FEATURE ARTICLE

An Analysis of the Financial Health of Hong Kong Corporations*

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The Asian financial crisis and the ensuing economic downturn have had significant impact on the corporate sector. Corporate profitability has been eroded sharply while debt burden has increased.

To regain its competitiveness, the corporate sector has diversified its fund raising channels to reduce its reliance on bank loans, expanding long-term loans to replace short-term ones to help improve the liquidity position and to reduce costs.

The improvement in Hong Kong's business environment since the second half of 2003 is likely to benefit the corporate sector.

I. INTRODUCTION

A strong corporate sector contributes significantly to the stability of the financial system, through its close funding and investment links with the banking sector and financial markets. In contrast, a weak corporate sector will also expose an economy to financial shocks and speculation. This is particularly true in developing countries where financial problems in the corporate sector are often significant and, at times, have a larger impact on currency and stock market crises than the usual macroeconomic variables (Johnson et al., 2000). Given the close linkage between the health of the corporate sector and financial crisis, the understanding of the vulnerability of firms has become a matter of increasing concern to policymakers in recent years (IMF, 2002).

A common method to assess the soundness of the corporate sector is by examining a wide array of financial ratios reported in firms' balance sheets. At the firm level, financial ratios can help credit analysts in banks or rating agencies determine the default risk of that particular company.[1] At the aggregate level, financial ratios for the corporate sector can shed light on the vulnerability of the sector as a whole and the risk of spillover effects on other parts of the economy. A study by the International Monetary Fund (IMF) finds that the combination of high leverage, shorter debt maturities, and decreasing profitability in the corporate sector played a significant role in the 1997-98 Asian financial crisis (IMF, 2002).

Against this background, this article is devoted to the examination of the evolution of major financial ratios of listed companies in Hong Kong. The balance sheet information reveals the capital structure, the profitability, the ability to service debts, the liquidity and the efficiency of the corporate sector during the period 1990-2001. Where appropriate, these financial ratios are compared to those of other emerging economies presented in a recent IMF study (IMF, 2002).[2] Nonetheless, the results should be

* This feature article is taken from a study analysing the financial health of Hong Kong companies. A complete version of the paper, including the modelling of the quantitative relationship between corporate liquidation risk and selected financial ratios, is available on the HKMA website's Research Memoranda category.

1 Many quantitative models used by credit analysts in financial institutions are extensions of the Z-score model developed by Altman (1968, 2000). Applying the multiple discriminant statistical methodology to a set of financial and economic ratios, the Z-score model produces a measure that can characterise the potential bankruptcy risk of an individual company.

2 This paper emphasises the time series study of the financial ratios in Hong Kong to ascertain whether the financial positions of the corporate sector have been improving or deteriorating in the past decade. Due to vast differences in business culture and institutional arrangements in different economies, the cross-country comparison is for reference only and should be read with caution.

interpreted carefully because: 1) the effects of the heterogeneity of the companies are not taken into account as only summary statistics, such as mean or median are examined, and 2) it may be misleading to derive the overall picture of the corporate sector based on these financial ratios if they are sector-biased or dominated by some special companies.

The remainder of the article is organised as follows: Section II describes the data used in the ratio analysis. Section III discusses the evolution of major financial ratios of the non-financial corporate sector in Hong Kong and, where appropriate, compares these ratios with those of other emerging economies presented in an IMF study (IMF, 2002). The study's conclusions are presented in the final section.

II. DATA

Data from the company accounts of non-financial corporations listed in the Hong Kong stock market during 1990-2001 are used in this analysis.[3] The sample size varies over the years: the number of companies ranges from a low of 179 in 1990 to a high of 717 in 2000. Although the number is small compared to the total population of non-financial businesses in Hong Kong, the sample covers companies that perform the great bulk of business activities in the corporate sector and hence have a significant impact on the stability of the financial system.[4] Adjustments for the different financial year cycles adopted by different companies are made to allow for a comparison of the ratios across companies and over time. For example, if a company's financial year-end is in March each year, then its financial information for the year 2000 is based on a weighted average of the corresponding data in financial years 1999-2000 and 2000-2001. The weight for the former is 0.25 and that for the latter is 0.75. Such adjustment ensures data comparability across different companies with different financial year cycles.

III. RESULTS OF RATIO ANALYSIS

The evolution of financial ratios containing information on the capital structure, the profitability, the ability to service debt, the liquidity and the efficiency of the corporate sector are examined to assess the strength of Hong Kong's corporate sector.[5] The choice of such ratios is consistent with existing literature on analysing the performance of corporations (Brealey and Myers, 1991). Apart from focusing on the mean ratio for the aggregate corporate sector, intra-sector variations among firms of two different sizes: small firms and small-to-medium firms, are examined. These refer to companies in the 25th percentile and 75th percentile of total sales in the year respectively.[6]

The movements of the financial ratios over time for all corporations, the small firms and the small-to-medium firms during 1990-2001 are given in Charts 1-9.[7] The key findings from these financial ratios are presented in the ensuing paragraphs. Where appropriate, the performance of the corporate sector in Hong Kong is compared with that in other emerging economies presented in a recent IMF study (IMF, 2002).[8]

3 Non-financial corporations refer to companies, excluding H-shares companies, investment companies, and those engaged in banking, insurance or finance, listed on the Hong Kong Main Board and the Growth Enterprise Market. The data are from Thomson Financial.

