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CORPORATE DISTRESS IN AN EMERGING MARKET

-The Case of China

For the Degree of Doctor of Philosophy

Faculty of Finance
Cass Business School
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15th January 2007

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Acknowledgement

飲水思源

"When drinking the water,
don't forget to remember
those who dug the well."

I dedicate this thesis to Marcus Keohane, my husband, whose unconditional love and support took me through countless sleepless working nights.

I am indebted to Prof. David Citron & Dr. Gulnur Muradoglu, my supervisors and hopefully life-long friends, for their rigour and support – I wouldn't have accomplished this without them.

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Then there are all the friends I've made, their companionship, drinking and dancing skills have certainly helped!

Finally – and most of all – I would like additionally to dedicate this thesis to "baba & mama" - my parents. I hope I have made them proud.

Abstract:

This thesis is one of the first studies to empirically examine the nature and source of financial distress, and the valuation effect of distressed companies' restructuring announcements, in an emerging market context. By describing and comparing the Chinese bankruptcy code with those of seven other countries, I find that the government's political interests and intervention, aggravated by the country's weak enforcement mechanism, result in the formal procedures rarely being used in practice. Consequently, the threat of bankruptcy is weakened and creditor protection is limited. These issues are confirmed by my empirical analysis. My empirical studies are separated into two distinct themes: China as a whole compared with what is documented in the literature; and within China state owned enterprises (SOE) versus non-SOE. Firstly, I analyse operating and financial performance and operating efficiency for 100 firms that became distressed between 1999 and 2003. I find that during the first year of distress, the main source of distress is economic, not financial. In addition, for a significant minority of firms, financial factor plays a greater role in causing cash flow shortfall prior to the onset of distress. For this reason, I believe that due to the lack of timely restructuring mechanism, financial distress leads to economic distress. My SOE versus non-SOE results suggest that "soft budget constraints" are widespread among SOEs. However, such lending bias towards SOEs does not save these SOEs from being distressed. The deliberate channeling of funds to inefficient uses results in the distortion of capital allocation.

Secondly, I investigate the valuation effect of restructuring announcements made by 100 firms. Comparing to the literature, I find that asset restructuring including mergers and acquisitions (M&A) and asset sales are more frequently employed. It is the most popular strategy in my sample. In the light of difficulties in officially liquidating economically unviable firms in the Chinese context, mergers and asset sales are perhaps a market self-correction mechanism to ensure asset mobility, which is essential for the effective operation of an enterprise economy. Consistent with the general M&A literature, M&A creates value for the target firm shareholders. In addition, asset sales are not perceived positively by the market. A potential explanation is that the lack of bankruptcy threat in China minimises the potential benefit of avoiding bankruptcy costs which shareholders otherwise have to bear.

In my SOE versus non-SOE study, M&A with payment strategy is effective only for the non-SOE firms. On the contrary, the government's attempt to revamp SOE performance by transferring the controlling ownership, either with or without payment, is not seen as effective by the market. My results also suggest that debt governance is not at work among SOEs and this affects the effectiveness of debt related restructuring. The fundamental conclusion is that government ownership has an adverse impact on the distress-resolution process as it distorts resource allocation, management incentives and investment decisions. An effective bankruptcy regime should be more independent from politically motivated government intervention.

Abbreviations

AAR	Average abnormal return
ADB	Asian Development Bank
AMC	Asset Management Company
APR	Absolute priority rule
AR	Abnormal return
BOC	Bank of China
CAAR	Cumulative average abnormal return
CAPEX	Capital expenditure
CAR	Cumulative abnormal return
CIPE	Centre for International Private Enterprises
CLB	Companies limited by shares
COE	Collectively-owned enterprise
CSRC	China Securities Regulatory Commission
EBIT	Earnings before interest and tax
EBITDA	Earnings before interest, tax, depreciation and amortisation
EP	Estimation period
FDI	Foreign Direct Investment
FIE	Foreign invested enterprise
GAAP	General Accepted Accounting Principles
GDP	Gross Domestic Product
GNP	Gross National Product
IAS	International Accounting Standards
ICBC	Industrial and Commercial Bank of China
IPO	Initial Public Offering
LEB	Law of China on Enterprise Bankruptcy
LLB	limited liability companies
LUR	Land Use Right
M&A	Merger and acquisition
MoF	Ministry of Finance
NBS	National Bureau of Statistics
NPL	Non-performing loan
PBOC	People's Bank of China (the Chinese central bank)
PLC	Publicly listed companies
PPP	Purchasing power parity
PT	Particular treatment
SAIC	State Administration For Industry & Commerce
SBC	Soft budget constraints
SETC	State Economic Trade Commission
SHSE	Shanghai Stock Exchange
SIC	Standard Industrial Classification
SIP	Share issue privatisation
SOE	State-owned enterprise
ST	Special treatment
SZSE	Shenzhen Stock Exchange
TP	Test period
WTO	World Trade Organisation

Declaration
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CHAPTER 1 - INTRODUCTION

China had achieved the impressive average annual growth rate of GDP of 9.5% between the start of its market reforms in 1978 and 1994, and the rapid growth has continued with its annual GDP growth averaging 7.7% between 1998 and 2002 (World Bank, 2003). Its recent history of robust economic growth and accession to the World Trade Organisation (WTO) in 2001 has not only made the country the most attractive destination for foreign direct investment (FDI)[1], but has also provided an opportunity to test established financial theory in a new context. As the most important emerging market in the world where competition and failure becomes reality, China is a significant laboratory to extend the existing distress and restructuring literature on emerging markets. In this chapter I will explain the aim, motivation and contribution of my research; and the organisation of the thesis.

1.1 OBJECTIVE AND CONTRIBUTION

The objective of this thesis is to use China, the most important emerging market in the world, to test and shed light on the current theoretical and empirical findings in the distress and restructuring literature. There are very few theoretical or empirical studies on corporate distress and restructuring in emerging markets in the finance literature and no known study in China. It is the author's motivation to fill this gap.

As D'Souza et al. (2001) states, from being extremely controversial during Margaret Thatcher's first government, privatisation has since become a global phenomenon. D'Souza et al. (2001) record that more than one hundred governments have privatised some or most of their state owned enterprises (SOEs) since 1980, and these governments have raised a cumulative value of over US$750 billion through share-issue privatisation (SIP) alone. As business failures are a universal feature of competitive markets, the concept of "survival of the fittest" becomes a reality for these newly privatised firms. How do these firms survive the new competitive environments? This topic of corporate distress in the context of emerging economies is under-researched. China provides a particularly

[1] According to McKinsey&Co., Chinese economy received US$48bn in foreign direct investment in 2002, more than any other country in the world, including the USA.

interesting context in which to address this issue due to its recent share-issue privatisation programme initiated in 1990.

What is the nature and source of distress? What are the frequently employed restructuring strategies by distressed firms in China, given the country's high level of non-performing loans, the potential existence of soft budget constraints and the developing nature of its capital markets? Do debt and equity restructuring assume different patterns to what is documented in prior research? How effective are they? How does government ownership impact distress resolution processes? Answers to these questions provide important implications for the design of an efficient mechanism through which viable firms survive while the non-viable ones do not, thus ensuring assets of poor performers are reallocated to better uses.

Firstly, by describing the Chinese bankruptcy code and comparing the Chinese bankruptcy regime to seven other codes (US, UK, Indonesia, Korea, Malaysia, Thailand and Philippines), this work contributes to the bankruptcy literature by shedding light on the on-going debate on debtor-friendly versus creditor-friendly bankruptcy regimes initiated by a comparison between the US and UK regimes (Franks and Torous 1996). Although both the UK and the US codes have deficiencies, they provide a framework for the current debate on what is the best practice. The US approach assumes that contracts are necessarily incomplete, with Chapter 11 providing a bargaining process to mitigate inefficiencies resulting from contractual incompleteness. However, this has led to, as argued by a large number of empirical and theoretical studies, a bias towards debtors (debtor-friendly). On the other hand, the UK approach is based on the concept of "freedom of contracting", to an extent assumes contract completeness. In the case of China, debtor friendly is not the consequence of mitigating inefficiency due to contract incompleteness, rather, it is due to political and social motivations. Secondly, China's weak enforcement mechanism exacerbates this debtor-friendliness to the detriment of creditors. Furthermore, debt in China is typically bank loans so the price is interest rates banks charge. However, as will be discussed in detail in section 2.4.1, the interest rates are 1. Regulated by the government; 2. As argued by some empirical studies, does not differentiate default risk levels.

A number of issues are highlighted and hypotheses generated for the subsequent empirical investigations in this thesis: 1). The existing Chinese bankruptcy code is creditor-unfriendly; 2). Government's political interests and intervention, aggravated by weak legal enforcement mechanisms result in the formal procedures rarely being used in practice; 3). There is a lack of timely restructuring mechanism (such as Chapter 11 for the US).

Secondly, I examine the characteristics and sources of corporate distress. Prior to privatisation, many SOEs in emerging markets were highly leveraged. However, the high level of leverage of these former SOEs was significantly reduced following privatisation, especially in those privatised through share issue privatisation (SIP). In the new competitive post-privatisation environments, inefficient or non-viable firms fail. Important questions arise that need addressing. The first question is what are the characteristics of distressed firms in China? Do they exhibit distress across a wide range of financial indicators? Do they exhibit the same weak performance in the year prior to distress and following the onset of distress? The second question is that, is it weak financial structure or poor operating performance that is the main contributor to distress? Prior evidence in the inefficiency of Chinese firms and of significant continued state ownership interest in firms, even post-privatisation, pointing to the likelihood that operating factor will predominate. However, the large amounts of NPLs suggest that firms may be allowed to continue with excessive debt in their funding structures without being pressured to restructure their finances on a timely basis.

I find that despite my distressed sample firms' high leverage compared with their industry medians, the main source of distress during the first year of distress is economic, not financial. In addition, due to the lack of timely restructuring mechanism and inefficient financial renegotiation processes, the presence of financial distress leads to aggravated economic distress.

Furthermore, given the importance of government ownership in corporate China, I use my sample firms to empirically detect the existence of "soft budget constraint". By separating the 100 distressed firms into SOE and non-SOE subgroups, I compare their investment behaviour as proxied by capital expenditure scaled by assets, prior to and during distress. I find that the non-SOE subgroup experiences a significantly greater reduction in capital

expenditure and assets, both statistically and economically. One explanation is that non-SOEs face hard budget constraints and have no other alternatives than cutting investment and firm size, whereas their SOE counterparts face soft budget constraints, with the result that the reduction of investment and firm size is less severe. Nonetheless, the fact that SOEs significantly reduce investment over and above their industry median level, and that their performance overall is significantly worse than their industry, suggests that despite the presence of soft budget constraints, the SOE firms selected by my distress selection procedure are indeed distressed, albeit with different investment behaviour compared with their non-SOE counterparts when facing distress. The existence of soft budget constraint does not seem to save the distressed SOEs from being distressed, as these SOEs demonstrate deteriorating financial and operating performance relative to their industry, similar to the full sample of distressed firms. The deliberate channeling of funds to inefficient uses results in the distortion of capital allocation. One caution on using reduction in capital expenditure to proxy for firms' lack of liquidity due to distress, is that firms could also be in distress due to lack of investment on capital expenditure prior to the onset of distress. The endogeneity of this proxy is a limitation of this thesis.

Finally, I use event study methodology to investigate the valuation effect of restructuring announcements by my distressed sample firms, and quantify the impact of government ownership in the distress resolution process. The main restructuring types covered include mergers and acquisitions, asset sales, debt and managerial restructuring. Firstly I focus on my full sample and compare evidence from China to what is documented in the existing literature. Takeover and asset sales are frequently employed by my sample firms. As a result of difficulties in officially liquidating economically unviable firms in the Chinese context due to the lack of effective bankruptcy laws, the frequent use of asset restructuring (asset sales and takeover) is perhaps a market self-correction mechanism, for asset mobility which is essential for the effective operation of an enterprise economy. On the other hand, the lack of creditor participation in distress resolution is confirmed by the overall lowest percentage (17%) of debt restructuring related announcements among the three main categories in my whole sample of 303 restructuring announcements.

Consistent with the literature that target firms receive positive premium, my overall M&A with payment announcements generate positive market reaction. On the other hand,

different to the current literature based on developed economies such as US and UK, the lack of a positive value driver for asset sales announcements suggests that shareholders may not necessarily face bankruptcy costs due to the lack of bankruptcy threat. Overall the effect of debt restructuring announcements is not clear cut. Different to the documented disciplinary role of debt in a developed economy, Tian (2004) argues that debt governance is not at work in China. The full sample result on this category is not significant. This issue is further examined in the SOE and non-SOEs subgroups study summarised below.

Managerial restructuring is not seen by the market as an effective restructuring strategy. Our explanation is that there is a lack of effective management pool in the domestic market due to the documented lack of managerial incentives to perform and of credible punishment for poor performance in the current emerging market literature. This explanation is supported by the positive market reactions to announcements made by foreign invested enterprises (FIE) which are arguably less restricted to the domestic managerial pool. Alternative explanation for the positive market reaction to managerial disciplinary events by FIEs is that FIE firms monitor their management more effectively.

Next, given the significant role of government in corporate China, I separate my full sample by ownership structure to provide further insight on the role of state ownership. In the M&A category, M&A with payment strategy is effective only for the non-SOE firms, where these firms are subject to a market driven mechanism and competitive environment. M&A with payment strategy for non-SOE target firms signifies to the market that the distressed firm is of value to the new owner and that the new owner may be able to manage the firm as a viable going concern effectively - in this circumstance, changing ownership stands a good opportunity for the distressed firm to be restructured successfully. The M&A with payment announcements made by the SOE firms do not create shareholder wealth. The M&A without payment announcements are seen as value destroying. The government's attempts to revamp firm performance by transferring ownership, either with or without payment, are not perceived as effective by the market, providing evidence to support the argument that the government's primary motivation rests in providing employment rather than in profit maximisation.

The effectiveness of debt restructuring is mixed. The market reacts positively to non-SOE firms' announcements of increasing leverage, but the same type of news made by SOE firms do not cause significant price reaction. The lack of success in this strategy by SOEs is because debt governance is not at work among SOEs. In addition, the market reacts significantly negatively to non-SOEs' attempt to renegotiate their debt contracts with their banks, but not significantly (economically but not statistically significant) to the same announcements made by SOEs. These results provide weak evidence to suggest that there may be lending bias by the Chinese banks towards SOEs. The evidence so far suggests that the role of government in corporate China is not desirable yet resources are still allocated with a bias towards SOEs. This finding raises the question of what needs to be done to ensure the efficient allocation of financial resources (bank loans).

The policy implication of my finding are, firstly, government intervention on both lending and interest rates should be reduced and eventually eliminated, to encourage efficient and effective allocation of bank loans, restore bankruptcy threat and promote market competition. Secondly, new bankruptcy code is needed to 1. Provide protection for creditor interests under contract; 2. Provide and encourage financing under distress in order to provide breathing space for viable firms facing temporary financial difficulty. Thirdly, soft budget constraint distorts competition and capital allocation and should be stopped.

My findings also provide implications for firm managers especially SOE managers. Investment decisions in adverse conditions need to be proactively managed for the viability of the firms, as soft budget constraints cannot save firms from being distressed, in addition to distorting management incentives. As for investors, the Chinese accounting data seem to provide credible information about the viability of the firms and hence is useful in aiding investment decisions. Furthermore, the Chinese stock markets seem to conform to the semi-strong form efficiency hence share prices carry valuable information for investment decisions.

In summary, my empirical results show that the government's continued ownership post-privatisation results in inefficient assets reallocations, and in distortion of fund allocations and management incentives. This strong political bias should be avoided in designing an effective bankruptcy regime for the Chinese economy.

The contribution of this thesis is three-fold. Firstly, by studying China, I include the most important emerging market in the current corporate distress and restructuring literature. Secondly, using firm level data in the Chinese context, I provide insight on the nature and source of financial distress and on the valuation effect of restructuring announcements. Implications for policy makers, firm managers and investors are provided. Finally, China's partial privatisation provides a unique opportunity to study the "soft budget constraint" syndrome and the current debate on the role of government in corporate China. The main limitation of the empirical work in this thesis comes from restricting samples to publicly listed companies, due to data availability. Consequently the findings should not be generalised beyond this type of company. Nevertheless, this limitation should provide an avenue for future research when data become more readily available.

1.2 ORGANISATION OF THE THESIS

The structure of the thesis is as follows. Firstly, chapter 2 provides an overview of the economic and political context within which Chinese corporations function. In particular, I review the legal and financial systems, the structure and workings of the corporate sector and its financing; and the nature of Chinese firms by analysing two distressed companies' accounting performance. These factors assist in the understanding of corporate distress and restructuring in the Chinese context.

In Chapter 3, I describe the Chinese bankruptcy code and compare the code with those of the US, the UK, and five other Asian countries. My motivation to choose the US and UK for this comparison is to shed light on the existing debate on the cost and benefit of debtor- versus creditor-friendly systems using experience from China. Important hypotheses are generated for my empirical chapters to follow. Chapter 4 provides an overview of important prior studies on corporate distress and restructuring in the literature. Specific literature relevant for the two empirical chapters (5 and 6) will be reviewed in that chapter itself. In chapter 4, I define distress and categorise restructuring strategies documented in prior research into financial and non-financial restructuring. I also review the restructuring announcements by two distressed companies to illustrate the types of restructuring mechanism in the Chinese context. Empirical studies on the use and effectiveness of these restructuring methods are then reviewed.

Chapters 5 and 6 are the main empirical research chapters of this thesis. Chapter 5 studies the characteristics of corporate distress in the Chinese context. Firstly, using the distress definition described in chapter 4, 100 firms are identified as being distressed. Using accounting data, the financial and operating performance of these 100 firms are compared with their respective industry medians in order to reveal the characteristics and sources of their distress. Two distinct themes are used in this chapter and the next chapter. Firstly I examine my full sample and compare the results to the existing literature. I then separate my sample into SOE and non-SOE subgroups to shed light on the role of the government. Chapter 6 applies the established event study methodology to study 303 hand-collected restructuring announcements made by these 100 distressed firms, focusing on asset restructuring, debt-related and managerial restructuring. The unique hand-collected data set also allows for the investigation of the role of government in the distress resolution process in China. Finally, chapter 7 concludes.

