costs</b>	<b>3,237</b>	<b>3,172</b>	<b>3,350</b>	<b>3,780</b>	<b>4,439</b>	<b>4,894</b>	<b>4,817</b>	<b>+52%</b>	<b>+8.7%</b>	<b>-1.6%</b>
<i>Of which</i>										
- Staff costs	n.a.	999 (31%)	1,001 (30%)	1,038 (27%)	1,237 (28%)	1,289 (26%)	1,330 (28%)	+33%	+5.9%	+3.2%
- Systems expenses	n.a.	675 (21%)	741 (22%)	886 (23%)	960 (22%)	1,016 (21%)	1,058 (22%)	+57%	+9.4%	+4.1%
- Premises expenses	n.a.	272 (9%)	266 (8%)	245 (6%)	279 (6%)	269 (5%)	260 (5%)	-4.4%	-0.9%	-3.3%
- Administration	n.a.	301 (9%)	378 (11%)	470 (12%)	463 (10%)	432 (9%)	328 (7%)	+9.0%	+1.7%	-24%
- Depreciation	n.a.	293 (9%)	292 (9%)	318 (8%)	406 (9%)	424 (9%)	435 (9%)	+49%	+8.2%	+2.6%
- Other Costs	n.a.	560 (18%)	610 (18%)	591 (16%)	680 (15%)	905 (18%)	867 (18%)	+55%	+9.1%	-4.2%

Remark: Only important segment costs have been highlighted in the survey. As such segment costs do not add up to the total. Also see footnote 2.  
Source: C&R Survey

- The total costs of member exchanges responding to the C&R Survey grew at an annual rate of 8.7% between 1996 and 2001 (Table 3), slightly faster than the growth in revenues (7.7% per annum on average).
- IT expenses and staff costs were two major cost items which continued to increase and thus spurred exchange costs. IT expenses doubled between 1996 and 2001 (at an average per annum rate of 9.4%) and represented 22% of total exchange costs in 2001. The increase was induced by the upgrade of financial infrastructure to cater for the anticipated demand for electronic trading. According to the FIBV, 77% of the member exchanges would put greater emphasis on developing e-business beyond using the Internet as a means of communication.
- Staff costs constituted 28% of total expenses in 2001 and remained as the largest item. They grew at a slower pace of 5.9% per annum on average between 1996 and 2001.

## Cost Trend of HKEx

	1999		2000		2001		1 <sup>st</sup> Half 2002		2001/2000	2000/1999
<b>Staff costs</b>	<b>570.8</b>	<b>(45%)</b>	<b>598.7</b>	<b>(45%)</b>	<b>528.0</b>	<b>(45%)</b>	<b>262.3</b>	<b>(45%)</b>	<b>-11.8%</b>	<b>+4.9%</b>
<b>IT expenses</b>	<b>197.7</b>	<b>(16%)</b>	<b>216.7</b>	<b>(16%)</b>	<b>231.1</b>	<b>(20%)</b>	<b>131.6</b>	<b>(23%)</b>	<b>+6.6%</b>	<b>+9.6%</b>
Premises expenses	115.1	(9%)	109.1	(8%)	100.5	(9%)	49.9	(9%)	-7.9%	-5.2%
Product marketing & promotion	37.5	(3%)	31.1	(2%)	15.5	(1%)	7.8	(1%)	-50%	-17%
Legal & professional fee	36.0	(3%)	32.1	(3%)	61.8	(5%)	6.0	(1%)	+92%	-11%
Depreciation & amortization	150.2	(12%)	177.5	(13%)	152.7	(13%)	78.4	(14%)	-14%	+18%
Other expenses	150.5	(12%)	167.6	(13%)	86.9	(7%)	41.1	(7%)	-48%	+11%
<i>Of which</i>										
<i>Merger, listing &amp; integration</i>	60.2	(5%)	93.4	(7%)	0	0.0%	0	(0%)	-100%	+55%
<b>Total Expenses</b>	<b>1,257.8</b>	<b>(100%)</b>	<b>1,332.8</b>	<b>(100%)</b>	<b>1,176,367</b>	<b>(100%)</b>	<b>577,154</b>	<b>(100%)</b>	<b>-11.7%</b>	<b>+6.0%</b>

Note: For comparison purpose, cost items have been re-categorized. Hence *Other expenses* stated above included *Merger, listing & integration expenses*.  
Source: annual and interim reports of HKEx