4 In 2000, for example, there was a total of 504,823 registered companies in Hong Kong compared to 717 in the data. But the amount of bank loans taken by these 717 companies accounted for 58.4% of the total loans made by all authorized institutions to the corporations.

5 The financial ratio of the corporate sector is represented by its mean. Instead of simply averaging the ratio of each company, the mean ratio for the corporate sector as a whole is calculated by dividing the sum of all companies' data in the numerator by the sum of all companies' information in the denominator. Alternative measures such as the median or the average ratio of individual companies are used to represent the corporate sector in other studies (IMF, 2002; Wong et al., 2000). It should be noted that the corporate sector may look very different if these alternative measures are used. Compared to these measures, the mean ratio compiled in this study is less affected by the distribution of individual companies' ratios. The median ratio is also compiled in this study when comparing Hong Kong to other emerging economies discussed in the IMF study.

6 The classification of firms is based on their sales revenues in a particular year. This differs from the common definition of SME, which refers to small-and-medium-sized companies with an employee size below a specified threshold.

7 The definitions of the financial ratios are described in Appendix.

8 Where appropriate, the median ratio is also computed for comparison with the IMF study.

a. Capital Structure

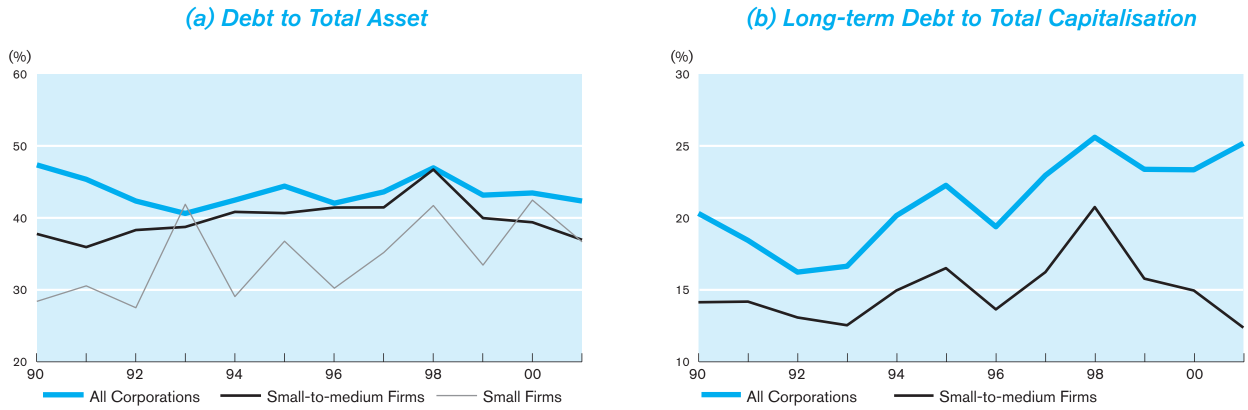
The capital structure of a company refers to the mix of debt and equity in its capital base. The ratio reveals the extent of leverage the firm assumes in its financing decision and is thus indicative of its ability to withstand shocks to its future cash flow and value of collateral. Generally speaking, a highly leveraged corporate sector is expected to suffer from more business failures in an economic downturn. Moreover, a high proportion of short-term debt in the loan structure of a company would subject it to interest rate risk when these loans are to be rolled over.

- **Hong Kong companies rely less on debt than equity financing.** Chart 1a shows that the debt-to-total-asset ratio of all corporations was around 41%-47% in the period, with equity making up the rest of the financing. The ratio for Hong Kong, however, is significantly higher than that of other emerging markets.[9] Analysed by different groups of companies, debt financing of small-to-medium firms dropped from the peak of 47% in 1998 to a 10-year low of 37% in 2001, indicating that a de-leveraging process has taken place in most corporations (except the very large ones) since the Asian financial crisis. For small firms, debt financing played a less important role in their capital structure compared to larger corporations in the 1990s. Nevertheless, its importance has been increasing gradually, reducing the gap with the larger corporations.

- **Debt is a less important long-term funding source compared to share capital.** In Chart 1b, long-term debt accounted for only a minor fraction of the total capitalisation despite its gradual rise from 1993 onward.[10] On the other hand, the ratio for small-to-medium firms declined to 12% in 2001, after peaking at 21% in 1998. The divergence of the movement in the ratio between all corporations and small-to-medium firms suggests that while very large companies have increased their share of debt in long-term financing, possibly because their greater creditworthiness gives them easier access to the loan market, most corporations have been consistently relying heavily on equity capital (Chart 1b).

CHART 1

Capital Structure of Non-financial Corporations in Hong Kong



Source: Thomson Financial.