CHAPTER 2 - THE INSTITUTIONAL FEATURES OF CHINA

China is an important emerging market and is in the process of transition from a command economy to a market oriented economy. The underpinning legal and regulatory framework is of primary importance for the political stability and economic growth. This chapter is not intended to provide comprehensive economic statistics on China, rather, it is intended to outline the economic and political background in which this research takes place. These factors are important for a proper understanding of corporate distress and bankruptcy in China. It then goes on to examine in more detail the structure of the corporate and financial sectors in China.

2.1 ECONOMIC CONTEXT

As Table 2.1 shows, China enjoyed rapid growth between 1999 and 2002. This growth is predominantly domestically driven as a result of high savings rates and gains in factor productivity. China's GDP stood at US$1.2 trillion in 2002 - this represents 81% of GDP in the UK, and 12% in the USA. With a population of 1.3bn, this translates into US$950 GDP per capita, representing nearly 3% of that of the USA. China's continued integration into the world economy can be seen from its trade balance of US$33bn in 2002, while during the review period its import and export grew at an average annual rate of 17.8% and 13.8%, respectively. Table 2.1 also demonstrates that China has become an attractive destination for foreign direct investment (FDI).

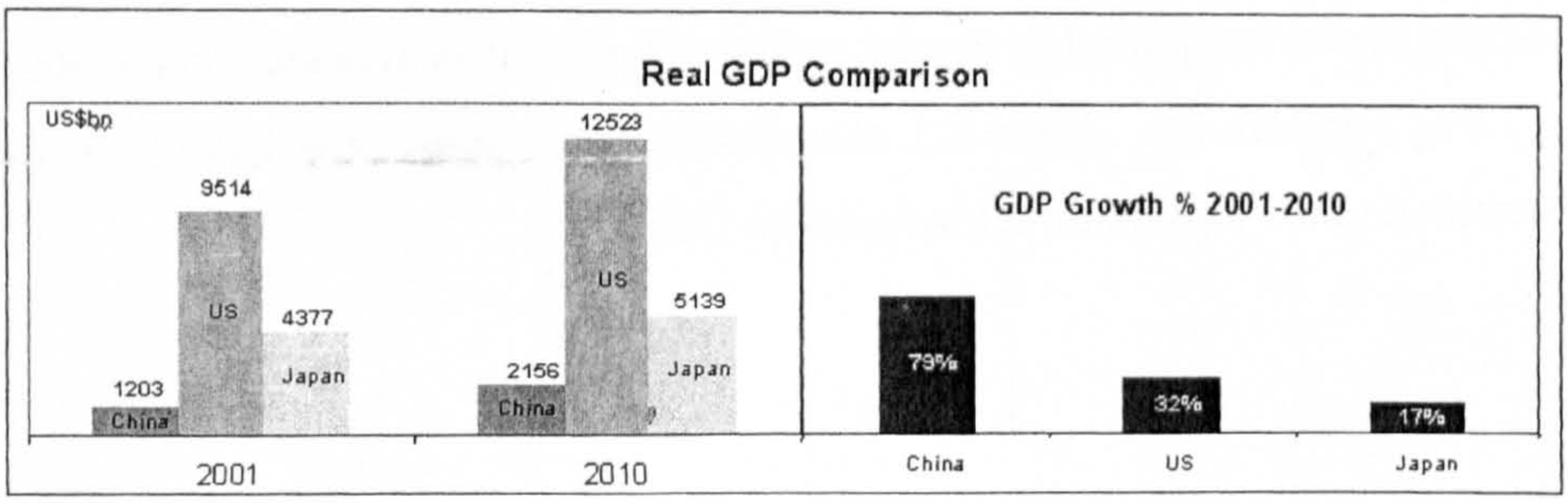
Table 2.1 China economic data

Domestic Data				
	1999	**2000**	**2001**	**2002**
GDP Growth %	7.1	8	7.3	8
GDP $bn	991.22	1079.84	1158.7	1240.62
GDP % of UK	67.87	74.94	81.44	80.66
GDP % of US	10.69	10.99	11.49	11.9
GDP Per Capita $	787	853	911	950
GDP Per Capita % of UK	3.21	3.54	3.84	3.72
GDP Per Capita % of US	2.32	2.44	2.58	2.62
External Data				
	1999	**2000**	**2001**	**2002**
Exports $m	194,716	249,131	266,075	293,563
Export Growth %, y-on-y	6.1	27.95	6.8	10.33
Imports $m	-158,734	-214,657	-232,058	-260,121
Import Growth %, y-on-y	15.94	35.23	8.11	12.09
Trade Balance $m	35,982	34,474	34,017	33,442
Foreign Direct Investment $m	38,753	38,399	44,241	48,600
Foreign Direct Investment % GDP	3.91	3.56	3.82	3.92

Source: World Markets Research Centre 2003

From a medium sized economy in terms of GDP, China is expected to be the world's fastest growing economy, with a GDP growth rate of 79% between 2001 and 2010 (McKinsey&Co 2003), versus 32% and 17% for USA and Japan, respectively, as Figure 2.1 shows.

Figure 2.1 Real GDP growth comparison



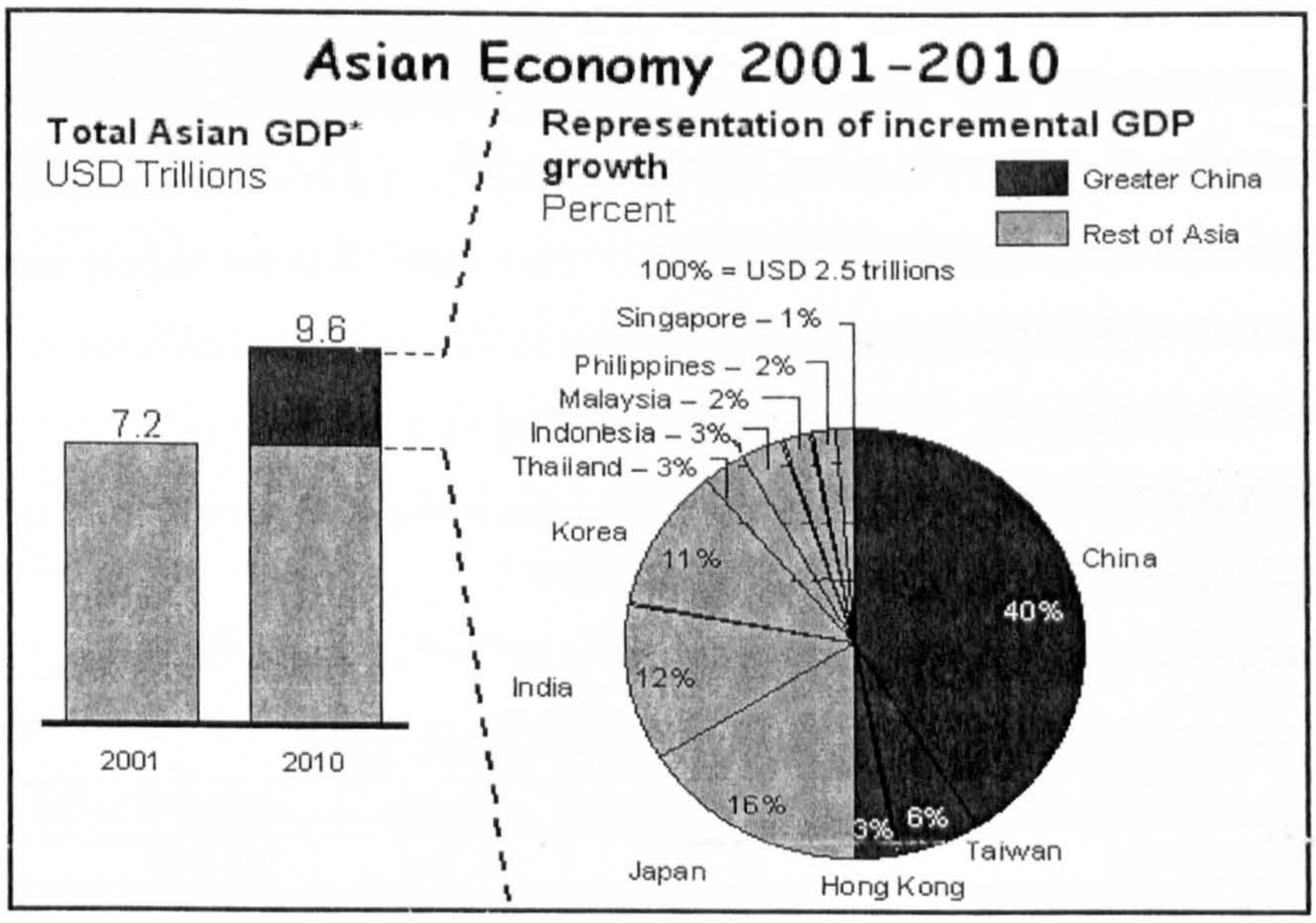
*2001 current price
Source: McKinsey&Co 2003

s being closely controlled. China, after nearly half a century of command-based economic principles, is moving through a gradual transition to incorporate elements of a market economy. The government is managing the growth in China, who expects to be the world's 4th largest economy by 2010, through a gradual development.

This tight control can be seen in 1991, when the Eighth Five-Year Plan determined that the sustainable annual growth rate to be limited to around 6%. At the time, it was believed that

greater growth rates would expose the shortcomings of infrastructure development and of the basic industries (e.g. agriculture, energy), and result in inflationary pressures and social tensions. However by 1992, double-digit growth came to be seen as sustainable. So China's leader then Xiaoping Deng abandoned this strategy of limiting growth in that year. When overheating became problematic in 1993-95, the goal was revised to lower growth rates. After the 1997 Asian financial crisis and the rapid, although patchy, implementation of continuing industrial reforms[2], the cooling external and domestic demand initiated a large fiscal pump-priming program. A looser monetary policy and a wide range of measures to boost consumption accompanied this.

Figure 2.2 Incremental GDP growth, Asia 2001- 2010



Source: McKinsey&Co 2003

As a result of these initiatives, with growth rates among the highest in the world, China has been the most important emerging market during the past two decades in terms of sheer size and potential. It has surpassed the economic size of Japan to be ranked number two in the world in terms of GNP on a PPP (purchasing power parity) basis (Allen et al. 2005). In 2002, China's GDP stands at less than one third the size of Japan (US$4 trillion) – with a population ten times the size of Japan. However China is estimated to be the region's core

[2] See Appendix 1 for a brief chronology of recent reforms (1995-2001).

engine for economic growth in the next decade by contributing 40% of Asia's incremental growth between 2001 and 2010, as predicted by McKinsey (see Figure 2.2).

China's history of robust economic growth and its accession to the World Trade Organisation (WTO) at the end of 2001, made the country attractive to foreign investors. Figures released by the government show that the Chinese economy received US$48bn in FDI in 2002, more than any other country in the world - including the USA. This accounts for 40% of the FDI in Asia.

The expansion of this economy is interlinked with the gains in labour productivity as China moves from an agricultural based economy towards a service oriented economy. Table 2.2 shows the composition of GDP over the period 1981 - 2002. In 2002 Agriculture accounted for only 14% of GDP, having decreased from 32% in 1981; Industry output increased gradually over the review period, to account for nearly half of the GDP; and Services accounted for 42% of GDP. This means that the supply side increase in output (involving the introduction of services in to the economy) has been a critical element in the economic growth. The increase in services output shown in Table 2.2 demonstrates that between 1981 and 1991, there was an increased demand for personal services as controls on the economy started to be loosened.

Table 2.2 Sector analysis of China GDP 1981 – 2002

(% of GDP)	1981	1991	2000*	2001*	2002*
Agriculture	31.8%	24.5%	14.8%	14.1%	13.5%
Industry	46.4%	42.1%	45.9%	45.2%	44.8%
Services	21.8%	33.4%	39.3%	40.7%	41.7%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

*Adjustments were made by the National Bureau of Statistics China in 2004
Source: World Bank 2004

In short, China is a large emerging economy with strong potential for growth, driven domestically, and is increasingly attractive for FDI. Nevertheless the government has keen interest and critical role in the process of this transition from a planned economy to a market-orientated economy. As a result there is still high political intervention in most commercial decisions in China. This occurs in a variety of guises, whether through regulation, or explicitly through governance or implicitly as a result of cultural influences.

These factors will be of importance in this study of corporate restructuring and bankruptcy and they are set out in the next section.

2.2 POLITICAL BACKGROUND

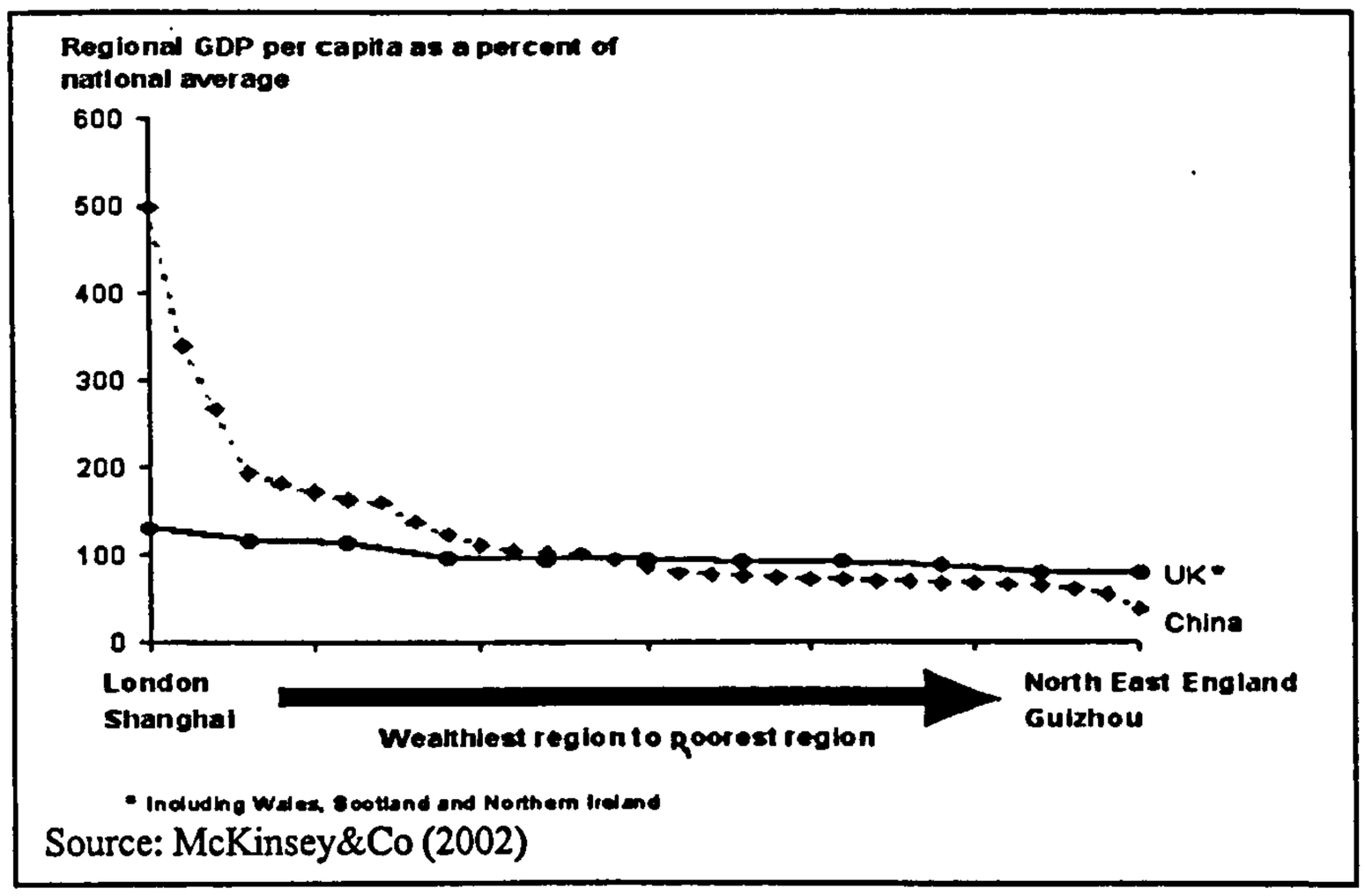
China's control culture is being carefully and gradually transformed. However, behind a desire based on a cultural legacy to retain state control (or at least a strong political influence), there is the very real issue for the government to maintain stability during any period of volatility and change. The uneventful succession of Hu Jintao as the new Party General Secretary in November 2002 has confirmed the general perception that China's leadership continues to be reform-minded and pragmatic.

China is facing the challenges of transitioning from a large planned economy to a market economy. Underpinning the social contract that currently exists in China, which was promoted and celebrated during the years of the planned economy, is the belief that the state would look after the individuals. The current Chinese population is looking for the current government system to deliver on this contract – be this through providing employment, the conditions for employment or by looking after those who are unable to work. Although in 2001 China's unemployment rate stands at only 3.6% (20th highest in the world - China Statistical Yearbook 2002), the result of this rate increasing would be widespread and severe. China has to delicately balance the often-antagonistic tensions of economic reform and social stability. These pressures manifest themselves in a variety of issues that were receiving close government attention over the period of this study. The four issues detailed below are particularly pertinent to the background of this study:

- The social welfare schemes are underdeveloped. In addition China has a large, ageing (exacerbated by the one child policy) and extensively unproductive workforce. The pension scheme is on the verge of collapse and there is an imminent need to fill the pension gap – by selling state owned shares. The issue is how to implement this policy while preventing a securities market collapse. These markets currently have among the highest P/E ratios in the world (please refer to Table 2.6 below).
- The increasing tension of the wealth gap. Figure 2.3 demonstrates that, in comparison to the UK, there is a large inequity between the GDP per capita across

the different regions in China. The coastal cities, which to date have driven the growth, continue to be enriched and are currently the most fertile area for return on investment. This is set against the growing gap in income between these cities and the western inner parts of China. There is a danger of igniting social unrest if this gap is increased or even maintained.

Figure 2.3 Income gap comparison



Source: McKinsey&Co (2002)

- Non Performing Loans (NPL) is independently estimated to be at 44-55%[3] of total loans (McKinsey 2002). These loans have been made to under-performing State Owned Enterprises (SOE) on a political rather than commercial basis. Most banks in China are therefore technically insolvent and this issue must be resolved to avoid a financial crisis in the long-term. However, to retain the credibility and legitimacy of the current system of government and avoid social unrest, the solution must be delivered whilst preserving the social contract.

- Allied to this is the pressing need for SOE reform. Due to current state dogma and organisational behavioural issues of local banks, loss-making SOEs receive priority capital funding. This capital could be used more efficiently if it were allocated to the growth of the less labour intensive private enterprise. Any far reaching SOE

[3] Against the official release of 25%

reform would lead to pressure on the banking system and increased unemployment with all the risks that entails.