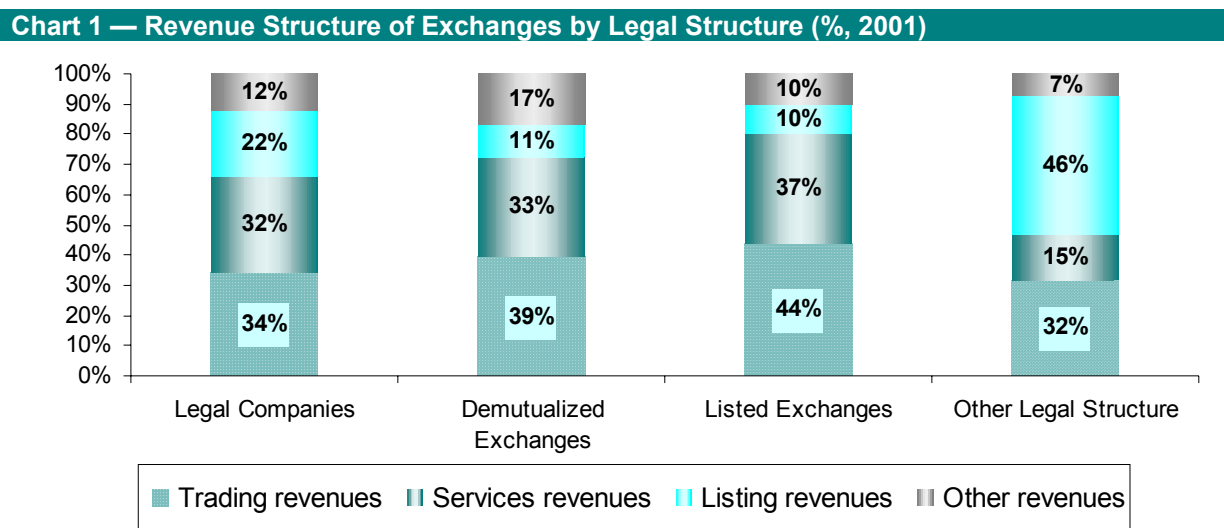
- IT expenses of HKEx rose 17% between 1999 and 2001 and accounted for 20% of the total expenses, largely in line with its counterparts. The share increased further to 23% in the first half of 2002 on the implementation of the upgraded CCASS/3.
- The share of staff costs and related expenses maintained at 45% throughout the period from 1999 to the first half of 2002, and represented the largest cost item for HKEx.

### Appendix – Revenue and Cost Structures of Exchanges by Legal Structure

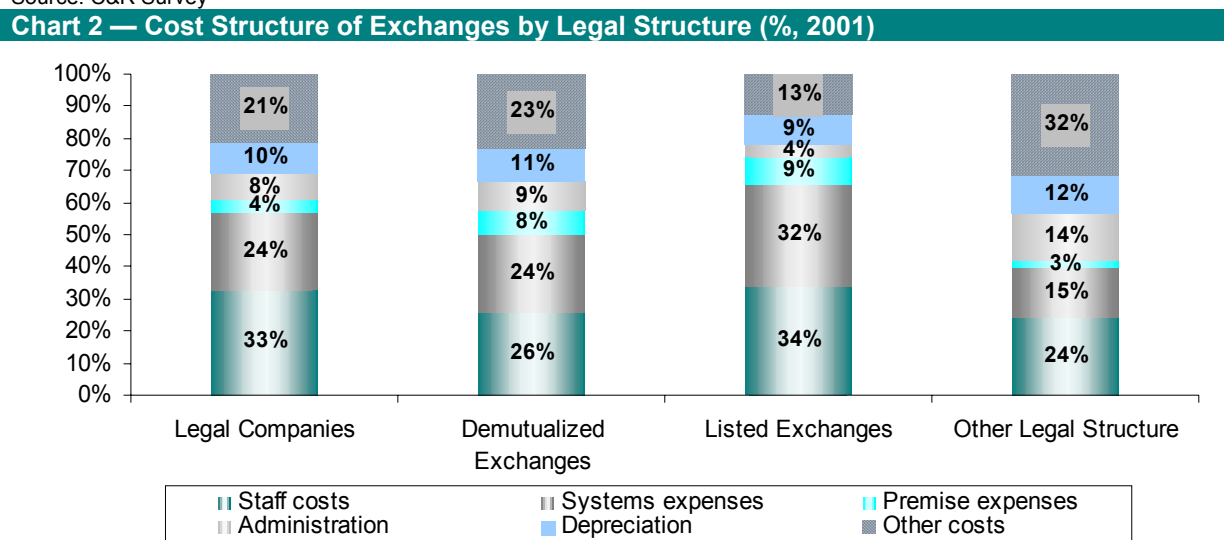
According to the FIBV, exchanges can be broadly categorized into four groups in terms of legal structure: -

- 1) **Legal Companies** – private limited companies with ownership restricted to their members [e.g. NYSE];
- 2) **Demutualized Exchanges** – private limited companies that have undertaken demutualization and ownership is open to non-exchange [e.g. Tokyo Stock Exchange];
- 3) **Listed Exchanges** – exchanges that go public with a more diversified profile of shareholders [e.g. HKEx]; and
- 4) **Exchanges with “Other Legal Structure”** – Diversified legal structures under various local legislations and belong to the state [e.g. Korea Stock Exchange].

The exchanges have quite different revenue and cost structures across the categories.



Source: C&R Survey



Source: C&R Survey