Notes: 1. The charts show the average ratios for the aggregate corporate sector and for firms of different sizes over the years. The ratio of debt to total asset represents total liabilities excluding shareholders' equity as a percentage of total assets of companies, and the ratio of long-term debt to total capitalisation represents total long-term debt as a percentage of total capitalisation of companies. Long-term debt refers to borrowings due one year or more after the balance sheet date, while total capitalisation is a summation of long-term debt and shareholders' equity.
2. Non-financial corporations refer to companies, excluding H-shares companies, investment companies, and those engaged in banking, insurance or finance, listed on the Hong Kong Main Board and Growth Enterprise Market.
3. Small firms and small-to-medium firms refer to companies in the bottom 25% and 75% in terms of total sales in the year respectively.

[9] The median ratio for Hong Kong is 41%, while that for Emerging Asia, Latin America, Emerging Europe and South America is about 32%, 25% and 13% respectively in 2000 (IMF, 2002).

[10] A different trend, however, is found in the median ratio. In 2000, the ratio was about 3.8%, significantly down from more than 10% in the mid-1990s.

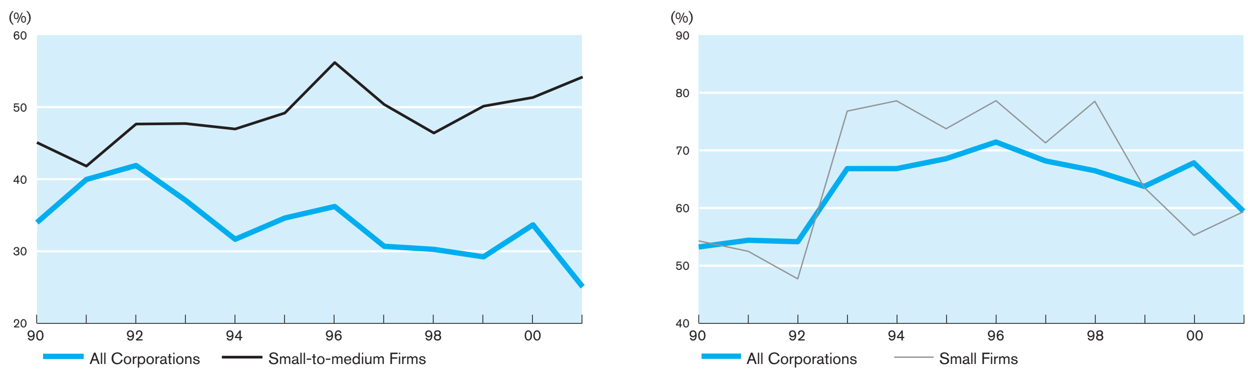
- **Short-term loans account for a relatively smaller share in the loan portfolio of large companies while the reverse is true for smaller ones.** As shown in Chart 2a, the share of short-term loans for all corporations declined to a low of 25% in 2001 after averaging about 34% in the study period. Contrary to the sector average, the majority of the loans taken by small-to-medium firms was short-term in nature, with the share in total loans ranging between 50% and 60% since 1998. The contrast suggests that while small-sized companies are still counting on short-term loans, the very large companies have gradually been reducing these exposures lately. Compared to other emerging economies, the Hong Kong corporate sector appears to rely more on short-term loans in its borrowing.[11]

- **The corporate sector of Hong Kong has diversified its debt financing sources since the Asian financial crisis, although the banking system remains its largest creditor.** Chart 2b shows that bank lending is the most important source of loans taken by the corporate sector during the study period.[12] However, its share in the total loans for all corporations declined to 59% in 2001 after peaking at 71% in 1996.[13] The most significant ratio decline is among small firms, dropping by over 20 percentage points from the peak in 1998 to the recent trough in 2000, possibly reflecting the post-crisis liquidity squeeze. In 2001, while most corporations increased the proportion of bank loans in their debt financing, the very large companies found alternative sources for funding their operations.

CHART 2

Loan Structure of Non-financial Corporations in Hong Kong

(a) Short-Term Loans to Total Loans *(b) Bank Loans to Total Loans*



Source: Thomson Financial.

Notes: 1. The charts show the average ratios for the aggregate corporate sector and for firms of different sizes over the years. The ratio of bank loans to total loans represents the total bank loans as a percentage of total loans of companies, and the ratio of short-term loans to total loans represents the total short-term loans as a percentage of total loans of companies. Short-term loans refer to borrowings due in less than one year.

2. Non-financial corporations refer to companies, excluding H-shares companies, investment companies, and those engaged in banking, insurance or finance, listed on the Hong Kong Main Board and Growth Enterprise Market.

3. Small firms and small-to-medium firms refer to companies in the bottom 25% and 75% in terms of total sales in the year respectively.

[11] In 2000, the ratio of the median company in Hong Kong was 70%, while that for Emerging Asia, and Emerging Europe and South America was about 57%-60% and that for Latin America was slightly less than 45% in the same year (IMF, 2002).