Whilst all of these challenges that face China are of crucial importance to the continued economic progress in the next decade and beyond, the final two are of particular influence in terms of this study and the requirement for a robust insolvency code.

2.3 CORPORATE SECTOR AND SOE REFORM

This section will consider the types of companies found in China. It will then provide a more detailed examination of the public limited companies and the key issues of SOE reform.

2.3.1. Ownership classification

China's privatisation process in the past two decades has dramatically transformed the structure of its corporate ownership. In the early 1980s China's industrial sector consisted almost exclusively of state-owned and state-controlled enterprises (SOE) and collective-owned enterprises (COEs). By 1994, these enterprises were out-numbered by the mushrooming of newly created enterprises, including foreign invested companies, shareholding enterprises, and private companies.

Unlike the "Big Bang" approach to privatisation adopted by many emerging markets in Eastern Europe and Asia, the Chinese government retains a keen interest and critical role in the SOE privatisation and reform process. Although Chinese publicly listed companies (PLC) are organised and operated under the model of modern western firms, their shareholding structures are different from those of western firms in order to allow for continued state control of these listed firms. In other words, one of the main characteristics of Chinese listed companies is that the State remains in control of many former SOEs, despite their being listed on a stock exchange.

The ownership structure of China's enterprises can be categorised into five main types: "SOEs"[4], "Collectives", "Shareholding enterprises", "Private enterprises" and "Foreign enterprises" (also called "Foreign Invested Enterprises", or FIE hereafter) and the characteristics of these five types are detailed in Table 2.3.

Table 2.3 Definition of enterprises of different classes of ownership, China

Class of Ownership	Controls and Influences
SOE	Including TSOEs, state-owned or controlled enterprises, in the form of companies limited by shares (CLS) – some of which are publicly listed, or state-owned limited liability company (LLC) (more explanations on CLS and LLC are given in "shareholding enterprises") State government is the *de facto* owner. These enterprises are theoretically profit making – but are often managed on a political rather than commercial basis.
Collective	Community in the local vicinity joins local government in ownership (agent for the State government).
Shareholding enterprises	Including two main types: 1) Companies limited by shares (CLS), the approximate equivalent of the large stock corporation in Western countries. This sub-category includes public listed companies (PLC). 2) Limited liability companies (LLC), intended for a much smaller and more closely-knit group of investors (youxian zeren gongsi) Capital raised through issuing shares (some shares non-tradable). Each investor bears limited liability for debt.
Private	Refer to economic units invested or controlled (by holding the majority of the shares) by natural persons. Included in this category are private LLC, private share-holding corporations Ltd., private partnership enterprises and private sole investment enterprises.
FIE	Enterprises supported by foreign investment, including foreign Joint Ventures.

Source: Tian (2002)

The ownership structure changed dramatically over the past two decades. In the early 80's China's industrial sector consisted almost exclusively of state-owned and state controlled enterprises and collective-owned enterprises (COEs), by 1994, as shown in Table 2.4, there were sharp increase in the total number of newly created enterprises, including 29,000

[4] Clarke (2003), Jiang (2000) and Wang (1999) distinguish traditional SOEs (TSOE) – state-owned enterprises that existed under the planned economy – from enterprises organised under the Company Law that happen to be wholly state-owned or controlled by the state – including those converted from the TSOEs. In this thesis I refer to them all as SOEs.

foreign invested companies, over 4,300 shareholding enterprises, and nearly 4,000 private companies.

In 1998 China's National Bureau of Statistics (NBS) revised its statistical system to exclude firms reporting less than five million RMB in sales per year[5]. Table 2.4 shows that in 2001 the reported 46,767 SOEs represented a sharp decline from the number reported in 1998. Most of the reduction in SOEs was due to their conversion to shareholding enterprises. COEs underwent a similar conversion process. By 2001 the number of shareholding enterprises had more than doubled the number in 1998. This conversion of SOEs and COEs to shareholding enterprises was the principal mode of SOE restructuring and privatisation in China (Clarke 2003, Jefferson et al., 2003a, b). It generally entails the corporatisation of the firm, and frequently involves the infusion of new assets from outside the state system (in the case of listed SOEs, also through initial public offering (IPO)).

[5] With the exception of sole State-funded enterprises which are included regardless of annual sales figure.

Table 2.4 Ownership distribution of industrial enterprises 1980-2001

	Old statistical system*								New statistical system**					
	1980	**%**	**1985**	**%**	**1994**	**%**	**1997**	**%**	**1998**	**%**	**2000**	**%**	**2001**	**%**
Domestic funded														
SOE	62,437	19%	69,834	19%	85,334	18%	84,397	18%	64,737	40%	53,489	33%	46,767	27%
COE	263,378	81%	300,687	81%	342,908	74%	319,438	69%	47,745	30%	38,577	24%	31,657	18%
Shareholding	-	-	-		4,359	1%	3,898	1%	11,411	7%	19,864	12%	24,870	15%
Private	-	-	-		3,898	1%	13,188	3%	10,667	7%	22,128	14%	36,218	21%
Other domestic	-	-	1,522	0%	627	0%	1,356	0%	224	0%	382	0%	321	0%
Foreign funded	-	-	-		29,101	6%	42,881	9%	26,442	16%	28,445	17%	31,423	18%
Total in the system	325,815	100%	372,043	100%	466,227	100%	465,158	100%	161,226	100%	162,885	100%	171,256	100%
Total GVIO*** (RMB[6] bn)	471		839		5,135		6,835		6,774		8,567		9,545	
Individual enterprises	-		-		8,007,400		5,974,700		-		-		-	
National Total	377,066		463,210		10,017,100		7,922,900		7,974,600		-		-	
Total GVIO*** (RMB bn)	490		972		7,018		11,373		11,905		-		-	

* Includes all industrial enterprises that operate as independent accounting units at or above the township level.
** Includes all industrial enterprises that report annual sales in excess of 5 million RMB with the exception of sole state-funded enterprises.
*** Gross value of industrial output sold or available for sale at current price.
Source: Jefferson et al. (2003a), China Statistical Yearbook 2002

[6] US$ 1 equals approximately RMB 8.3.

Table 2.5 presents shares of the different types of Chinese enterprises in the economy. The legitimacy of the government in providing employment rests on the 48% employment provided by SOEs and COEs. Collectively they control 68% of total assets in 2001, and produce 55% of total industrial outputs (in value terms). The inefficiency of SOEs in aggregation can be shown by comparing the SOE with the foreign funded enterprises: employing 3% workforce and 20% of total assets, foreign funded enterprises produce 29% of total outputs.

Table 2.5 Shares of different ownership (%)

	No of enterprises		Output (value)		Employment		Assets	
Class of ownership	2000	2001	2000	2001	2000	2001	2000	2001
Domestic funded								
State- owned and controlled	33%	27%	47%	44%	44%	43%	n/a	62%
Collective-owned	24%	18%	14%	11%	7%	5%	n/a	6%
Shareholding	12%	15%	5%	12%	6%	6%	n/a	13%
Private	14%	21%	6%	4%	5%	6%	n/a	n/a
Other domestic	0%	0%	0%	0%	35%	36%	n/a	n/a
Foreign funded	17%	18%	27%	29%	3%	3%	n/a	20%
	100%	100%	100%	100%	100%	100%	n/a	100%

Source: China Statistical Yearbook 2002

Economists argue that in competitive markets without significant externalities, government ownership is inferior to private ownership (Alchian 1977, Sappington and Stiglitz 1987, Shapiro and Willig 1990, Boycko et al. 1996, Hart et al. 1997), due to government's lack of transferable residual claims, its political and social objectives over profit maximisation, and the associated greater information asymmetries and higher transaction costs. Vining and Boardman (1992), and Megginson et al. (1994), among others, provide empirical support for such proposition. In contrast, Wortzel and Wortzel (1989) and Martin and Parker (1995) suggest that government ownership is not necessarily less efficient than private ownership.

There is inconclusive empirical evidence on the role of government in corporate China. Wei et al. (2003) compare the financial and operating performance of Chinese firms prior to and post privatisation. They find significant post-privatisation improvement in real output, real assets, and sales efficiency, but not in profitability. However, when they separate their sample into SOE and non-SOE controlled, they document significant improvement in profitability in firms with over 50% voting rights controlled by non-State

investors. They conclude that privatisation works. Qi et al. (2000) find post-issue return on equity positively related to institutional ownership but negatively related to state ownership. Wei et al. (2002) also record a negative relationship between Tobin's q and state equity ownership. Different to these findings, Sun et al. (2002) find partial government ownership has a positive impact on SOE performance. Tian (2005) finds that corporate value decreases with an increased size of government shareholding when the government is a small shareholder. However, when the government equity holding is sufficiently large, corporate value increases with increased government shareholding. The contradictory findings probably reflect the complexity of the issue.

Although state ownership in the economy is declining (Jefferson et al. 2003a, b, Sun et al. 2002, Tian 2004), the government still remains the most dominant force in the economy. Clarke (2003) notes that despite talk of the state withdrawing from the economy, it is committed to retaining control over enterprises in some sectors such as national security-related industries and pillar industries. This is a critical issue, as unlike studies in many developed countries, research into a topic such as corporate insolvency in China needs to carefully take into account powerful political influences.

2.3.2 Public listed companies (PLC) and their capital structure

The companies listed on the stock markets represent a new enterprise system in China. Their ownership structure includes SOEs, COEs, FIEs, and private (i.e. controlled by the private sector by holding legal person shares – see Table 2.9). It is these listed companies which form the subject of this thesis. This section describes the Chinese stock market and documents the shareholding structure and some other corporate finance factors of the PLCs. The role of the Chinese stock market in corporate financing is analysed in the following section.

A. The Chinese Stock Market

China's share issue privatisation (SIP) of SOEs was a catalyst for the development of its two stock exchanges - Shanghai Securities Exchange (SHSE) and Shenzhen Stock Exchange (SZSE) in 1990 and 1991 respectively. At the outset the stock exchanges were used primarily to supply capital to SOEs that remained in the control of the state. By 2003, the total market capitalisation of the two stock exchanges was 43.5% of GDP and the total

market capitalisation was ranked as the 12th largest in the world. Despite its rapid growth, in 2000 total capital raised in stock markets accounted for the equivalent of only 15.8 % of new bank lending over the whole economy in the same year, and total market capitalisation of stocks was 48.4% of the total loans outstanding in China (McKinsey 2003).

The governing body of the listed companies is the China Securities Regulatory Commission (CSRC). The IPO selection process is fiercely competitive, lengthy and bureaucratic (Aharony et al. 2000, Chen and Yuan 2004, Jiang et al. 2005). According to Jiang et al. (2005), only 0.3% IPO applications are successful. In addition, CSRC has imposed a series of guidelines restricting rights issues after November 1993[7]. All listed companies are required to disclose information on one of the two official websites for information disclosure: www.cnlist.com.cn and www.cninfo.com.cn. Appendix 3 presents the CSRC official "format of announcement requirement" on listed companies translated by the author. This is the source for restructuring announcements for the studies reported in chapters 6. Further details of the announcement requirements will be discussed in section 4.2.1.

Table 2.6 shows the Chinese stock markets' rapid growth. Between 1992 and 2002, the market capitalisation increased at the average rate of 60% per year. The number of listed companies grew 48% annually, from 51 PLCs in 1992 to 1224 PLCs in 2002. We can also see that the P/E ratios of these stocks are amongst highest in the world.

[7] For further details see Chen and Yuan (2004).

Table 2.6 Chinese stock market

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total listed companies	51	180	290	322	529	744	851	949	1088	1160	1224
Total cap as % of GDP	3.9	10.2	7.9	5.9	14.5	23.4	24.5	30.7	51.2	43.2	43.5
Tradable cap % of total cap	31.9	28.8	32.9	41.3	35.2	34.6	34	35.2	36.6	36.6	32.6
Trading Velocity % (turnover/tradable cap)	204	361	669	281	616	507	355	336	346	240	224
Trading turnover (volume, billion)	68	367	813	404	2,133	3,072	2,354	3,132	6,083	3,831	2,799
P/E Ratio SHSE	-	42.5	23.5	15.7	31.3	39.9	34.4	38.1	59.1	46.3	34.5
SZSE	-	42.7	10.3	19.5	35.4	41.2	32.3	37.6	58.8	40.8	38.2

Source: China Securities Regulatory Commission (CSRC) website, Bloomberg.

B. Corporate features of the PLCs

According to Tian (2004), as shown in Panel A in Table 2.7, bank loan is an very important form of debt financing in PLCs, as the corporate bond market did not exist. The bank loans are mainly from state-owned banks. Panel B of Table 2.7 shows that the Chinese PLC's total liability to total assets ratio is lower than the US, UK and Japan, but higher than South Korea. Furthermore, its bank loan to total capital ratio is slightly lower than that of the UK. In addition, according to Tian (2002), these PLCs' average total assets were US$175mn, of which 53% being current assets and 36% being fixed assets. Huang and Song (2002) find that correlations between firm characteristics (such as profitability, asset tangibility, growth opportunity and size) and leverage is similar to other countries and this suggests that that these firms are also profit maximisers and basic economic forces are at work in China.

Table 2.7 Financial leverage

Panel A: Leverage Ratios of China's PLCs from 1994 to 2003

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Total
Liability to Total Assets											
Mean	0.450	0.477	0.440	0.415	0.420	0.437	0.447	0.493	0.506	0.538	0.470
Median	0.441	0.458	0.452	0.413	0.413	0.416	0.419	0.434	0.451	0.484	0.438
Bank Loans to Total Assets											
Mean	0.217	0.235	0.235	0.219	0.222	0.240	0.240	0.265	0.262	0.276	0.247
Median	0.210	0.226	0.229	0.210	0.216	0.225	0.216	0.238	0.238	0.255	0.229
Bank Loans to Capital											
Mean	0.286	0.314	0.304	0.283	0.290	0.321	0.312	0.316	0.337	0.347	0.316
Median	0.293	0.304	0.298	0.273	0.279	0.288	0.277	0.304	0.315	0.338	0.299
Observations	287	308	519	717	822	919	1054	1130	1193	1252	8201

Panel B: International Comparison

	No. of Firms	Time Period	Nonequity Liabilities to Total Assets	Bank debt to Total Assets	Bank Debt to Capital
China	287-1252	1994-2003	0.47	0.25	0.32
United States	2580	1991	0.58	0.27	0.37
United Kingdom	608	1991	0.56	0.24	0.34
Germany	191	1991	0.76	0.16	0.39
Japan	514	1991	0.75	0.42	0.63
South Korea	49	1985-1991	0.30		
India	99	1980-1990	0.67		

Source: Tian (2005) - the data on US, UK, Japan and Germany are from Rajan and Zingales (1995); data on South Korea and India are from Booth et al. (2001).

The corporate governance structure of these companies is the two-tier board structure. They have a so-called supervisory board, which is in charge of monitoring any illegal behaviour of the managers and directors of the company. It has no authority to interfere with corporate management and strategy. The board of directors is elected at the shareholders' annual general meeting. The position of general manager is the equivalent of the CEO in the USA and so is responsible for the daily operations of the company. As stated by Schipani and Liu (2002), in China today, the most important legal sources of corporate governance rules include the Corporate Law of 1993 and the Securities Law of 1998. In additional to legal sources, the memorandum of association of each corporation plays an active role in designing each corporation's corporate governance structure. The Chinese memorandum of association is comparable to a document that would combine both the articles of incorporation and bylaws of an American corporation.

C. Shareholding structure

As shown in the above section, the Chinese PLCs are organised and operated under the model of modern western firms. However their shareholding structures are different from those of western firms.

Share ownership is officially classified as state, legal-person, employee, and tradable A shares plus shares denominated in a foreign currency (Table 2.8). All the common shares bear the same rights for voting and cash flow.

Table 2.8 Official share classes

Classes		Description
Non-tradable shares	State shares	Shares obtained by an institution, as a representative of the central government, on behalf of the State in exchange for the capital contribution made by the State. The institution can be the central government itself, local governments or wholly government-owned economic institutions. Although the shares are not tradable, they are transferable under the approval of China Securities Regulatory Commission (CSRC).
	Legal person shares	Shares owned by domestic institutions. A legal person in China is defined as a non-individual legal entity or institution. In official documents, domestic institutions include stock companies, non-bank financial institutions[8] and SOEs that have at least one non-state owner. Legal person shares can be transferred to other domestic institutions upon approval from the CSRC.
	Employee shares	Employee Shares are offered to workers and managers of a PLC, usually at a substantial discount. Employee shares are registered under the title of the labour union covering that company, which also represents shareholding employees trying to exercise their rights. After a holding period of 6 to 12 months, the company may file with CSRC to allow its employees to sell the shares in the open market, but the directors, supervisors and the general managers may not transfer such shares during their term of office.
Tradable shares	A shares	Listed in either Shanghai or Shenzhen Exchange. These shares were sold only to Chinese domestic investors until December 2002.
	Shares denominated in foreign currency	This group of shares includes B shares on domestic stock exchanges, H-shares on the Hong Kong Stock Exchange and N-shares on the New York Stock Exchange. B-shares were available exclusively to foreign investors until 2001 when they were also made available to domestic investors. The B-shares market is separated from the A-shares market, with SHSE B-shares denominated in US dollars and SZSE B-shares denominated in Hong Kong dollars. H-shares and N-shares carry the same rights and obligations as the A- and B-shares, but they cannot be traded on domestic stock exchanges, although can be held by anyone.

Source: Xu and Wang (1999), Tian (2002)

This official classification is adopted in most existing research on the impact of shareholding structures on corporate value of China's PLCs (for example, Xu and Wang (1999), Qi et al. (2000), Sun et al. (2002)). Tian (2002) argues that the official classification confuses tradability with ownership, i.e. it confuses institutional shareholders with legal-person shares. However I argue that the confusion actually stems from policy maker's motivation in retaining control in the PLCs. "State" share is defined only to be held by wholly state owned enterprises whereas "Legal Person" share is defined only to be held by non-individual institutions with less than 100% state ownership. When the policy

makers' attention was founded on differentiating "wholly state-owned" and "partial state-owned", institutional shareholders became a vague concept in the system. As Clarke (2003) states:

> *"The state wants to make SOEs operate more efficiently by subjecting them to a new and different set of rules — the rules of organisation under the "modern enterprise system". Policymakers then find, however, that they must change and adjust the rules to take account of continuing state ownership. Moreover, the need to provide for the special circumstances of state-sector enterprises ends up hijacking the entire Company Law, so that instead of state-sector enterprises being made more efficient by being forced to follow the rules for private-sector enterprises (the original ambition), potential private-sector enterprises are hamstrung by having to follow rules that make sense only in a heavily state-invested economy."*

Table 2.9 presents the composition of shareholding of Chinese PLCs between 1992 and 2001 by shareholding registration. From the table we can see that the state holds 45% shares in 1992. State direct holding declined slightly to 32% in 1999 and went back up to 46% in 2001. The statistics suggest that the government is the single largest shareholder of these Chinese listed companies. However, according to Green (2003), in addition to direct holding, the state retains ownership indirectly through Legal Person (LP) shares. He believe that in 2002, 78% of the PLCs – 729 firms were directly or indirectly controlled by state organs.

[8] Taking the Glass-Steagall Act of the US as a model, the Commercial Banking Law of China that came into effect in 1994 prohibits commercial banks from underwriting, holding or trading securities except for government bonds.

Table 2.9: Composition of stocks issued by companies on Shanghai and Shenzhen Stock Markets (%)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Nontradable shares	68.1	71.2	67.1	64.6	64.8	65.4	66	64.8	63.3	65.3
State shares	44.6	48.1	42.7	38.9	37.7	35.4	34.3	31.6	37.1	46.2
Legal persons' shares	22.1	21.3	23.1	24.5	24.9	26.7	28.2	29.6	24.9	18.3
Others	1.5	1.7	1.3	1.2	2.2	3.3	3.4	3.6	1.3	0.8
Tradable shares	31.9	28.8	32.9	41.3	35.2	34.6	34	35.2	36.6	36.6
A-shares	15.4	16.8	20.9	21.0	21.9	23	24.1	26.9	29	25.7
B-shares	16.5	6.4	6.1	6.7	6.4	6.4	5.4	4.3	4.2	3.1
H-shares	0.0	5.7	6.0	7.7	6.9	5.2	4.5	3.9	3.5	6.4
Grand total	100	100	100	100	100	100	100	100	100	100

Source: IDE Spot Survey 2003, China Statistical Year Book 2002

2.3.3 The accounting system

Listed companies in China are subject to two sets of accounting and disclosure regulations issued by the Ministry of Finance (MoF) and China Securities and Regulations Committee (CSRC). While A-share companies prepare Chinese Generally Accepted Accounting Standards-based (GAAP-based) financial statements audited by local CPA firms, B-share companies are required to publish financial statements that are based on both the Chinese GAAP and International Accounting Standards (IAS). Companies with B-shares must have their accounts audited by international accounting firms. Despite anecdotal stories of how Chinese accounting is inadequate, a number of recent studies (e.g., Chen et al. 2001, Chen and Wang 2004) find that accounting information is value-relevant to investors in the Chinese market. This is an important finding as a large part of the analyses in this thesis uses accounting data.

2.3.4 SOE reform

Many SOEs in China are loss making or non-viable, and a large number have long since been in default to their creditor banks. Recent official statistics (State Administration For Industry and Commerce www.saic.gov.cn) suggest that there is an equal split between those SOEs that are loss-makers, those that break even though plagued with implicit losses, and those that are marginally profitable. Accordingly credit allocation and asset reallocation are not as efficient as they could be. As business failures are a universal feature of competitive markets, effective insolvency and creditor rights systems are fundamental building blocks of sustainable development. The existence of such a framework facilitates access to credit and underpins contract enforcement. Therefore effective insolvency and creditor rights systems are important to both domestic and international investors and

creditors, and are crucial to reducing the risks of financial instability and handling financial crises when they occur.

As mentioned in Section 2.3.1, the conversion of SOEs and COEs to shareholding enterprises was the principal mode of SOE restructuring and privatisation in China. During the latter half of 1990s many SOEs entered a period of accelerated reform. In 1997, Premier Zhu Rongji put China's loss-making SOEs on a strict three-year schedule during which they were instructed to implement a "modern enterprise system" and convert losses to surpluses. Two quantitative changes are most visible during the latter 1990s: rapid declines in the number of SOEs and in the employment level of surviving SOEs. For many industrial SOEs, restructuring occurred via merger or acquisition, the conversion of ownership status, or in outright liquidation[9]. While the outright liquidation was largely limited to smaller scale enterprises, a substantial number of large and medium-size enterprises also exited the class of state industry.

As part of the government's initiative to reform SOEs, mergers took place extensively in six bankrupt industries including sundry light industry, textile, machinery and chemical (World Bank 2000) since mid 1990's. Since the start of 1996, the state has allotted a certain amount of the SOE banks' reserves for bad debts to be used in the merger and layoff of bankrupt companies. According to State Economic Trade Commission (SETC), in 1998, the reserves for bad debts totalled US$10bn and more than 6,400 bankrupt companies were saved via merger. In 1999, 3,098 bankrupt companies were saved via merger. The SETC also called for bankruptcy mergers to enter bankruptcy procedures more quickly. (People's Daily 1 August 2000).

As a result of this rapid reform, non-performing loans (NPLs) of the Chinese banks reached a record high. To resolve these NPLs, four Asset Management Companies (AMC) were set up in 1999 to restructure the pre-96 NPLs. The four AMCs took over US$200bn of NPLs and had resolved around 25% (in value terms) of these NPLs (McKinsey 2003) by 2003. In addition to using AMCs, the Chinese government has promoted mergers/acquisitions and debt-for-equity swaps[10] in an attempt to improve banks' NPLs.

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[9] According to the State-Owned Assets Supervision and Administration Commission (SASAC), between 1995 and 2002, 7,798 SOEs were liquidated.

[10] For example, the SETC issued a document in 2001 promoting debt-for-equity swaps.

This section introduced the institutional features of the Chinese corporate sector, including the ownership structure and its development between 1980 and 2002. The main feature is the reform and corporatisation of SOEs. The Chinese "modern enterprise system" – the PLCs on which the empirical work of this thesis will take place has also been described in detail, in terms of their shareholding, capital and governance structures. This section provides important background for the introduction of the banking sector in the next section. In addition, to put things into perspective, I also illustrate the nature of Chinese corporations by describing two PLCs in detail in section 2.5.

2.4 THE BANKING SECTOR AND COMPANY FINANCING SOURCES

2.4.1 The banking sector

To better understand this dynamic relationship between the financial sector and SOE reform, it is necessary to examine the background of these issues in terms of China's financial institutions and their stability, funding and limited disintermediation.

In addition to FDI, the banks are the key sources of external finance in corporate China. The financial landscape is dominated by "the big four" state owed banks[11]: Industrial and Commercial Bank of China, Bank of China, China Construction Bank and Agricultural Bank of China; and they are highly inefficient[12].

Banks are the primary channel for directing funds from savers to borrowers because of disintermediation. Also, since the retail-banking sector in China remains undeveloped (housing loans were only 3.4% of total lending in 2000 – according to McKinsey 2003), corporate lending (particularly to SOEs) is likely to continue to dominate bank lending. In this environment bank reform is inseparable from genuine reform of SOEs.

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[11] According to The Economist (5th January 2006), Bank of China (BoC) will be the third mainland bank to list on the Hong Kong exchange in the near future. So far, Bank of Communications was listed in Hong Kong in June 2005, and China Construction Bank was listed in Hong Kong in October 2005.

[12] The cost/income ratio of mainland Chinese banks is among the highest in the world, averaging close to 80%, versus 35-45% in Asia and 40-55% internationally (Bank of China International 2002).

There was significant government intervention in bank lending prior to 1994. Such government intervention could take place either ex ante or ex post of bank lending being made (Lu et al. 2001). Since 1994, the Chinese State banks have been granted increasing autonomy in their lending decision-making.

According to Lu et al. (2001), the banks' lending decisions are systematically biased in favour of SOEs. They also find that the investment sensitivity to cash flow of the moderate-risk firms is substantially higher than that of the other firms, while investment of the worst-risk firms is the least responsive to changes in cash flow. This pattern of investment-cash-flow sensitivities suggests that, although banks do ration credits to some extent, they tend to provide liquidity to keep the borrowers in financial distress afloat – the so called "soft budget constraint" syndrome.

Due to the ailing state of many SOEs, banks' aggregate NPLs amounted to 44-55% of GDP at year-end 2001, or US$480-600bn. Worse still, bad debt is dampening economic growth: capital is tied up in defaulted borrowers and insolvent companies continue to operate rather than face liquidation.

The Chinese Central Bank – People's Bank of China (PBOC) has a great influence in corporate financing. Firstly one tool in implementing the government's monetary policy is through the setting of interest rates. Regulation then limits the range within which the banks can lend around this central rate (Lu et al. 2001). The lending decisions to the SOEs are thus politically influenced although this force is diminishing. The banks have limited capability[13] to perform a credit risk analysis thus lending decisions are not based on risk. Neither, in the main, are the banks able to monitor the borrower and assess performance.

The high level of NPLs renders the financial system as technically insolvent, although a financial crisis is unlikely in the short-term. As we can see in Panel A of Table 2.10, banks' net interest income is RMB381bn, assuming 0% NPL levels. Panel B in Table 2.10 calculates the different net interest income level at different NPL levels. Because of

[13] Lending decisions were centrally controlled by the government historically until 2001 and as a result there is a lack of commercial approach in the banks' current lending decision making process which is further worsened by a lack of trained staff.

sufficient deposits[14], disintermediation is not yet a concern and banks' interest income/expenses would still be positive with a NPL level of 50%. Therefore the Chinese banks are very liquid with loans to deposit ratios below 80, plus massive new savings continue to enter the banking system due to lack of other investment options. Furthermore, importantly, there is in place an implicit guarantee of the banking system by the government – supported by the world's second highest foreign reserves.

However a liquidity crisis is not improbable in the long term as less than 1% of the urban population controls 50% of all deposits. One result of this is that it would take only a small segment of customers to migrate to create a liquidity problem for banks. Furthermore, if China's economy slows down, the underlying banking weakness would be exposed.

Foreign bank RMB lending is now available, but in this respect these banks are also heavily regulated with scope and geography restrictions.

[14] McKinsey (2003) estimates that the average savings rate in China between 1997 and 2005 is 40%, versus 14% in the US and 27% in Japan.

Table 2.10 The aggregate balance sheet of Chinese banks 2000

Panel A. The aggregate balance sheet of Chinese banks 2000			
(RMB bn)	Balance	Yield/cost of funds	Interest income/expenses
Loans			
Short-term loans	6,575	6.29%	413
Medium- to long-term loans	2,793	6.67	186
Trust loans	241	6.63	16
Other loans	328	6.63	22
Total	**9,937**	**6.41**	**637**
Deposits			
Corporate deposits	4,409	2.07	91
Fiscal deposits	351	2.25	8
Govt & org. deposits	222	2.25	5
Individual deposits	6,433	2.02	130
Saving deposits	1,819	0.99	18
Time deposits	4,614	2.43	112
Agricultural deposits	264	2.25	6
Trust deposits	287	2.25	6
Other deposits	413	2.25	9
Total	**12,380**	**2.07**	**256**
Net interest income			**381**

Panel B Financial disintermediation not yet a concern		
Assume NPL level	0%	**381**
	10%	318
	20%	254
	30%	190
	40%	126
	50%	63

Source: Bank of China International 2002

Due to historical reasons, banks are the main channel of funds from savers to borrowers. According to Tian (2004) and Allen et al. (2005), China is a bank economy. However, unlike other bank economies such as Japan and Germany, the commercial banks in China do not have equity holding in listed companies. Taking the Glass-Steagall Act of the US as a model, the Commercial Banking Law of China (1994) prohibits commercial banks from underwriting, holding or trading securities except for government bonds.

2.4.2 Soft budget constraints

The resolution of the issue of the high rate of outstanding NPLs through banking reform and the restructuring of SOEs are inextricably linked. These critical issues and their inter-relationship will now be reviewed in more detail.

Many scholars blame soft budget constraint for China's mounting NPLs (Lu et al. 2001, Bai and Wang 1997). The term "soft budget constraints" was first introduced by Kornai (1980) and has since become widely used in the emerging market literature. It refers to the case when a firm is not concerned with financial losses and expects to be bailed out by the government. As stated by Kornai (1986), the budget constraint refers to a behavioural characteristic of the decision-maker: the need to covers all expenses from the income generated by the firm. However, the "softening" of the budget constraint manifests itself when the strict relationship between outgoings and income is relaxed. Ultimately the cause of the soft budget constraint syndrome is the demand of society on the State to provide welfare, and the self-reinforcing nature of bureaucratisation. Soft budget constraints represent important incentive problems and are a key element of socialist economies[15].

Tian (2004) believes that the government ownership of both banks and firms bring about soft budget constraints. The government, facing the pressure of providing employment (Bai and Wang 1997, Wei et al. 203, Chen and Yuen 2004, Allen at al. 2005), tends to maintain inefficient going concerns, and consequently, SOEs in default expect refinancing instead of bankruptcy. Banks are without incentives to monitor their credits and managers are without incentives to avoid default and creditor dissatisfaction. Therefore, Tian (2004) argues that under soft budget constraints debt cannot reduce managerial agency costs. On the contrary, debt financing expands the resources managed by firm managers and facilitates managerial exploitation. This argument is consistent with the theory of politicians and the firm (Shleifer and Vishny 1994).

2.4.3 Sources of financing

With an underdeveloped legal system and financial sector, the fact that China has small external capital markets (albeit developing rapidly) comes as no surprise. Allen et al. (2005) compare China's financial system to both the USA system which is dominated by financial markets, and the German system which is dominated by the banking sector. By adopting the measures used by Levine (1999) and Beck et al. (2002), Allen et al. (2005) find that China has a largely dominant but inefficient banking sector, while its stock market is smaller than most of the Levine (1999) countries both in terms of market capitalisation

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[15] As stated by Roland and Qian (1998), there are also instances of soft budget constraints in market economies such as bailouts of banks (e.g. the S&Ls) and corporations (such as Chrysler).

and the total value of equity traded in the market, weighted by GDP. In addition, Allen et al. (2005) find that most of the bank credits are issued to SOEs (listed and unlisted) and this view is shared by Lu et al. (2001). By using a panel data set of PLCs, Lu et al. (2001) demonstrate that bank lending decisions are systematically biased in favour of SOEs.

Table 2.11 is constructed using the methodology in Allen et al. (2002). It illustrates the total size of "investment in fixed assets" which is a proxy for total financing needs, and the sources of these funds, for all types of companies.

Table 2.11 Sources of financing 2001

		SOE	COE	Share-holding	Other domestic	FIE	Source/total
State Budgetary		12.5%	5.5%	1.4%	0.0%	0.1%	6.7%
Domestic Bank Loan		23.7%	11.0%	25.3%	7.3%	18.3%	19.2%
Foreign Investment		2.0%	3.3%	2.5%	0.1%	30.8%	4.6%
Self-raised funds & Other		61.8%	80.3%	70.8%	92.5%	50.8%	69.5%
IPO and SEO*							0.2%
Bond*							0.4%
Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Type of companies / Total investment in fixed assets	2001	47.5%	14.3%	15.2%	15.0%	8.1%	100%
	2000	50.3%	14.7%	12.3%	14.7%	7.9%	100%

* Available only to publicly listed and traded companies.
Source: China Statistical Yearbook 2002

From the table we can see that the four most important financing sources are:

- Self-raised funds, this includes proceeds from capital raised from the local government and communities, and internal financing channels such as retained earnings. This is not unusual, even in markets with strong stock markets like the UK, where retained earnings are the main source of funds.
- Domestic bank loans
- State budget
- Foreign investment

On the aggregate level, state budget provides 6.7% of corporate funding needs, whereas bank loans provide 19.2% and foreign investment provides 5%. Self-raised funds are by far the most important source of financing for almost all types of firms – overall they

provide 70% of corporate financing. On the other hand only 0.6% of total financing is provided by the external capital market (equity plus bonds).

Having presented how the four most important sources contribute to firms' financing overall, the financing decisions of the different types of companies will now be examined. For SOEs, bank loans[16] provide 24% of firms' financing requirements, while self-raised funds provide 62% of financing. Similarly, for the shareholding companies, bank loans provide 25% and self-raised funds provide 71% of firms' financing requirements.

The "Other domestic" category includes mainly private and individual enterprises. For them, bank loans provide merely 7.3% of their financing needs, the remaining 93% financing needs come from self-raised funds. According to an article published by the Centre for International Private Enterprises (CIPE) on 1st November 1995, it is very difficult for China's private enterprises to secure a bank loan. This is because the government-controlled interest rate is much lower than the equilibrium rate, usually 12% p.a., so demand for funding is much higher than supply. To make the situation more difficult for the private sector, credit decisions are usually made by the government, which directly allocates most bank quotas to the SOEs. As a result private enterprises may only obtain bank loans outside the official plan, where they face much higher interest rates (around 20%) and shorter loan periods, often only three to six months. When private enterprises need more funding they must borrow from friends, relatives or neighbours at a much higher interest rate (25-30%)[17].

Providing 19% of total corporate financing, bank loans are the second most important financing source. Important determinants of the bank lending include borrower risk, collateral and relationships (Lu et al 2001, Gregory and Tenev 2001). Due to government intervention (although decreasing) through policy loans and interest rate control and the implicit guarantee to SOEs, lending bias towards SOEs leads to soft budget constraint and

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[16] It is worth noting that, bearing in mind the banking sector is dominated by the State, it is possible that bank loans are made to SOEs as a disguised form of subsidy. Therefore the author believes that for SOE financing needs, official statistics on state budget may be deflated.

[17] In the same report, CIPE states that a survey of 38 private enterprises in Luzhou city, Sichuan province, found that almost half these firms' funding (totalling RMB12.41mn) came from their own capital accumulation. The firms borrowed another 20% (RMB5.35mn) from their neighbourhood, and the remainder from bank loans (RMB8.37mn), which were obtained by only 22 of the 38 enterprises

Non-performing loans (NPL). According to Gregory and Tenev (2001), there is ample evidence that local governments continue to encourage bank lending to SOEs by extending explicit or implicit guarantees. They also find that although a number of assets qualify as acceptable collateral in theory, in practice real estate assets (in most cases land use right - LUR) appear to be the most common (in some cases the only kind of) collateral accepted. However, as will be discussed in detail in section 3.1, LURs are often used for employment settlement and are excluded from bankruptcy assets. This in effect renders the lending banks unable to recover their claims through collateral in the case of bankruptcy. These structural problems in the banking sector lead to a vicious circle of lending bias towards SOEs, soft budget constraint and NPLs.