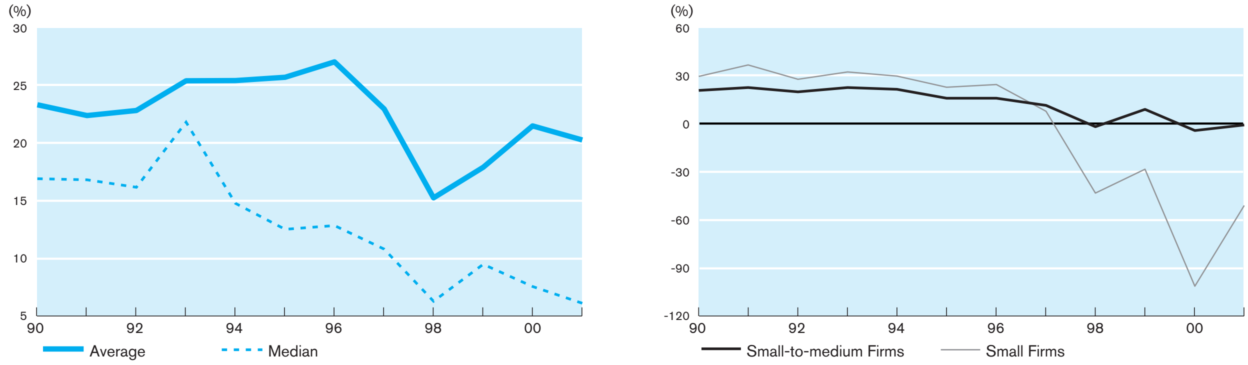
[12] Other loans include, for example, finance leases and hire purchases, notes and bills, convertible loans, loan capital and intra-group loans. The details can be found in Table 1 of Appendix.

[13] The median measure also confirms the falling trend, dropping to 76% in 2001 after peaking at 86% in the mid-1990s. Despite the drop, banks are still the most important creditors of the corporate sector as at least half of the companies in the sample had bank borrowings accounting for more than 76% in their total loans in 2001.

CHART 3

Profit Margin of Non-financial Corporations in Hong Kong

(a) All Corporations *(b) Small Firms and Small-to-medium Firms*



Source: Thomson Financial.

Notes: 1. The charts show the average ratios for the aggregate corporate sector and for firms of different sizes over the years. The ratios are calculated by dividing total EBITDA (earnings before interest, tax, depreciation and amortisation) by total sales revenue of companies (expressed in percentage terms).
2. Non-financial corporations refer to companies, excluding H-shares companies, investment companies, and those engaged in banking, insurance or finance, listed on the Hong Kong Main Board and Growth Enterprise Market.
3. Small firms and small-to-medium firms refer to companies in the bottom 25% and 75% in terms of total sales in the year respectively.
4. Company coverage excludes the financial performance of Hutchison Whampoa in 1999 and PCCW in 2000.

b. Profitability

Profitability is an important indicator of corporate health, as it directly affects the company's capability to repay its debt. In this study, profitability is measured by two variables: the profit margin based on the ratio of earnings before interest, tax, depreciation and amortisation (EBITDA) to total sales, and the ratio of operating profit to sales.

- **Corporate profit margins deteriorated sharply during the Asian financial crisis before rebounding significantly in recent years.** The profit margin of all corporations fell to 15% in 1998 from a pre-crisis average of 24%, but rebounded significantly to about 20% in 2000-2001 (Chart 3a). Small-to-medium firms had their profit margin reduced from 19% in 1990-97 to less than 1% in 1998-2001. The deterioration in profitability was most pronounced among small firms whose profit margin fell from an average of 26% prior to 1997 to an average loss of 55% during 1998-2001 (Chart 3b). The negative profit margin, compared to an 18% average for the whole corporate sector indicates that, on average, only the very large corporations managed to have profitable operations in Hong Kong in the past few years. A similar trend is also found if the median measure is considered. Since the mid-1990s, the profitability of the corporate sector has generally been on a declining trend, down to 6% in 2001 from an average of 13% in 1994-96. The observation is consistent with other emerging markets where profitability has declined since the mid-1990s (IMF, 2002).[14]

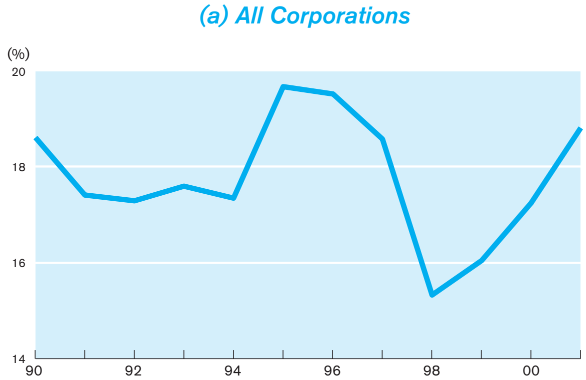
- **The profitability of the core business of the corporate sector is relatively stable,** as the losses experienced by small-to-medium firms are offset by gains by the very large ones. As shown in Chart 4a, the average operating profit margin of all corporations declined marginally in 1998-2001 from its pre-crisis level of 18%.[15] Even in 1998 when businesses

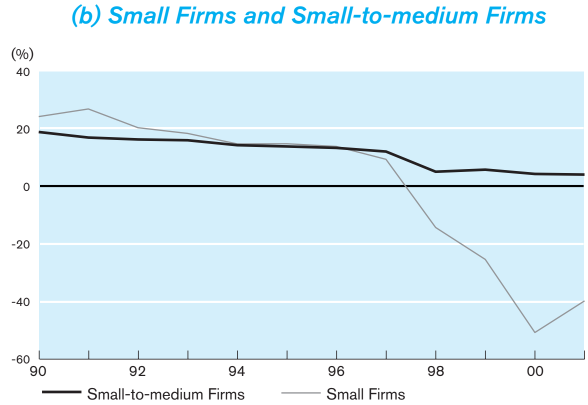
[14] It should be noted that the profitability measure in the IMF study is based on return on assets and is different from the one used in this article.