2.5 TYPICAL CHINESE FIRMS IN DISTRESS – TWO CASE COMPANIES

By describing and analysing two distressed listed companies – one SOE and one non-SOE, this section illustrates the nature of Chinese corporations in the context of distress. The two distress cases were selected from the 100 companies that constitute the full population of distressed companies listed in China between 1999 and 2003, as documented in chapter 5 of this thesis. The first case, Shandong Jintai is a non-government controlled pharmaceutical company operating in a growing and liberalised industry consisting of 60 listed firms; the second case, Sichuan Joint-WIT Medical, on the other hand, is a SOE in the State controlled clothing and fabric industry consisting of five listed SOEs. Data for the two cases' operating performance, capital structure, and industry performance controls are from Thomson Financial Analytics Database - same source for the data in chapter 5, as well as from the two companies' annual reports. I also collect the two companies' restructuring announcements from the two official websites[18]: www.cnlist.com.cn and www.cninfo.com.cn. Details of the announcements are presented chronologically in Appendix 4 and 5 respectively. These restructuring announcements will also be used to illustrate the types of distress restructuring mechanism in China in chapter 4.

2.5.1 Case study one: Shandong Jintai Group

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surveyed. It is a general consensus that poor access to conventional bank finance is one of the chief constraints to private-sector growth in China.

Shandong Jintai (Jintai hereafter) was formerly a state owned enterprise and was restructured to be a shareholding company in 1989. The group's principal activities are the research, manufacture and sale of chemical raw material medicines, chemical medicinal preparations, Chinese medicinal preparations and biological medicines. It is also engaged in the wholesale and retail of Chinese and Western prepared medicines. Other activities include manufacturing and marketing of biological products, medical intermediates and medical apparatus, importing and exporting goods, developing and transferring technologies and providing technical services.

The pharmaceutical industry is a high growth industry in China. As at 2003, there are a total of 60 listed companies within the industry. According to China Economic Information Network (CEINet), a leading industry studies expert, the pharmaceutical industry enjoyed a growth of 15.5% from 2001 to 2002, with RMB94.55bn output in 2002. The company's accounting performance versus its industry between 1999 and 2003 is presented in Table 2.12 below. As the table shows, the industry's median asset size grew over time from RMB608mn in 1999 to RMB1391mn in 2003.

[18] The announcements are made in Chinese and are translated into English by the author.

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[18] The announcements are made in Chinese and are translated into English by the author.

Table 2.12 Accounting information for Shandong Jintai 1999-2003

This table presents the key accounting data for Shandong Jintai and its industry (4-digit SIC classification), in terms of operating and financial performance, liquidity, investment and size, during 1999 to 2003. t=-1, 0, and +1 denotes prior to, first and second year of coverage shortfall, respectively. For detailed discussion on each empirical proxy see section 5.3.2.

	t=-3 (Y1999)		t=-2 (Y2000)		t=-1 (Y2001)		t=0 (Y2002)		t=+1 (Y2003)	
Selection criterion	Firm	Industry median	Firm	Industry median	Firm	Industry median	Firm	Industry median	Firm	Industry median
Interest cover	#N/A	7.327	3.988	7.632	3.244	6.889	-9.830	6.962	-5.078	5.991
Variables										
Operating performance										
EBITDA/asset	#N/A	0.096	0.073	0.093	0.064	0.078	-0.373	0.079	-0.254	0.084
Gross Profit Margin	0.296	0.417	0.296	0.457	0.222	0.418	0.120	0.378	0.265	0.359
EBITDA/sales	#N/A	0.243	0.191	0.220	0.159	0.213	-4.275	0.195	-5.832	0.180
Sales/asset	0.452	0.401	0.381	0.421	0.401	0.392	0.087	0.428	0.044	0.508
Financial performance										
Interest Expense/assets	0.019	0.013	0.018	0.012	0.020	0.011	0.038	0.011	0.050	0.014
Current liab/total liab	0.811	0.905	0.723	0.915	0.866	0.941	1.000	0.949	0.925	0.892
Total liab/asset	0.500	0.487	0.539	0.421	0.522	0.377	0.811	0.420	1.107	0.433
Total debt/asset	0.327	0.244	0.407	0.223	0.370	0.250	0.540	0.262	0.675	0.277
Accounts payable/total liab	0.174	0.149	0.115	0.132	0.116	0.134	0.220	0.134	0.015	0.135
AccountsPayable/Sales	0.193	0.144	0.163	0.130	0.151	0.129	2.040	0.129	0.387	0.127
Liquidity										
Current asset/current liab	1.415	1.201	1.075	1.564	1.059	1.500	0.426	1.345	0.281	1.244
Investment										
Capex/assets	#N/A	0.038	0.022	0.045	0.007	0.064	0.032	0.067	0.002	0.066
Size										
Sales/employee (RMBmn)	#N/A	0.195	0.206	0.181	0.252	0.229	0.031	0.285	#N/A	0.340
Asset/employee (RMB)	#N/A	526246.9	541153.9	546587.6	629926.5	657347.4	349653.8	669646.0	#N/A	720334.9
Employees	#N/A	1353	786	1344	680	1456	904	1540	#N/A	1669
Sales (RMBmn)	172.7		162.2		171.6		27.6		10.5	
Assets (RMBmn)	382.5	608.4	425.3	786.8	428.4	988.6	316.1	1184.8	240.81	1391.7
Equity (RMBmn)	181.9		187.0		195.3		44.9		-31.72	
Other										
Accounts receivables/Sales	0.658		0.260		0.211		0.383		0.936	
Accounts receivables (days)	#N/A		172.8		82.2		305.3		349.9	

As will be discussed in detail in section 4.1 and 5.3.1, consistent with the existing literature, in this thesis I measure "financial distress" by interest coverage ratio, i.e. a firm is as distressed if its earnings before interest, tax, depreciation, and amortisation (EBITDA) are less than its reported interest expense. Using this definition of distress, between 1999 and 2003, five of the 60 firms were in distress in the sector, including Jintai. Of the five distressed companies, two are non-SOEs, and three are SOEs. Jintai is a non-SOE firm with zero government shareholding. It is also a small company measured by total assets.

Jintai started its application for listing in 1993 and was eventually floated on the Shanghai Stock Exchange, eight years later, on 23rd July 2001. This lengthy process is mainly a result of bureaucracy and the extreme demand outstripping supply (Jiang et al. 2005).

Table 2.12 shows some key accounting information for the company between 1999 and 2003. 2002 is the first year the company suffered interest cover shortfall (t=0). In terms of company size measured by total book assets, prior to its distress in 2002, Jintai's total assets between 1999 and 2001 were approximately 50-60% of industry median, and therefore was a relatively small company. Jintai's 2002 year-end book value assets were RMB316mn, representing a decrease of 30% from 2001. In 2003, there was another decrease of 24% and the company's total assets were only 17% of industry median. In other words, while the industry's median firm level total assets increased year on year, Jintai's total assets adjusted by industry median decreased in the same period, and such decrease accelerated in 2001.

Furthermore, Jintai's equity decreased from RMB181.85mn in 1999, to a negative RMB31.72mn in 2003. Its total liabilities to total assets ratio increased from 52% in 1999 to over 110% in 2003, due to the large written offs of its bad accounts receivables and non-performing assets. According to an article published on the official Stock Exchange website (www.cnlist.com.cn) on 10 November 2004, since Xin Hong Ji Group's takeover of Jintai, the company was sued over 100 times for defaults on debt payments.

In fact, around the time of listing in 2001, it had come to light[19] that the company was starting to become exposed to a variety of issues, such as high level of bank debts; obsolete technology due to a lack of investment over the years and management devoting considerable amount of efforts in its listing application; and only about 10% potentially realisable accounts receivables of a total of RMB100mn. Table 2.12 shows accounts receivables (days) increased sharply from 82 days in 2001 to 305 days in 2002 and again to 350 days in 2003

The company also suffered a sharp decrease in sales in 2002. Table 2.12 shows its sales/assets ratio decreased from 0.40 in 2001 to 0.09 in 2002. According to its 2002 annual report, the company discontinued the operation of one of its major subsidiaries because of liquidity constraints on working capital. The sharp drop in sales (RMB171.4mn in 2001 to RMB28.0mn in 2002) suggests it discontinued 80% of its operations. As the pharmaceutical industry was being liberalised, companies faced increased competition, and pressure on pricing.

All in all, the company's 2001 accounts show the company performed poorly relative to industry in all aspects. Table 2.12 also shows that the company's operating and financial performance continued to deteriorate from 2002 to 2003. Its 2003 sales/assets ratio was only half of that in 2002. Although its EBITDA/assets ratio improved slightly from -0.37 in 2002 to -0.25 in 2003 due to the sharp decline in total book value assets. Its gross profit margins improved from 0.12 in 2002 to 0.26 in 2003 but its operating profit margin deteriorated from -0.04 to -0.058. In addition, its bank debts/total assets continued to increase and in 2003, its total liabilities exceeded its total assets in 2003. The company was in effect bankrupt although was kept alive for the reasons discussed in section 2.2. The company's absolute bank debt level was relatively stable, and it had managed to take a new loan of RMB20m on 13 December 2002 (announcement No. 19 in Appendix 4), despite its poor credit condition and deteriorating operating and financial performance. On 14th August 2003, the company also managed to renew the RMB20mn loan (announcement No. 20 in Appendix 4). Although detailed information on these loans such as interest rates and covenants are not publicly available, the company's ability to obtain and renew loans with banks in such adverse conditions is a testament that the debt contracts are incomplete since

[19] According to articles published on the official stock exchange website.

banks are unable to monitor borrowers. In addition, as discussed in detail in section 2.4, banks are only able to set interest rates within specified range around a centrally regulated rate, the risk of lending is not appropriately reflected in interest rates.

2.5.2 Case study two: Sichuan Joint-WIT

Sichuan Joint-Wit Medical and Pharmaceutical Industry Company Limited Formerly known as Sichuan No. 1 Textile Stock Company Limited. It was a SOE with 65.6% State shares. It was listed on 16 June 1998 at the Shenzhen Stock Exchange. The Group's principal activities were the manufacture and sale of yarn, thread, base cloth, dyed cloth, knitwear, garments, beddings, adornments, machinery equipment, apparatus, meters and spare parts. Other activities include import and export trade, purchase of raw cotton and manufacture of chemical fibre yarn. Major products of the Group are cotton cloth and cotton yarn. The textile industry included five listed companies, all under the control of the State. In addition, there is a large number of non-listed non State-owned small to medium size companies within the industry. The industry has been growing rapidly and the increased production and sales was a manifestation of brisk consumer spending and growing exports. Similarly Table 2.13 presents the company's accounting performance versus its industry during 1999 and 2003. As Table 2.13 shows, among the five listed companies, the median industry book value assets increased year-on-year from RMB608mn in 1999 to RMB1.19bn in 2003. Sichuan Joint-WIT was the smallest listed company in the industry in 1999.

Table 2.13 Accounting information for Sichuan Joint-WIT 1999-2003

This table presents the key accounting data for Sichuan Joint-WIT and its industry (4-digit SIC classification), in terms of operating and financial performance, liquidity, investment and size, during 1999 to 2003. t=-1, 0, and +1 denotes prior to, first and second year of coverage shortfall, respectively. For detailed discussion on each empirical proxy see section 5.3.2.

	t=-2 (Y1999)		t=-1 (Y2000)		t=0 (Y2001)		t=+1 (Y2002)		t=+2 (Y2003)	
Selection criterion	Firm	Industry median	Firm	Industry median	Firm	Industry median	Firm	Industry median	Firm	Industry median
Interest cover	15.918	17.287	14.481	20.600	-5.632	9.971	-13.096	8.155	9.236	8.637
Variables										
Operating performance										
EBITDA/asset	0.117	0.133	0.108	0.092	-0.082	0.077	-0.078	0.084	0.200	0.069
Gross Profit Margin	0.118	0.187	0.141	0.208	0.005	0.184	-0.038	0.195	0.060	0.165
EBITDA/sales	0.192	0.199	0.135	0.221	-0.101	0.176	-0.095	0.204	0.143	0.145
Sales/asset	0.608	0.703	0.797	0.418	0.814	0.433	0.819	0.434	1.396	0.481
Financial performance										
Interest Expense/assets	0.007	0.008	0.007	0.004	0.015	0.008	0.006	0.010	0.022	0.008
Current liab/total liab	0.997	0.834	0.932	0.847	0.630	0.643	0.699	0.796	1.000	0.907
Total liab/asset	0.441	0.354	0.551	0.396	0.630	0.430	0.717	0.449	0.256	0.548
Total debt/asset	0.096	0.239	0.197	0.261	0.213	0.294	0.199	0.340	0.026	0.374
Accounts payable/total liab	0.276	0.061	0.194	0.081	0.172	0.117	0.152	0.048	0.092	0.147
AccountsPayable/Sales	0.201	0.036	0.134	0.085	0.133	0.094	0.133	0.049	0.017	0.135
Liquidity										
Current asset/current liab	1.101	2.376	0.546	1.591	0.624	1.662	0.318	1.045	2.327	1.156
Investment										
Capex/assets	0.002	0.052	0.014	0.119	0.007	0.094	0.016	0.069	0.013	0.070
Size										
Sales/employee (RMBmn)	0.058	0.109	0.049	0.106	0.037	0.116	0.048	0.136	0.371	0.184
Asset/employee (RMB)	94983.7	194905.5	61737.0	236837.4	45826.7	252112.7	58900.8	303226.3	266163.6	348226.1
Employees	4350	3680	8038	3586	9847	3722	6560	3727	709.00	3021
Sales (RMBmn)	251.2		395.4		367.3		316.5		263.4	
Assets (RMBmn)	413.2	608.4	496.2	786.8	451.3	988.6	386.4	1184.8	188.71	1391.7
Equity (RMBmn)	230.9		222.8		160.4		104.1		114.84	
Other										
Accounts receivables/Sales	0.456		0.033		0.034		0.016		0.164	
Accounts receivables (days)	#N/A		58.1		12.4		9.8		32.9	

The company suffered interest cover shortfall in year 2001 and 2002. The company's book value assets were relatively stable prior to and during the first year of coverage shortfall. However, its book value assets more than halved from RMB451mn in 2001 (t=0) to RMB189mn in 2003 (t=+2). In terms of operating performance, the company's EBITDA/assets ratio was similar to industry median prior to distress, but became negative in 2001 and 2002. The main cause of distress is operational as shown by the negative EBITDA in 2001. The company's financial structure did not look bad – its debts/assets ratio was actually low, so its negative interest cover was due to poor operating performance but not to excessively high interest payments. This underlines the problems of operational inefficiency in SOEs. In 2003, the company's EBITDA/assets recovered to the industry median level. However, its sales/assets ratio outperformed the industry 2000-03[20].

In terms of financial performance, the company's leverage was similar to industry median, although it had higher accounts payable/assets and accounts payable/sales ratios. Its liquidity ratio of 1.101 was less than half of that of industry median in 1999, two years prior to the onset of distress, the ratio dropped to 0.546 in 2000 which was less than a third of that of industry median in the same year. Similarly, its capital expenditure/assets ratio was very poor compared to industry prior to distress. Two year prior to the onset of distress, its capital expenditure scaled by assets was only 3% of that of the industry median. The percentage improved slightly in 2002-03.

Low debts/assets ratio, high accounts payable/assets and accounts payable/sales ratio, and very low capital expenditure/assets ratio suggest that although the company was not highly leveraged, it relied on trade credits for liquidity and its liquidity was poor. Poor liquidity restricted the company making adequate capital expenditure investments. The main cause of distress was operational and this underlines the problems of operational inefficiency in SOEs.

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[20] Its sales/assets ratio in 2003 was very strange, 140%. Reason being that the company signed agreement to buy 81% holding of a pharmaceutical company on 19th August 2003and the transaction was completed on 31st Dec

The company's sales/employees ratio and the total number of employees show the company had a relatively large workforce and extremely low sales per employee ratio, indicating its inefficiency, even compared to other SOEs in the same industry. Assets/employee ratios were also low. Employee numbers continued to grow substantially in the first year of distress despite the falls in both assets and sales. The total number of employees was over 6560 in 2002, this figure then dropped to only 709 in 2003. The company's announcements in 2003 confirmed such large-scale redundancy. As Appendix 5 shows, the 27/08/2003 announcement mentioned the total compensation involved in redundancy was in the region of RMB13bn. This dramatic drop in headcount is the consequence of the company's exit strategy of the labour-intensive textile industry. As I will discuss further in section 4.2.1, in 2001, during the first year of distress, the government attempted a number of restructuring strategies including transferring State shares from an asset management SOE to a textile SOE who supposedly had industry-specific expertise management; and operational restructuring; but in vein. In December 2002 the company had to discontinue operations due to deteriorating cash flow problems. Eventually, the company had to lay off its extremely large labour force which seems to be the source of inefficiency, and initiated its exit of the textile industry in 2003.

Despite being the smallest listed firm in the industry, Sichuan Joint-WIT had extremely high number of employees. This could be an important cause of the firm's inefficiency. When the company was no longer able to operate due to lack of liquidity, government was involved in the settlement of employees, implying that social stability and employment were an important item on the government's agenda. However the government at the same time also tries to act as a shareholder and play an important role in the corporate world. The role of government in distress resolution will be explicitly tested in chapter 6.

In summary, Sichuan Joint-WIT started to experience lack of profitability and interest coverage shortfall in 2001. Its controlling government shareholder attempted a number of restructuring strategies, including transferring the State shares to a textile SOE, and operational restructuring but unsuccessful. The company's performance continues to deteriorate in 2002 and the

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2003 (p32 of 2003AR), and this subsidiary's accounts was incorporated in Sichuan Joint-WIT's 2003 annual

company had to discontinue operation due to a lack of cash flow for working capital requirements.

2.6 CONCLUSION

China is the most important emerging market in the world. It is in transition from a command economy to a market oriented economy through the reform of its large but unproductive SOEs. In addition, the Chinese government retains a continued interest post privatisation in corporations which is different to many emerging markets in Eastern Europe and Asia. China's financial system is dominated by a large but inefficient state-owned banking sector. Government ownership of both banks and firms distorts fund allocation and brings about soft budget constraints. While bank loans are necessarily incomplete, government's control of interest rates and the implicit guarantee to SOE and sometimes even distressed non-SOE firms, exacerbates the structural problems in the financial sector of lending bias, soft budget constraint and NPLs. The external capital market has developed rapidly in the past ten years but the growth is constrained by the underdeveloped legal and regulatory framework, as well as the political agenda. The publicly listed companies, on which the empirical studies in this study are based, represent the "modern enterprise system". This "modern enterprise system" is the model for future corporate China.