[15] If the financial performance of Hutchison Whampoa in 1999 and PCCW in 2000 are included, the decline in average operating profit margin would be even less in 1998-2001.

CHART 4

Operating Profit to Sales of Non-financial Corporations in Hong Kong





Source: Thomson Financial.

Notes: 1. The charts show the average ratios for the aggregate corporate sector and for firms of different sizes over the years. The ratios are calculated by dividing total operating profit by total sales of companies (expressed in percentage term). Operating profit is sales revenue deducting cost of goods sold and other trading expenses.
2. Non-financial corporations refer to companies, excluding H-shares companies, investment companies, and those engaged in banking, insurance or finance, listed on the Hong Kong Main Board and Growth Enterprise Market.
3. Small firms and small-to-medium firms refer to companies in the bottom 25% and 75% in terms of total sales in the year respectively.
4. Company coverage excludes the financial performance of Hutchison Whampoa in 1999 and PCCW in 2000.

experienced adverse macroeconomic conditions, the operating profit margin remained slightly above 15%. However, with the exception of the very large companies, the average operating profit margin of all corporations fell from a pre-crisis average of 15% to an average of 5% in the post crisis period. Small firms were the most affected by the economic downturn. Its ratio fell from an average of 18% before the crisis to -40% or below in 2000-2001 (Chart 4b). When the median measure is considered, the operating profit margin displays a similar declining trend to the median profit margin in Chart 4, dropping to 4% in 2001 from around 10% in the mid-1990s.

c. Ability to Service the Debt

One of the most commonly used indicators to highlight the risk of corporate failure is the firm's ability to service the debt. In this study, this indicator is captured in terms of: 1) income gearing, which is defined as the total interest expenses as a percentage of profit before interest and tax payments, and 2) the ratio of total loans to after-tax net profit.

- **Interest servicing burden of the Hong Kong corporate sector rose substantially after the Asian financial crisis.** In Chart 5a, the income gearing was relatively stable at 17% for all corporations during 1990-1996. However, after the Asian financial crisis, the ratio rose sharply to 99% in 2001. In particular, the burden of small-to-medium firms was more acute as they were either at a loss or had insufficient receipts to cover the interest payment in 1998-2001 (Chart 5b). Compared to other emerging markets, Hong Kong's income gearing is significantly higher, partly due to its relatively larger proportion of debt in the capital structure.[16]

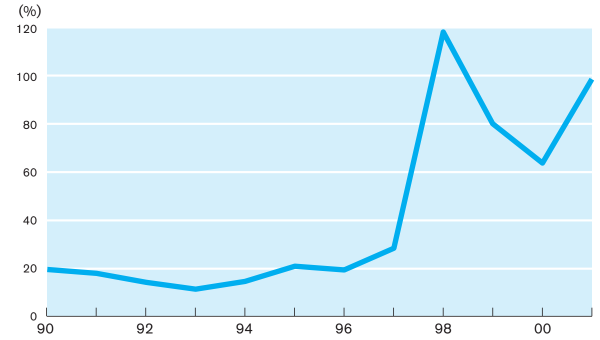
- **The corporate sector is experiencing increasing difficulties in debt reduction through profits.** Due to the shrinkage in profits that outpaced the decline in outstanding debt after the Asian financial crisis, the debt exposure of all corporations, relative to the

[16] Although the income gearing is on a rising trend in all emerging markets, they are smaller than that in Hong Kong. The median income gearing of the companies was about 0.6, 0.3 and 0.6 in Emerging Asia, Emerging Europe and South Africa, and Latin America in 2000 respectively, while that for Hong Kong was 0.8 in the same year (IMF, 2002, HKMA estimate).

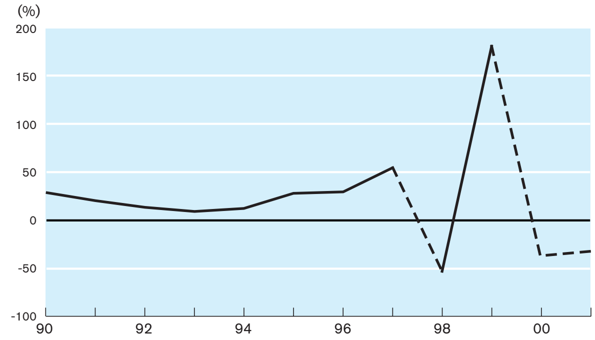
CHART 5

Income Gearing of Non-financial Corporations in Hong Kong

(a) All Corporations



(b) Small-to-medium Firms



Source: Thomson Financial.