The description of two distressed listed companies provided some insight on the nature of Chinese corporations and on the role of government in corporate China. Both companies suffer from poor operating and financial performances relative to their respective industries, including low gross profit margins, high leverage and deteriorating sales, pre and during distress. The SOE case is also associated with extremely high employment headcount relative to its industry, suggesting the acute conflict of interest between profit maximisation and providing employment by government ownership. Both firms also suffer from poor liquidity and this liquidity constraint restricts them from making adequate capital expenditure investment.

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report.

Having outlined the economic, political and financial institutional background of China, I will now go on to describe the Chinese bankruptcy code and its legal institutional environment.

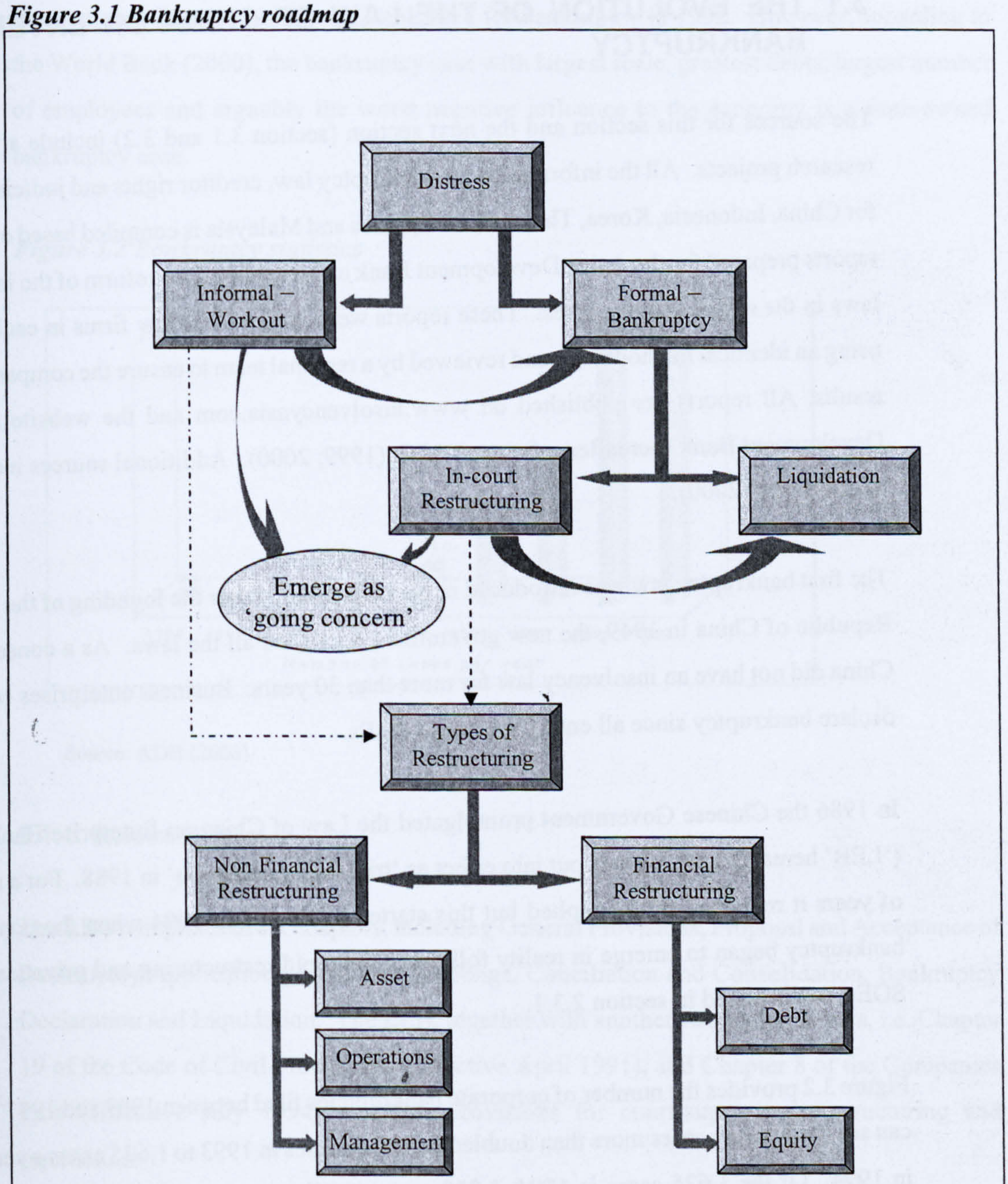
CHAPTER 3 – THE CHINESE BANKRUPTCY CODE AND AN INTERNATIONAL COMPARISON OF CODES

In economic terms, "corporate bankruptcy" is important because it is the legal mechanism through which inefficient firms are eliminated or restructured. An efficient corporate bankruptcy code is important in that it should serve to lay down the rules of the game, and it should provide legal procedure for distress resolution. In addition, a corporate bankruptcy code should act as a motivation for companies to restructure prior to the onset of distress. The 1997 Asian financial crisis sparked much academic interest and initiated a number of studies. These studies add to the existing legal and finance literature on bankruptcy in emerging markets, and provide the foundation for a comparison of the codes between China, US, UK and five Asian countries, Indonesia, Korea, Malaysia, Thailand and Philippines. The proposed comparison provides the context within which the existing Chinese bankruptcy regime is described in detail.

The Chinese bankruptcy law was initially promulgated to restructure or liquidate the insolvent state owned enterprises. As China began to move towards a more market driven economy additional bankruptcy legislation was enacted. The term "Bankruptcy" follows the US definition and refers to the corporate bankruptcy process of court supervised restructuring or liquidation, and is used interchangeably with "insolvency". Figure 3.1 has been constructed to generalise the bankruptcy roadmap in many countries, including China. As we can see in the figure, similar to companies in other countries, when a Chinese company is in distress, there are two possible routes for distress resolution: 1. private workouts; 2. bankruptcy process during which the company may be restructured under court supervision or liquidated.

Figure 3.1 also provides a road map for the structure of this chapter and the next chapter. The Chinese bankruptcy code will firstly be described in section 3.1, to set the background framework for the next section; section 3.2 reviews literature on bankruptcy and highlights important characteristics of bankruptcy against which I compare the Chinese code with US/UK and other five Asian economies; section 3.3 concludes.

Figure 3.1 Bankruptcy roadmap



3.1 THE EVOLUTION OF THE LAW OF CHINA ON ENTERPRISE BANKRUPTCY

The sources for this section and the next section (section 3.1 and 3.2) include a variety of research projects. All the information on bankruptcy law, creditor rights and judicial systems for China, Indonesia, Korea, Thailand, Philippines and Malaysia is compiled based on detailed reports prepared for the Asian Development Bank as background for reform of the insolvency laws in the respective countries. These reports were prepared by law firms in each country using an identical methodology and reviewed by a regional team to ensure the comparability of results. All reports are published on www.insolvencyasia.com and the website of Asian Development Bank (hereafter refer to as ADB (1999, 2000). Additional sources include the World Bank (2000).

The first bankruptcy law was introduced in China in 1906. After the founding of the People's Republic of China in 1949, the new government abolished all the laws. As a consequence, China did not have an insolvency law for more than 30 years. Business enterprises could not declare bankruptcy since all enterprises were SOEs.

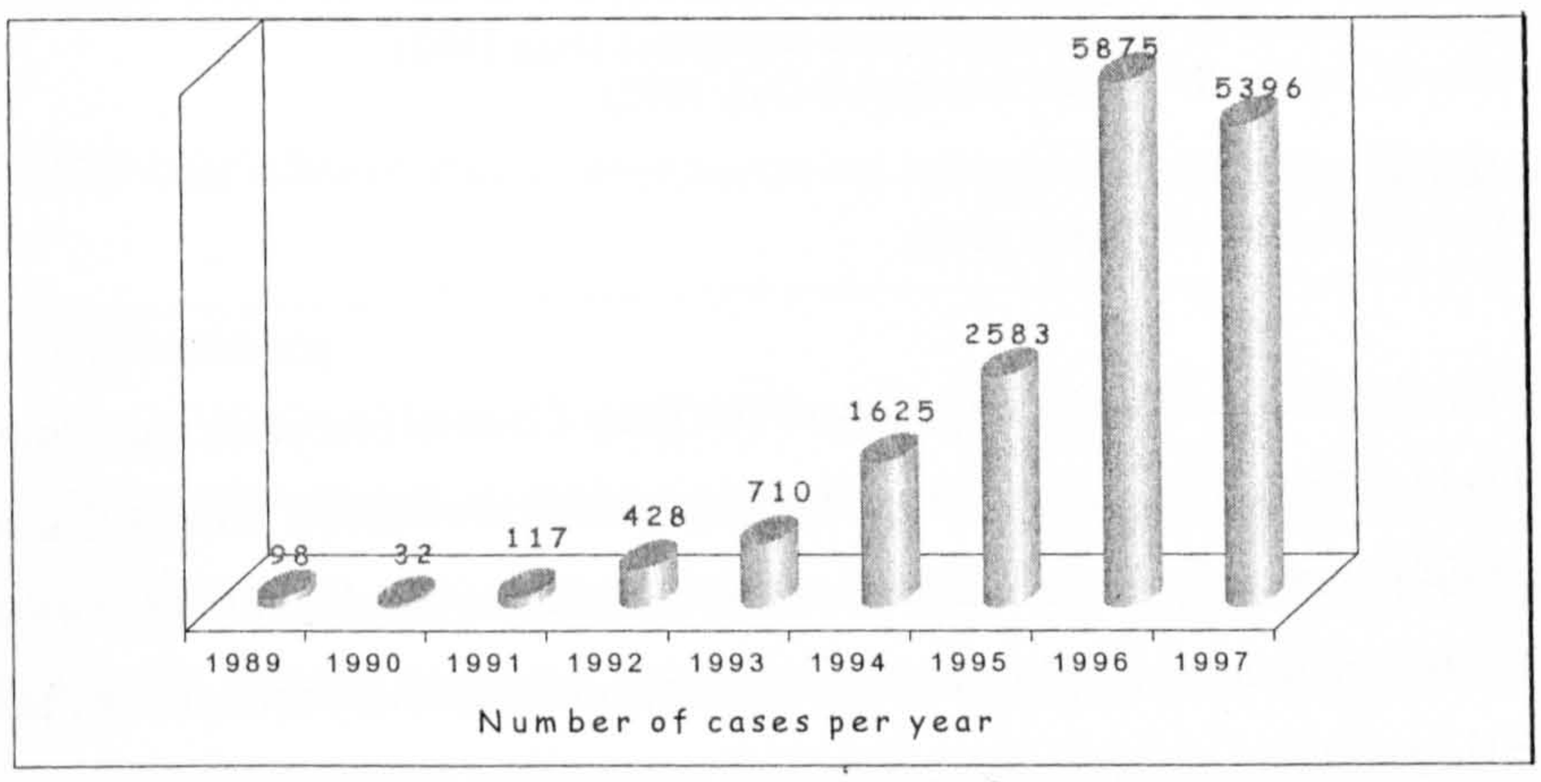
In 1986 the Chinese Government promulgated the Law of China on Enterprise Bankruptcy ('LEB' hereafter), which was put into effect as 'trial implementation' in 1988. For a number of years it remained rarely applied but this started to change in 1994 when the concept of bankruptcy began to emerge in reality following the rapid restructuring and privatisation of SOEs, as discussed in section 2.3.1.

Figure 3.2 provides the number of corporate bankruptcies filed between 1989 and 1997[21]. We can see bankruptcy cases more than doubled from 710 cases in 1993 to 1,625 cases a year later in 1994. Of the 1,625 cases in 1994, 1,232 cases (76%) were SOEs. Three years later, in 1997, the number of SOE cases decreased to 1,000 cases (19%), with the remaining 81% of cases mainly being private companies and joint ventures. The first foreign related company,

[21] Latest available data.

International Commercial Credit Bank filed for bankruptcy in 1992. However, according to the World Bank (2000), the bankruptcy case with largest scale, greatest debts, largest number of employees and arguably the worst negative influence to the economy is a state-owned bankruptcy case.

Figure 3.2 Bankruptcy statistics



Source: ADB (2000)

3.1.1. Relevant laws

The LEB comprises of six chapters, including General Provisions, Proposal and Acceptance of Bankruptcy Applications, Creditors' Meetings, Conciliation and Consolidation, Bankruptcy Declaration and Liquidation. The LEB, together with another two national laws, i.e. Chapter 19 of the Code of Civil Procedures (Effective April 1991), and Chapter 8 of the Companies Law (Effective July 1994), contains provisions for court-supervised restructuring and liquidation.

However, they are not the only basis for bankruptcy practice in China. The governments of the Localities have also promulgated their own regional bankruptcy laws to promote bankruptcy work. The major ones are listed in Box 1.

Box 1

Shenzhen
Bankruptcy of Foreign-related Companies (July 1987)
Bankruptcy of Enterprises (March 1994)
Liquidation and Dissolution of Enterprises (October 1995)
Shenzhen Special Economic Zone Foreign Company Insolvency Regulations (November 1996)

Shanghai
Liquidation Procedures for Foreign Investment Enterprises (October 1991)

Beijing
Liquidation Measures for Foreign Investment Enterprises (June 1992)
Dissolution of Foreign Investment Enterprises (July 1995)

Guangdong Province
Bankruptcy of Companies (August 1993)

In addition, there is one important policy of the State Council (cabinet) regarding bankruptcy, applicable to SOEs, and this policy supersedes previous provisions. This is Document Guo Fa No. 59 (1994) which stipulates that the land use rights of an insolvent SOE were to be sold and the proceeds used to meet employee requirements and the primary focus of any restructuring is the costs on employee pension obligation and redundancy, but not the payment to creditors.

3.1.2. Bankruptcy procedures

The general procedure is as indicated in Figure 3.1. When a company is in distress, it may restructure voluntarily (out-of-court), or file for bankruptcy. Once an application for bankruptcy is made either by the debtor or the creditors, the court has ten days to determine whether to proceed with the case. If the court determines to proceed, it must call for a meeting of creditors to consider the financial position of the debtor. Within three months of the court's acceptance of the application for bankruptcy, the debtor may submit a proposal for reorganisation (restructuring). If creditors with more than two thirds in face value accept the proposal, the court will suspend the bankruptcy proceedings for up to two years. During the two years, the reorganisation is supervised by a committee of creditors and employees. If the debtor is a SOE, it is supervised by the entity's controlling body.

In the event that a restructuring proposal is not submitted, fails, or is not accepted by creditors then the court may declare the entity bankrupt, i.e. the entity is deemed insolvent by law. Within fifteen days of the bankruptcy declaration, the court must establish a Liquidation Committee to handle the winding up of the affairs of the entity. Members of the Liquidation Committee are selected from the local government financial agencies (including the Valuation Bureau (Gu Jia Gu)), government departments and creditors. If the debtor is a SOE then the committee will also consist of members of the enterprises' supervising body.

The following subsections consider the restructuring and liquidation alternatives in more detail.

A. Restructuring

In-court restructuring plan can be presented by either the debtors or the creditors. Note that in the case of in-court restructuring, the law does not stipulate that the objective of the plan is primarily to benefit creditors; instead the motivation is for the pension and redundancy payments of employees, especially for SOEs, as stated in the Document Guo Fa No. 59 mentioned above.

According to Asian Development Bank (2000, hereafter refer to as ADB 2000), the main means of restructuring in China include:

(1) Debt restructuring. This includes debt-for-equity-swaps, debt compounding (debt composition) and debt forgiveness.
(2) Asset restructuring including acquisitions, sell-offs or divestitures.
(3) Ownership restructuring including spin-offs, split-ups and equity carve-outs.
(4) Enterprise entrusting and leasing. Enterprise entrusting refers to enterprises which are poorly operated and are entrusted to specialised agencies to reorganise and operate. Enterprise leasing is when part or the whole assets are leased to other enterprises to operate during a fixed period.

However, existing laws restrict the application of these restructuring measures. For example, according to Article 8 of Doc. No. 59 (1994) of the State Council, the spin-off of an enterprise for reorganisation must obtain the consent of creditors which own more than two thirds of the claims in face value, as well as the approval of city or county governments where the enterprise is located. Another restriction comes from Article 12 of the Company Law, which states that if a company makes an investment in other limited liability companies (LLC) or companies limited by shares (CLS), the aggregate investment shall not exceed 15% of the net assets of the company itself.

It is very important to note that, according to the World Bank (2000), there have been so far, no known cases of in-court restructuring in China. This World Bank study reviews the principles and actual implementation of China's bankruptcy system for SOEs by 15 case studies in addition to interviews in five major cities, as well as at the national level with representatives of government agencies (responsible for SOEs, banks, labour/social security, and land), the judicial and legislative system, banks and other creditors, service professionals (valuators, accountants, lawyers, etc.), and debtor enterprises.,The study states that out-of-court, the main restructuring option for an insolvent SOE is debt-for-equity swaps and merger. Such mergers are subject to debt writing off quotas specified by the government and therefore are limited because of a lack of funds. They also find that creditors in practice have very limited influence in the process. This issue will be discussed in more detail in section 3.2.

B. Liquidation

The Law stipulates that the priority for distributing the bankruptcy assets is as follows:

- Costs and expenses of the bankruptcy process;
- Employee wages and labour insurance;
- Provincial and government taxes;
- All other claims in the bankruptcy including unsecured creditors and trade creditors.

In theory, an asset that already constitutes security collateral is not a bankruptcy asset; only the portion of the value of the security collateral exceeding the amount of the debt that it secures is a bankruptcy asset. The implication is that secured creditors have the legal rights to take possession of their security interests, although this must be done through litigation.

However in practice, two main principles are adopted in the liquidation of an enterprise:

- Land Use Right (LUR), in many cases the most valuable asset, is specified to be taken over by the municipality (Document Guo Fa No. 59), despite the fact that in a majority of bankruptcy cases the LURs were used as collateral for bank borrowing.
- With the remainder of the assets, the debtor must pay for the 'rehabilitation' of its workers before any other claims. The 'rehabilitation' fee aims in part at maintaining average rather than minimum living standards of the city concerned. The presence of well-paying national or provincial SOEs can drive the fee up to a level that prevents bankruptcy filing for smaller local SOEs.