Notes: 1. The charts show the average ratios for the aggregate corporate sector and for small-to-medium firms over the years. The ratios are calculated by dividing total interest payment by profit before interest and tax payment (expressed in percentage term). A dotted line, showing ratio with negative total profit or changing from positive to negative total profit, should be interpreted cautiously.
2. Non-financial corporations refer to companies, excluding H-shares companies, investment companies, and those engaged in banking, insurance or finance, listed on the Hong Kong Main Board and Growth Enterprise Market.
3. Small-to-medium firms refer to companies in the bottom 75% in terms of total sales in the year.
4. Company coverage excludes the financial performance of Hutchison Whampoa in 1999 and PCCW in 2000.

profit, increased to nine times in 2001 from four times or less in the years prior to 1997.[17] The situation is even more critical for the smaller firms which recorded losses in the years after the crisis (Chart 6).

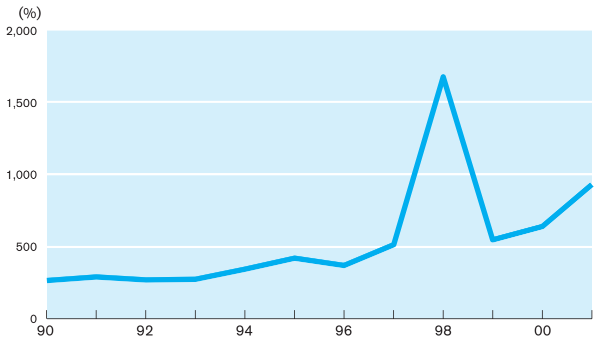
d. Liquidity

The liquidity ratio, defined as total current assets excluding inventories over total current liabilities of the company, measures the firm's ability to meet its short-

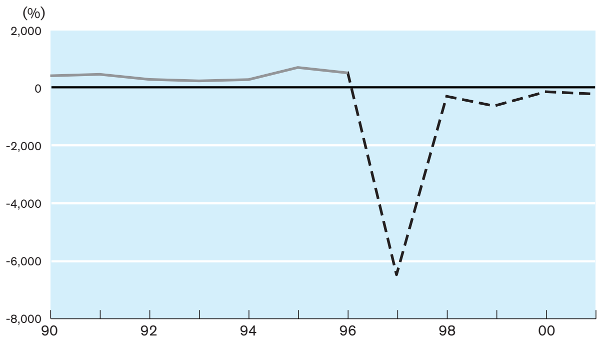
CHART 6

Total Loan to After Tax Net Profit of Non-financial Corporations in Hong Kong

(a) All Corporations



(b) Small Firms



Source: Thomson Financial.

Notes: 1. The charts show the average ratios for the aggregate corporate sector and for small firms over the years. The ratios are calculated by dividing total loans by net profit after tax of companies (expressed in percentage term). A dotted line, showing the ratio with negative total profit or changing from positive to negative total profit, should be used cautiously when comparing with a positive one.
2. Non-financial corporations refer to companies, excluding H-shares companies, investment companies, and those engaged in banking, insurance or finance, listed on the Hong Kong Main Board and Growth Enterprise Market.
3. Small firms refer to companies in the bottom 25% in terms of total sales in the year.
4. Company coverage excludes the financial performance of Hutchison Whampoa in 1999 and PCCW in 2000.

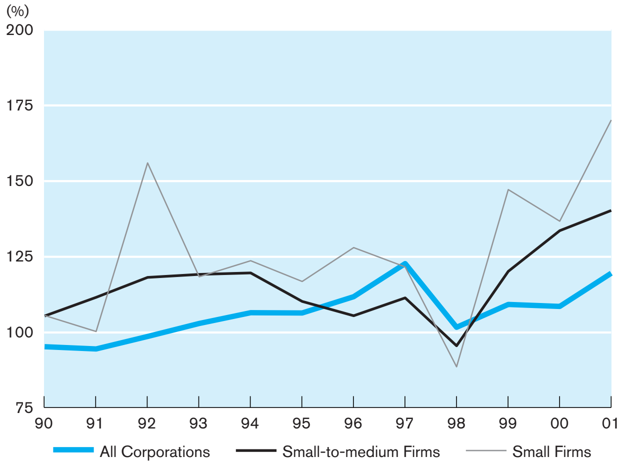
[17] In other words, it would take about nine years for the corporate sector to repay all the debts with its profits in 2001, doubling the time required prior to 1997.

term cash need without affecting its credit quality. In other words, it captures the extent of liquidation risk faced by the corporate sector as most corporate defaults are triggered by cash flow problems.

- **Hong Kong corporations maintained a healthy liquidity ratio after the Asian financial crisis.** Excluding the very large companies, the liquidity ratio of small-to-medium firms was at a 12-year high in 2001 after a brief drop in 1998. The improvement in the liquidity ratios varies inversely with the size of the companies. Although the liquidity ratio of small firms used to be more volatile, the rebound from the low of 88% in 1998 to 170% in 2001 is remarkable when compared with other companies. In fact, it is important for small firms to remain liquid, as external funds are not readily available to help them withstand financial shocks or keep them afloat during an economic slowdown (Chart 7). Similar improvement in liquidity is also observed in other economies in Emerging Asia but not in Latin America, Emerging Europe or South America (IMF, 2002).[18]

CHART 7

Liquidity Ratio of Non-financial Corporations in Hong Kong



Source: Thomson Financial.