As stated in section 2.2, two primary concerns of the government are social stability and bank NPLs. The unemployment problem forces us to understand the relationship between bankruptcy and political stability. Unrecoverable loans force us to understand the relationship between restructuring SOEs and banking system stability. If SOEs went into bankruptcy on a large scale, the national banks who are the major creditors of these SOEs would be forced to write off large amount of loans which would lead to bankruptcy of the banks and eventually lead to financial crisis and economic recession. Therefore, unemployment and unrecoverable loans are two major problems of bankruptcy practice[22] in China (WB 2000, Garnaut et al. 2004, Tian 2005 and Allen et al. 2005).

[22] According to Tian (2004), Huarong Asset Management Company and other two creditors requested in 2001, that Monkey King PLC to be liquidated. This is expected to be the first bankruptcy case of a public listed company in China.

3.1.3 A mini case study

To put the procedure of the Chinese insolvency code and related issues in perspective, I cite a case study of the bankruptcy of an SOE given in World Bank (2000, p11).

A small municipal SOE, while maintaining a headcount of over 200 employees was only utilising 5% of the available capacity. At the time the bankruptcy petition was finally filed in 1996, the banks were exposed to 80% of the RMB15 million debt, while the assets were valued by the Valuation Bureau at less than RMB7.5 million. After lengthy debate on the workers' compensation and the value of the assets a deal was closed by the municipality for another SOE to absorb these assets. The SOE acquiring the assets already had excess headcount and did not want to take on liability for the existing workforce. Through an in-court agreement the sale of the assets was completed against a cash payment of a little more than half of the price originally desired by the Liquidation Commission. A compensation agreement was structured with the employees. In addition social security and tax arrears were settled using the proceeds of the sale, while the creditors, who were for the most part the banks, only received 1.5% of their original claims.

Post acquisition, the buyer SOE leased the facility on a six-year contract for a fixed fee (with a provision for an annual percentage increase) to a private individual. The lessee was in turn entitled to the retained profits and right of first refusal on the lease renewal. The lessee employed 17 of the original workforce on a six-year contract plus employing a further dozen additional personnel. This was a radical downsizing compared to the number of initial employees, although the preserved opportunities for employment appeared to be sustainable and financially viable.

Despite recognising the potential revenue streams in the new business, the lessee did not have access to the capital resources needed to acquire the assets. However the lessee was able to rehabilitate the assets, and provide working capital funded through an initial capital injection and maintained with the retained earnings. The performance of the facility at the time of bankruptcy was 20,000 tons/year employing a workforce of 216. By 2001 it was a profitable

entity, selling over 100,000 tons/year only with 30 employees. As of 2001, despite the turnaround of this business operating as a going concern, the banks had not yet resumed lending to the private lessee.

This mini case study highlights a number of issues. Firstly, the bankrupt SOE had an over employment issue and was highly inefficient; Secondly, the company was kept afloat after it was already bankrupt. By the time the bankruptcy petition was finally filed and accepted by the court, the SOE's book value assets were only less than half of the amount of its total debt, majority of which was owed to its banks; Lastly, the settlement of the redundant workforce, added further difficulty to the liquidation process and severally damaged the interests of the banks, who in the end only recovered a mere 1.5% of their original claims.

3.1.4 Chinese bankruptcy regime - summary

World Bank (2000) highlights a number of issues in the existing Chinese bankruptcy regime:

(i) SOE bankruptcy has been an administrative process, with little creditor involvement and transparency. Creditors' rights were severely damaged in order to pay-off employee wages and taxes, despite the specified priority order in payout by the law. The process can hinder the unfolding of market-based lending and borrowing;

(ii) The incentives of key stakeholders in the administered bankruptcy process can cause a bias against creditor interests and against timely reallocation of assets to their best alternative uses;

(iii) Effective reorganisation alternatives once bankruptcy has been chosen and filed, and mechanisms to provide credit to viable but insolvent firms, have been few. This has limited the options for rescuing potentially viable firms as going concerns and so obtaining better results for creditors.

3.2 INTERNATIONAL COMPARISONS OF THE CODES

Having described the Chinese code, this section conducts the comparisons. The motivation for the comparison is to bring out differences in codes between various regimes, and thereby highlight their relative strengths and weaknesses. In addition, this is the first study to compare the Chinese code with any other codes.

Section 3.2.1 reviews literature on bankruptcy and highlights important characteristics of bankruptcy against which I compare the Chinese code with US, UK, and five Asian countries (Indonesia, Korea, Malaysia, Thailand and Philippines); section 3.2.2 discusses the implications of the findings in the context of China.

3.2.1 Corporate and legal characterastics affecting bankruptcy

Existing literature states that firm characteristics such as capital structure, and country characteristics such as legal standards and regulatory frameworks affect the way corporate financial distress is resolved. Two international comparisons provide important insights for this study. The first is Franks and Torous (1996) which compare the US and UK codes. The US and UK insolvency systems[23] provide fundamental insolvency frameworks for many countries especially emerging markets, and the comparison of these two systems initiated the on-going debate on the cost and benefit of debtor- versus creditor-friendly systems. My motivation to choose the US and UK for this comparison is to continue this existing debate using experience from six emerging markets including China. The US code is debtor-friendly, lengthy, expensive and encourages complex bargaining which leads to deviation from absolute priority rule (APR)[24]. Also management has strong incentive to over-invest. The UK code, on the other hand, is creditor-oriented and speedy. Because creditors generally obtain control of the debtor firm, greater adherence to APR is obtained. However this may be achieved at the costs of premature liquidations and underinvestment.

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[23] The UK observations and references of the UK system throughout are based on the system prior to the introduction of the Enterprise Act (2002) which aimed for a more debtor-oriented insolvency system.
[24] Absolute Priority Rule is an allocation rule based upon the relative priority of the contractual entitlements held by all of the firm's claimants. It dictates that, once the court establishes the hierarchy of claimants, a junior claim

The second study is Claessens et al. (2003) whose research focuses on the resolution of distress in five East Asian economies (excluding China) in 1997-1998. The institutional features of these five codes before the onset of the Asian financial turmoil in 1997 were very similar, the insolvency laws of these economies were out of date and irrelevant to modern commercial needs. Related laws and practices, such as the ones relating to debt recovery and security enforcement, were similarly defective and these often have the unintended result of creating a 'debtor-friendly' system (ADB 2000). In their descriptive analysis, Claessens et al. (2003) state that in the first two years following the onset of the East Asian financial crisis in 1997, out-of-court resolution was the prevalent method for corporate distress resolution. As of August 1999, of the total 322 distressed Indonesian companies, 38% filed for bankruptcy while the rest attempted out-of-court resolution. More strikingly, of the total 887 distressed Thai companies, only 62 applied for bankruptcy while the remaining 825 entered out-of-court restructuring.

By studying a sample of 644 financially distressed firms in five East Asian countries between 1996 and 1998, Claessens et al. (2003) show that the reason for the frequent use of out-of-court resolution is in part due to the relative weakness of the bankruptcy systems. They also find that bank-owned and group-affiliated firms are less likely to file for bankruptcy. This suggests that informational advantages and preferential sources of credit from internal markets encourage informal restructuring.

My motivation to choose the other five Asian countries for this comparison stems from the following reasons: a). China and these five Asian countries have similar corporate environments; b). The five countries have in the past few years had rapid developments in their insolvency systems following the onset of the 1997 Asian crisis. These developments set precedents for China and provide important implications to the debate of the debtor- versus creditor-friendly systems; c). Information on their insolvency systems is available.

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can receive no payment until all senior claims are fully paid (Jarrow et al. 2001). Therefore deviation from APR indicates a diminishing effect of senior creditors.

These two studies show that the determinants of bankruptcy and the means for resolving financial distress depend on the relative strengths of the critical agents (creditors, equity holders and managers) in the resolution. The two studies also highlight important issues reflecting the main features of a bankruptcy process. These important issues include cost of bankruptcy, control rights in the bankruptcy process, creditor treatment, the availability of new financing in reorganization, as well as the enforceability of the laws in practice.

Table 3.1 characterise bankruptcy codes across nine prominent features. It has been constructed by the author extending the framework of Franks and Torous (1996) and Claessens et al. (2003). For US and UK, features (1) – (4), (7) – (9) are from Franks and Torous (1996), features (5) – (6) are based on the thesis author's own analysis. For Indonesia, Korea, Malaysia, Philippines and Thailand, features (1) – (3), (5) and (6) are from Claessens et al. (2003), features (4), (7) – (9) are from ADB (1999, 2000). Information on China is analysed by the thesis author in the Franks and Torous framework based on information from ADB (1999, 2000) and World Bank (2000). Each of the features will now be discussed in turn in more detail.

Table 3.1 International comparisons

This table is constructed by the author extending the framework of Franks and Torous (1996) and Claessens et al. (2003). For US & UK, features (1) - (4), (7) - (9) are from Franks and Torous (1996), features (5) and (6) are based on author's analysis. For Indonesia, Korea, Malaysia, Philippines and Thailand, features (1) - (3), (5) and (6) are from Claessens et al. (2003); features (4), (7) - (9) are from ADB (1999, 2000). Information on China is from ADB (1999, 2000) and World Bank (2000)

Features	(1) Costs	(2) Does management stay in bankruptcy	(3) Is there automatic stay	(4) Creditor treatments	(5) Process of Liquidation	(6) Process of Restructuring	(7) Solvency requirements	(8) Management of liabilities	(9) New financing
United States	Higher than UK because (i) Lengthy period (ii)Court extensively involved in process and can delay business decisions	Yes. Debtor-in-possession: in majority of cases previous managers retain control	All creditors claims stayed (exceptions e.g. lease payments)	Secured creditors paid first. Protection of creditors not as robust as in the UK	Efficient, quick	Inefficient, lengthy	Firms need not be insolvent	Great discretion to renegotiate claims against debtor-in-possession	Debtor-in-possession financing available
United Kingdom	Lower than US because (i) Short period (ii)Creditors minimally involved in process	No. Insolvency practitioner: Previous managers must relinquish control	None in receivership	Protection of secured creditors' interests. Secured creditors paid first.	Efficient, quick	Efficient, quick	Firms can not meet payments to creditors	No discretion in receivership and limited in administration	Additional finance usually from secured lenders prior to sale of the business. Other lenders in administration
Indonesia	Not expensive in liquidation; Expensive and lengthy in restructuring	Yes under the old code; No after August 1998	Yes under the old code; No after August 1998	Costs of proceedings are paid first, followed by claims on wages and secured creditors	Difficult, inefficient, slow	Difficult, inefficient, very slow	Firms need not be insolvent. Firm cannot or is expected to be unable to meet payments.	Discretion to renegotiate claims.	No provision

Features	(1) Costs	(2) Does management stay in bankruptcy	(3) Is there automatic stay	(4) Creditor treatments	(5) Process of Liquidation	(6) Process of Restructuring	(7) Solvency requirements	(8) Management of liabilities	(9) New financing
Korea	Not expensive in liquidation but expensive in restructuring	No	No	Secured creditors paid first	Easy, efficient, quick	Difficult, efficient, quick	Firms can not meet payments to creditors	Limited discretion to renegotiate claims.	Sanctions provision of new money, no priority repayment of that new money
Malaysia	Expensive and lengthy in both liquidation and restructuring processes	No	No	Secured creditors paid first	Easy, efficient, slow	Difficult, efficient, slow	Firms need not be insolvent.	Discretion to renegotiate claims.	No provision
Philippines	Not expensive in liquidation, expensive in restructuring, slow and very inefficient in both processes	Yes Management committee (include previous managers) or rehabilitation receiver resume control.	Yes. Management committee or rehabilitation receiver also has the right to relief debts	Taxes are paid first, followed by wages, cost of proceedings and secured creditors	Very difficult, inefficient, very slow	Very difficult, inefficient, slow	Firms need not be insolvent.	Power to issue debt relief against all creditor claims.	No provision
Thailand	Not expensive	No	No	Cost of proceedings are paid first followed by taxes, wage claims and secured creditors	Easy, efficient but slow	Difficult, efficient, quick	Firms must be insolvent by "asset/liability" test. No voluntary bankruptcy	Great discretion to renegotiate claims.	Sanctions provision of new money, no priority repayment of that new money

Features	(1) Costs*	(2) Does management stay in bankruptcy	(3) Is there automatic stay	(4) Creditor treatments	(5) Process of Liquidation	(6) Process of Restructuring	(7) Solvency requirements	(8) Management of liabilities	(9) New financing
China	In case of liquidation, lower than the UK i) No involvement of professional practitioners ii) Court proceedings are straightforward	In most cases managers *de facto* stay. In case of liquidation, court-appointed liquidation commissions represent only enterprise owner and employee interests	All creditors claims *de facto* stayed	For SOEs, wages and taxes are paid first before secured creditors, for non-SOEs, Secured creditor paid first	Difficult, efficient	N/A (no known cases so far)	Firms can not meet payments to creditors	Discretion to renegotiate claims.	No provision

* The comparison on costs should be treated with caution between US/UK and Asia/China, as there is no systematic empirical study of bankruptcy cost for Asian countries including China. The comparisons between China and the other five Asian economies are based on ADB (1999, 2000) and are comparable.

A. Cost of bankruptcy

Hart (1999) argues that three measures are of primary importance in the evaluation of a country's bankruptcy procedure: cost, time and efficient outcome. Cost of bankruptcy is also an important determinant between formal and informal restructurings. Gilson et al. (1990) state that for the US, out-of-court resolution is less costly than formal bankruptcy because it takes less time, generates lower professional fees, and causes less disruption to the firm's business. Jensen (1989, 1991) believes that bankruptcy will be taken out of the courts and 'privatised' because large potential costs of formal reorganization provide incentives for the parties to accomplish reorganisation more efficiently outside the court.

So an important question is whether bankruptcy is costly. Extensive empirical studies have been conducted in the US context, to quantify both direct and indirect costs of bankruptcy. Direct costs include legal, administrative, and advisory fees paid by the debtor firm. Indirect costs can be viewed as opportunity costs including costs that arise because of inter- or intra-group conflicts in interest, asymmetric information, free-rider problems, lost sales and competitive position, higher operating costs, and ineffective use of management time. The measure of indirect cost is problematic and under debate in the existing literature. Wruck (1990) summarises previous findings and concludes that the direct costs average 3.5% of market value of the firm, and indirect costs are in the range of 9% to 15%.

In China, the direct bankruptcy cost is minimised because there are no professional bankruptcy practitioners involved in the process. The court process sometimes is delayed due to difficulty in valuation or agreement on employee compensation. Although there are no sufficient figures available to make affirmative judgement, the cost is believed to be sufficiently lower than that in the US. However the irony is that the scarcity of professional bankruptcy practitioners is detrimental in building an efficient insolvency system and this phenomenon leads to the classic debate of "the chicken and the egg". In this context, are the costs of bankruptcy practitioners outweighed by the benefit of the savings that could be gained by following their advice?

A comparison of the eight countries in cost of bankruptcy is shown as feature (1) in Table 3.1.

B. Control rights and creditor protection

In the world of Modigliani and Miller (1958), securities are recognised by their cash flows: debt has a fixed promised stream of interest payments, equity holders receive dividends. However recent financial research shows that this is not the complete story and that the defining feature of different securities has been shifted to the rights these securities entail (Hart 1995). For example, shareholders have the right to vote for directors of companies, while debt entitles creditors to repossess collateral when the promised payments are not delivered by the company. Control rights provide creditors and the debtor company with prespecified rights over a firm's assets in bankruptcy and reflect the different characteristics of a debtor- and a creditor-friendly system.

As pointed out by Franks (2000), the UK insolvency system has a highly creditor-controlled procedure. In contrast, in the US under Chapter 11 (restructuring), the debtor-in-possession usually remains in control of the business. Although in many cases management stays during the restructuring process, they are subject to court supervision which potentially limits its discretion to raise financing and sell assets. Empirically, Gilson (1989) finds 50% of financially distressed firms' top management remains in place throughout the Chapter 11 process. As for Asia, as stated previously, the ineffective laws and enforcements have the unintended result of a 'debtor-friendly' system regardless of the content of legal rules.

White (1996) shows that the differences between debtor- versus creditor-friendly regimes influence whether firms in financial distress use in or out-of-court reorganisations. She also argues that the pros and cons of a creditor- versus debtor-friendly systems are controversial. On the one hand, in creditor-friendly regimes, the threat of being fired gives managers ex-ante incentive for less risky investments although a new manager may be unable to ensure a smooth transition and hence cause the creditors to suffer higher costs of resolution during distress. On the other hand, in most debtor-friendly regimes, although some incompetent managers are able to keep their jobs, in general managers are encouraged to seek bankruptcy protection earlier from their creditors, and as a result the likelihood of the firm surviving distress is increased. Using data from Finland, Ravid and Sundgren

(1998) support White's (1996) view that the harsh treatment of managers may lead them to delay filing for bankruptcy, hence higher bankruptcy cost for creditors.

So how can creditor protection be measured? Focusing on the protection of secured creditors in both liquidation and reorganization processes, La Porta et al. (1998) construct a creditor protection index to indicate the extent a legal system (company law and bankruptcy law) assures creditor rights in insolvency. Using this methodology, I compile and construct the creditor rights for the eight countries in this comparison study and present these figures in Table 3.2.

Table 3.2 Creditor rights

Country	Management does not stay in reorganisation	No automatic stay on assets	Secured creditors paid first	Creditors' consent for going into reorganisation	**Overall creditor rights***
United States	0	0	1	0	1
United Kingdom	1	1	1	1	4
Indonesia	1	1	0	1	3
Korea	1	1	1	1	4
Malaysia	1	1	1	1	4
Philippines	0	0	0	1	1
Thailand	1	1	0	1	3
China	1	0	0	1	2

* Creditor rights are presented as the summation of 4 dummy variables (the four categories in the table), where 1 = the variable is in the Law and 0 otherwise.

Source: Creditor rights of US and UK are from La Porta et al. (1998); Creditor rights for the other six countries are constructed by the author using data from ADB (1999, 2000).

This creditor protection index should be treated with caution as it is only a crude measure. The issue of creditor rights is multi-faceted. Firstly there may be different classes of creditors with different interests, so protecting rights of some creditors may hinder the rights of others. In the case of a default, senior secured creditors may have a simple interest in getting possession of collateral, whereas junior unsecured creditors may wish to preserve the firm as a going concern. Secondly, there are generally two creditor strategies of dealing with a defaulting firm: liquidation and reorganisation. The most basic right of a senior collateralised creditor is to repossess collateral when a loan is in default. Some jurisdictions dictate a provision of automatic stay against creditors' claims, partly because the collateralised assets may be essential to keep the business running, which is perceived as desirable socially. In these countries, creditors may still have powers against the debtors by voting against such reorganization.