Notes: 1. The chart shows the average ratios for the aggregate corporate sector and for firms of different sizes over the years. The ratios are calculated by dividing total current assets excluding inventories by total current liabilities of companies (expressed in percentage term).
2. Non-financial corporations refer to companies, excluding H-shares companies, investment companies, and those engaged in banking, insurance or finance, listed on the Hong Kong Main Board and Growth Enterprise Market.
3. Small firms and small-to-medium firms refer to companies in the bottom 25% and 75% in terms of total sales in the year respectively.

e. Efficiency

As the corporate balance sheet provides little information on the number of employees, inventory and fixed assets are the two factor inputs used as proxies to measure the productivity of corporations. A rise in either sales-to-inventory or sales-to-average fixed assets ratio denotes improved efficiency in the corporate sector.

- **The sales-to-inventory ratio of Hong Kong corporations accelerated to a peak of about 840% in 2000-01, compared to an average of 650% in 1990-97.** The recent improvement reflects the efforts of corporations to reduce the inventory to counter the slowdown in sales (Chart 8a). During the same period, the sales-to-inventory ratio of small-to-medium firms also improved from 600% to 690%. The smaller increase for small-to-medium firms indicates that most efficiency gains in the corporate sector in recent years have been achieved by large companies. A less significant improvement is observed for the sales-to-average fixed assets ratio of all corporations (Chart 8b). This declined from the early 1990s until 1998, but has edged up in 2000-2001. Despite a similar pickup in this ratio, small firms are less efficient when compared to the rest of the corporate sector.

III. CONCLUSION

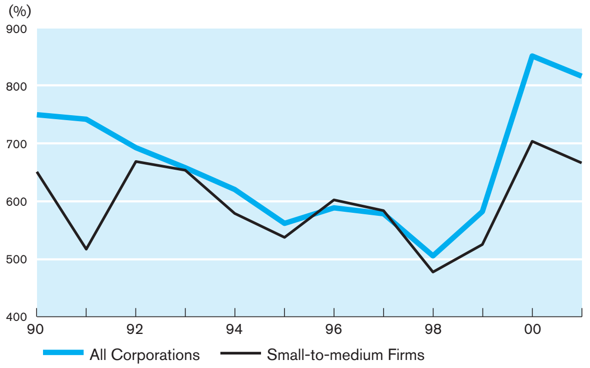
Given the close linkage between the financial soundness of the firms and the stability of the financial system, it is important to understand the vulnerability of the corporate sector. This study analyses the financial health of the non-financial corporations in Hong Kong using their balance sheet information. The financial ratio analysis shows that the prolonged economic downswing after the Asian financial crisis has been weighing on the corporate

[18] It should be noted the liquidity measure in the IMF study is different from this article and based on cash and short-term investments to total assets.

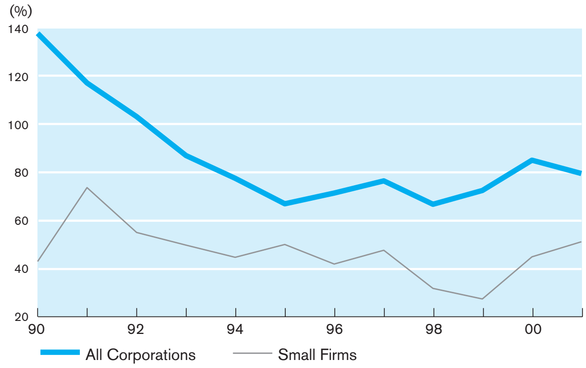
CHART 8

Efficiency of Non-financial Corporations in Hong Kong

(a) Sales-to-Inventory



(b) Sales-to-Average Fixed Asset Value



Source: Thomson Financial.

Notes: 1. The charts show the average ratios for the aggregate corporate sector and for firms of different sizes over the years. The ratio of sales to inventory represents the total sales revenue as a percentage of total inventory, and the ratio of sales to average fixed asset values represents the total sales revenue as a percentage of companies' total average fixed assets in the past two years.
2. Non-financial corporations refer to companies, excluding H-shares companies, investment companies, and those engaged in banking, insurance or finance, listed on the Hong Kong Main Board and Growth Enterprise Market.
3. Small firms and small-to-medium firms refer to companies in the bottom 25% and 75% in terms of total sales in the year respectively.

sector's ability to service its debts. In response to the difficult business environment, Hong Kong corporations are striving to maintain their competitiveness and regain their profit margin through tightening inventory control and more efficient use of fixed assets. In addition, the corporate sector has made efforts to maintain its financial soundness by increasing its liquidity ratio, reducing its funding risk through diversification and lengthening its loan profile to reduce exposure to short-term interest rate fluctuations.

There are significant variations in the financial ratios of different sized firms. In general, very large corporations in Hong Kong appear to be least affected by the Asian financial crisis and the subsequent economic recessions as most of their financial ratios have returned to their pre-crisis levels. Notwithstanding efforts to de-leverage and improve operational efficiency, the profitability of medium-sized companies was reduced because of the adverse economic environment. Small-sized companies were particularly hard hit as their earning power was severely impaired. Their risk of default has risen, as shown by a lack of improvement in their capital structure and efficiency. However, it should be noted that the improvement in Hong Kong's business environment since the second half of 2003, is likely to strengthen balance sheets and financial conditions in the corporate sector, including small companies, when compared to 2001.[19]

Finally, we emphasise that the results of this study should be interpreted with caution. The financial ratios of the corporate sector, presented in the form of the mean or median, are summarised into a single number to represent a group of highly heterogeneous companies in the economy. There is risk of over-generalisation. Sometimes, it may even be misleading when these summary statistics are combined together for an overall assessment of the corporate sector if these ratios are sector-biased or dominated by some special companies. For this reason, these ratios should be examined alongside other sources of information, including market intelligence and business surveys (Benito et al., 2001), when used to monitor the health of the corporate sector in Hong Kong.

[19] A survey released on 30 October 2003 by the SME Centre of the Hong Kong Productivity Council finds that the Business Operating Environment Index for SMEs, which gauges the views of Hong Kong's small-and-medium-sized enterprises in the areas of market opportunity, financial and investment situation, operating costs, human resources and risk assessment, reached a record high in October 2003 since it was introduced in 1998. This indicates that the financial health of small companies is likely to benefit from the upswing in economic conditions that is currently under way.

APPENDIX

TABLE 1

Breakdowns on Balance Sheet

Assets (1)	Liabilities
▪ Current Assets (2) - cash (3) - inventory (4) - others ▪ Fixed Assets (5) ▪ Financial Assets	▪ Total Loans (6) = short-term loans (7) + long-term loans (8) **OR** = bank loans (9) + other loans ▪ Short-term Creditors (10) ▪ Deferred Liabilities ▪ Other Long-term Liabilities ▪ Shareholders' Equity (11)

Note: Other loans include finance leases & hire purchases, notes & bills, perceptual subordinated loans, subordinated loans, loan capital, convertible loans, government-backed loans, mortgage loans, pension loans, intra-group loans.

TABLE 2

Breakdowns on Profit & Loss Account

Credit	Debit
▪ Sales Revenue (12)	▪ Trading Expenses (13) - cost of goods sold - depreciation (14) - amortisation (15) - other trading expenses
➤ **Operating Profit including depreciation and amortisation (16) = (12) - (13)** ▪ Interest Income ▪ Investment Income ▪ Other Income } (17)	▪ Exceptional Charges (18) - Fixed assets written off - Disposal of businesses - Financial assets written off - Goodwill written off
➤ **Profit Before Interest & Tax** **(19) = (16) + (17) - (18)**	▪ Financial Charges (20) - overdraft interest - lease & hire purchase interest - subordinated loan interest - short & long interest
➤ **Profit Before Tax** **(21) = (19) - (20)**	▪ Taxation ▪ Minorities Share of Profit } (22)
➤ **Profit After Tax or Net Income** **(23) = (21) - (22)**	▪ Dividends (24)

TABLE 3

Financial Ratio Calculations

Chart	Title	Calculations
1a	Capital Structure: Total Debt to Total Asset	$\frac{(1) - (11)}{(1)} \times 100\%$
1b	Capital Structure: Long-term Debt to Total Capitalisation	$\frac{(8)}{(8) + (11)} \times 100\%$
2a	Loan Structure: Short-term Loans to Total Loans	$\frac{(7)}{(7) + (8)} \times 100\%$
2b	Loan Structure: Bank Loans to Total Loans	$\frac{(9)}{(7) + (8)} \times 100\%$
3	Profit Margin*	$\frac{(19) + (14) + (15)}{(12)} \times 100\%$
4	Operating Profit Margin	$\frac{(16) + (14) + (15)}{(12)} \times 100\%$
5	Income Gearing (Interest to Profit before Interest Payment & Tax)	$\frac{(20)}{(19)} \times 100\%$
6	Loans to After Tax Net Profit	$\frac{(6)}{(23)} \times 100\%$
7	Liquidity Ratio	$\frac{(2) - (4)}{(7) + (10)} \times 100\%$
8a	Efficiency: Inventory Turnover (Sales to Inventory)	$\frac{(12)}{(4)} \times 100\%$
8b	Efficiency: Sales to Average Fixed Asset Value	$\frac{(12) \times 2}{(5)_t + (5)_{t-1}} \times 100\%$

Note: The number in brackets refers to the definition in Table 1 and 2 of Appendix.
* Based on EBDITA (earnings before interest, tax, depreciation and amortisation).

REFERENCES

Altman, E. (1968): "Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy", *Journal of Finance,* 23, No. 4, 589-609.

Altman, E. (2000): "Predicting Financial Distress of Companies: Revisiting the Z-score and Zeta Models", manuscript.

Benito, A., J. Whitley and G. Young. (2001): "Analysing corporate and household sector balance sheets", *Financial Stability Review, Bank of England,* December, 160-174.

Brealey, R. and S. Myers. (1991): *Principles of Corporate Finance,* McGraw-Hill Inc.

International Monetary Fund (2002): *World Economic Outlook,* September.

Johnson, S., P. Boone, A. Breach and E. Friedman. (2000): "Corporate Governance in the Asian Financial Crisis", *Journal of Financial Economics,* Vol. 58 (October/November), 141-86

Wong, J., I. Yu. and E. Law. (2000): "Corporate Restructuring in Hong Kong in the aftermath of the Asian Financial Crisis", *HKMA Quarterly Bulletin,* May 2001.