According to this index with a scale between zero and four, UK, Korea and Malaysia provide the strongest creditor protection while the US, the Philippines and China provide the weakest creditor protection. The complication in presenting level of creditor protection is demonstrated by the major difference in creditor rights index for US and UK. Although the UK regime provides the ultimate creditor protection to the secured creditors, such protection comes at the expense of the other classes of creditors, including trade creditors and other unsecured creditors. As argued by Franks (2000), in UK insolvencies the unsecured creditors usually recover very little of their loans. In contrast, the US regime is strongly biased toward maintaining the debtor as a going concern. Because any consensual reorganisation plan requires the approval[25] of all classes of creditors and equity holders, junior creditors and equity holders often receive a share in the reorganised firm, and in many cases to the extent where APR is violated. Further elaboration of these variables for each country is given in Table 3.1 as features (2), (3) and (4).

Another interesting pattern appears in the efficiency of the liquidation and restructuring processes. The US code provides a collective procedure which brings with it a lengthy bargaining process and so it is comparatively inefficient. The fact it is a collective process is reflected in its low creditor protection index shown in Table 3.2. On the contrary, the UK system is based on "freedom of contracts" (Franks 2000) and as a result secured creditors are provided with ultimate protection (creditor protection index = 4). In this system the restructuring process is efficient and straightforward. A comparison of the eight countries in this regard is shown in Table 3.1 as features (5) and (6).

C. Solvency requirements

Solvency requirements represent the threshold above which a firm can enter bankruptcy. In the US, Indonesia, Malaysia and the Philippines firms need not be insolvent to enter bankruptcy. In Indonesia and Malaysia firms may enter the bankruptcy process if they are expected to be unable to pay debts due. This allows firms to initiate their restructuring processes as early as possible and so have a better chance to recover. However in the US

[25] In the case of cram-down, consensus is not required as the court can overrule creditors' objections to a restructuring plan, although this discretion is not often exercised by the court.

and the Philippines, because management may retain control during the restructuring process, this situation may be used by management for strategic reasons.

In the UK, the creditor can appoint the receiver when there is a default on the covenants or on the payments due. In practice creditors may not wish to precipitate a firm moving into insolvency. For example, Eurotunnel is a classic case where creditors preferred not to take control of the company. In administration, the order can only be granted by the court if the company is unable or will be unable to pay its debts. The creditors and the company (by its director) may apply for the appointment of an administrator. However the company may not wish to do so unless it really is insolvent, because in administration management must step down immediately.

In China and Korea, firms may enter bankruptcy when there is a default and voluntary bankruptcy is possible (i.e. company files for bankruptcy petition). However in Thailand, entering the bankruptcy process proves to be extremely difficult and companies are not allowed to enter bankruptcy voluntarily. If creditors wish to file a bankruptcy petition against the firm, the court requires an "asset/liability" test and valuable time could be wasted. A comparison on this feature is provided as feature (7) in Table 3.1.

D. Management of liabilities

Management of liabilities is an important issue in restructuring and feature (8) in Table 3.1 summarises the different practices from the eight countries. In the UK receivership process, the receiver only represents the interests of one of the secured creditors, he therefore has very little discretion in renegotiating the debtor's liabilities. For example, if the receiver wishes to raise further debts he could not do so without the agreement of other creditors. In comparison, the court-appointed administrator has discretion in managing liabilities, but the approval of the court is still required. Discretion for management of liabilities in the restructuring process is allowed in the US and all Asian countries. However in the Philippines, the rehabilitation receiver is empowered to renegotiate or even relieve debts to the detriment of creditors' interest (ADB 1999).

E. New financing (supra priority financing)

New financing for the distressed firm's continued operations during bankruptcy may be required to maintain the firm as a going concern. The US Chapter 11 recognises such requirement explicitly by allowing the debtor-in-possession to raise senior new financing. Distressed firms under this condition stand a better chance of distress resolution, although Franks and Torous (1996) argue that such financing provides strong incentives for the debtor company to over-invest, since the equity-holders benefit in the event that the project pays off but do not contribute to the costs.

On the contrary, the UK code does not provide for such supra priority financing. However, the absence of supra priority financing in the UK may be the reason for new equity infusion to be frequently used for distress resolution. Franks and Sanzhar (2003) find that a large number of distressed UK companies use new equity infusion while this restructuring technique is rarely used in the US (Weston et al. 2001). Therefore it may be argued that the absence of supra priority financing provision and the automatic stay provision provides incentive for large UK companies to remain outside the legal process and to use market solutions to resolve distress. In addition, Carapeto (2004) finds that although post-petition loans are associated with more successful reorganisation, such positive impact is reduced when the loans are in very senior forms. As summarised in feature (9) of Table 3.1, only Korea and Thailand among the Asian countries sanction the possibility of new money but the new money does not enjoy a supra priority status over existing obligations. In China, in the absence of the supra priority financing, the underdeveloped capital markets restrict other potential solutions thus companies are not given opportunity to resolve distress. As a result the bankruptcy process does not promote efficient economic allocation of resources.

F. Enforceability of the law

So far, I have discussed the issue of creditor protection provided by the laws on paper, not in practice. As point out by La Porta et al. (1998), enforcement of laws is as crucial as their contents. La Porta et al. constructed an enforcement index based on: efficiency of judicial system, rule of law, corruption, risk of expropriation, risk of contract repudiation, and accounting rating on accounting standards. Using their methodology, Allen et al. (2005)

find China's measures on enforcement significantly below the average measures of the 49 countries in La Porta et al. (1998). The measures for the eight countries in this comparison are presented in Table 3.3. As we can see that both of the only two available measures for China, on rule of law and corruption, are significantly below those of the US/UK. These two measures for China are also below the corresponding average scores for the eight countries.

Table 3.3 Enforcement index

	Enforcement Variables*					
Country	Efficiency of Judicial System	Rule of Law	Corruption	Risk of Expropriation	Risk of Contract Repudiation	Accounting: Rating on Accounting Standards
US	10.00	10.00	8.63	9.98	9.00	71
UK	10.00	8.57	9.10	9.71	9.63	78
Indonesia	2.50	3.98	2.15	7.16	6.09	n/a
Korea	6.00	5.35	5.30	8.31	8.59	62
Malaysia	9.00	6.78	7.38	7.95	7.43	76
Philippines	4.75	2.73	2.92	5.22	4.80	65
Thailand	3.25	6.25	5.18	7.42	7.57	64
China	**n/a**	**5.00**	**2.00**	**n/a**	**n/a**	**n/a**
Average**	**6.50**	**6.24**	**5.81**	**7.96**	**7.59**	**69**

* The explanations of the enforcement variables and information regarding relevant international rating agencies providing the measurements of these variables can be found in La Porta et al. (1998, p1124-1125).

** The average scores do not include China.

Source: Allen et al. (2005) for China and La Porta et al. (1998) for the rest.

The views of La Porta et al. (1998) are shared by Claessens and Klapper (2002), who analyse a panel of 35 countries to investigate how bankruptcy use relates to creditor rights and judicial efficiency. They find that the relative use of bankruptcy around the world is higher in countries with strong creditor rights, but the combination of stronger creditor rights with greater judicial efficiency leads to less use, suggesting some substitution between strong rights and greater judicial efficiency. They believe that insolvency systems with stronger rights combined with good judicial systems encourage less risky behaviour and more out-of-court settlements. They suggest that strong creditor rights are more necessary in countries with weak judicial systems to compensate for weaknesses in legal enforcement. In addition, Rajan and Zingales (1995) find that contractibility (the so called "freedom of contracts" by Franks 2000) is enhanced by legal systems that protect creditor rights and punish management and equity holders in the case of financial distress.

Creditor rights assured by the law and the enforceability of such rights can be directly compared by employing empirical studies measuring deviation from APR and creditor recovery rates. Franks and Torous (1989) argue that the institutional features of Chapter 11, grant the debtor-in-possession valuable rights which in effect provide management with a valuable option. For example, under Chapter 11 management is allowed to obtain new senior financing and to exclusively propose a restructuring plan for the first 120 days. These rights can decrease the exercise price and extend the maturity of the firm's pre-bankruptcy liabilities, and as a result diminish the value of the pre-existing claims held by the creditors.

Empirical studies on the US bankruptcy system reveal that deviation from APR consistently exists. Weiss (1990) studies 37 firms under Chapter 11 between 1980 and 1986 and finds that absolute priority is only enforced 22% of the time. 78% of the reorganizations violate APR. Weiss also shows that APR is violated more frequently for relatively large firms. In his sample set, the implied recovery rates for secured creditors, unsecured creditors and equity-holders are: 97.1%, 63.6% and 34.5%, respectively. Eberhart et al. (1990) find 23 APR deviations for 30 cases examined. In their sample set, the mean violation was 7.5% of total awards to claimants, and the highest violation was 35.71%.

Deviation from APR is not present in receivership in the UK. Although there is no systematic empirical study on APR using UK data for the administration process, there is a general consensus among legal and finance scholars that such deviation is very small (Olsen 1996).

As for China, World Bank (2000) shows that secured creditor recovery rate for SOE bankruptcies range between 3 - 10%, versus over 95% in the US. The extremely low recovery rate in China reflects the bias in its liquidation process, against creditor rights for the political concern of maintaining social stability.

Direct comparison for the other five Asian countries is not possible due to lack of empirical studies in this regard.

3.2.2 Discussion

The objective of corporate bankruptcy should be the maximisation of the value of the assets of a firm and the process should represent all creditors' claims. In addition, some consideration should be given to improving the possibility of a workout.

The comparisons highlight the fact that most Asian countries' corporate bankruptcy law regimes are conservative and tend to focus on liquidation, rather than restructuring. As Table 3.1 shows, out of the six Asian countries, only Korea and Thailand expressly provide for the possibility of 'new money'. Although such financing may provide an immediate solution for much needed funding in distress, empirical evidence from the US and the UK suggests that it discourages the use of the capital markets for restructuring. In the context of China, the underdeveloped external capital markets provide future potential for the much needed funding in restructuring. Therefore a supra priority financing provision in the code may not be desirable.

There is a contrast between the comparisons in Table 3.2 and 3.3. When we look at the Creditor Rights Index presented in Table 3.2, there is no clear difference between developed and emerging markets. However in Table 3.3, the Enforcement Index measures illuminate the weakness of enforcement in the legal system in the six Asian countries, including China. As suggested by ADB (2000), such lack of efficiency in the legal systems is due partly to lack of funding and resources. This clear difference between laws on paper and in practice suggests that an alternative for distress resolution in China is to adopt a regime that encourages out-of-court renegotiation. Empirical experience from the five East Asian countries indicates that regimes that encourage ex-ante information efficiency, or that provide access to preferential credits, limit the use of bankruptcy and encourage out-of-court renegotiations. Research on this topic in China could provide important policy implications.

The US approach assumes that contracts are necessarily incomplete, with Chapter 11 providing a bargaining process to mitigate inefficiencies resulting from contractual incompleteness. However, this has led to, as argued by a large number of empirical and theoretical studies, a bias towards debtors (debtor-friendly). On the other hand, the UK

approach is based on the concept of "freedom of contracting", to an extent assumes contract completeness. Based on the comparison between US and UK, Frank and Torous (1996) believe that an efficient bankruptcy code should remain essentially creditor controlled. In addition, empirical evidence drawn from 35 countries suggests that strong creditor rights are necessary to compensate for weaknesses in legal enforcement (Claessens and Klapper 2002). From Table 3.1, the bankruptcy codes of two of the most serious victim countries of the Asian crisis, Indonesia and Korea, are developing towards a creditor-friendly system (management do not stay and no automatic stay clause).

Although both the UK and the US codes have deficiencies, they provide a framework for the current debate on what is the best practice. In light of this, the Chinese bankruptcy code requires much improvement. The current bankruptcy code was devised primarily to minimise the risk of social unrest. Consequently the decision to declare bankruptcy is a political decision and controlled centrally. The shroud around this central decision makes the proceedings unwieldy and impenetrable to other stakeholders. There is little or no motivation to seek out restructuring plans for the debtors or to service the needs of the creditors. The management teams often remain incumbent during the proceedings increasing the likelihood of moral hazard. With the State and the existing management retaining a major influence, the opportunity of benefiting from the inclusion of creditors and the impartiality of the courts is lost. Overall the effectiveness and transparency of the bankruptcy in practice would be increased with the reduction in administrative intervention, the reduction in incumbency, and the greater involvement of the creditors. This thesis uses data from China to empirically examine this issue, hypothesising the lack of creditor participation and testing its consequences in the restructuring processes.

Finally, experience from China also suggests that the creditor- versus debtor-friendly framework should be extended to include a further dimension: the employees. The so-called "debtor-friendly" system that has evolved in China is caused by the intention of being "employee-friendly" at the expense of creditor interests. This is different from the Franks and Torous' "debtor = shareholder" bias demonstrated by the US process. In the China case, debtor friendly is not the consequence of mitigating inefficiency due to contract incompleteness, rather, it is due to political and social motivations. In addition, China's weak enforcement mechanism adds additional cause for its contract incompleteness. In this

three-dimensional model, while the US system has a bias to preserve unviable firms for the interests of the debtor/shareholders, and consequently for the interests of the employees, the Chinese system is biased purely towards employees to the detriment of the creditors. In both cases the interests of creditors are hindered but the damage in China is more severe. Therefore it would be inappropriate to directly adopt the either system from the existing US/UK framework.

3.3 CONCLUSION

This chapter describes the Chinese bankruptcy regime and compares the major characteristics of its bankruptcy code with those of seven other countries. The Chinese bankruptcy code was initially enacted to liquidate bankrupt SOEs and is featured with government intervention, lack of transparency, lack of creditor participation and protection, as well as the lack of timely restructuring mechanisms. Following China's recent privatisation and rapid economic development, the original code is no longer suitable and needs improvement. Furthermore, due to the government's political motivation and China's weak enforcement systems, the formal bankruptcy procedures are rarely used in practice. This view is shared by Allen et al. (2005). They believe that the ineffective bankruptcy implementation makes the threat and penalty for bad firm performance non-credible.

Given the relatively early stage of development of the Chinese formal bankruptcy procedures and the discussed weaknesses of the formal system, plus its infrequent application, this thesis focuses on the informal processes in order to gain understanding of distress resolution in China. Chapters 5 and 6 are designed to empirically test the consequence of the lack of timely re-organisation mechanisms, of bankruptcy threat, and of creditor protection and participation in distress resolution in China, as highlighted by this chapter. By examining the nature and source of distress prior to and during distress in chapter 5, I shed light on the important question on whether financial distress has consequence and whether financial distress leads to economic distress. By examining how distressed firms actually restructure and which restructuring processes add value, I provide insights on the effectiveness of the Chinese bankruptcy code and on the role of the government in this process.

CHAPTER 4 – LITERATURE REVIEW: CORPORATE DISTRESS AND RESTRUCTURING

Extensive studies have been conducted on corporate restructuring strategies, particularly in the context of financial distress. From a broad perspective, the drivers for these restructuring activities stem from three main forces (Weston at al. 2001, p346). The first force is for a better alignment of interests between managers and shareholders. The second force is to re-assign assets to a more effective use (change of ownership). The last force comes from financial distress resolution, which is the primary focus of this thesis.

This chapter will review some important and influential literature on corporate restructuring with the aim to provide a platform for the empirical work carried out in the thesis. I will also use restructuring announcements made by the two distressed companies, studied in section 2.5, to illustrate the types of restructuring strategies employed in China and compare them to what's documented in the existing literature. The structure of this chapter follows the "Types of restructuring" part in Figure 3.1. Specific literature relevant for each empirical chapter will be reviewed in the chapter itself. In particular, chapter 5 focuses on the characteristics of distress and reviews important studies in the literature on the topic of nature of distress (economic vs financial) and its impact on operating and financial performances; chapter 6 reviews empirical papers investigating restructuring strategies recorded elsewhere that are also chosen by my sample companies, in order to compare and contrast the empirical findings.

Before the literature on the commonly employed restructuring methods is reviewed, the term "financial distress" itself needs to be defined.

4.1 DEFINITION OF FINANCIAL DISTRESS

What is financial distress? Altman (1998, p3-6) defines four commonly used terms as:

Failure – The realised rate of return on invested capital is significantly and continually lower than prevailing rates on similar investments.

Insolvency - A firm's total liabilities exceed a fair valuation of its total assets and the real net worth of the firm is negative (this should not be confused with negative net worth in an accounting sense). **Technical insolvency** exists when a firm cannot meet its current obligations, signifying a lack of liquidity.

Default - Usually this refers to as technical default. **Technical default** takes place when a debtor violates a condition of an agreement with a creditor that can be grounds for legal action. For publicly held bonds in the US, when a firm misses an interest payment or principal repayment and the 'problem' is not cured in 30 days, legally the security is then **'in default'.**

Bankruptcy[26] - One type of bankruptcy is described above as insolvency and refers to the net worth position of a firm. A more observed type is a firm's formal declaration of bankruptcy in a court.

Wruck (1990) defines **financial distress** on two bases:

Financial distress on a flow basis - A situation when cash flow is insufficient to cover current obligations (similar to Altman's "**technical insolvency**"). Interest cover provides a flow measure on an income (as oppose to cash flow) basis and is a popular proxy for an indication of financial distress in the corporate finance literature. This measure will be discussed in detail in Chapter 5.

Financial distress on a stock basis - Refers to the net worth position of a firm (similar to Altman's "**insolvency**").

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[26] It is also worth noting that in the UK, 'insolvency' is used to describe the net worth position of a firm whereas 'bankruptcy' is for that of the individuals.

Table 4.1 presents different types of measurements for distress employed in the current literature and shows that interest coverage has been frequently adopted to investigate the situation of financial distress.

Table 4.1 Some measures of distress in the literature

Measures	Reference
Interest coverage	Asquith et al. (1994) Claessens et al (2003) Gertner and Scharfstein (1991) Haugen and Senbet (1978) Hoshi et al. (1990) Kahl (2001) Rajan and Zingale (1995) Wruck (1990)
Accounting loss (negative earnings)	Zimmerman (1989) DeAngelo and DeAngelo (1990) John et al. (1992)
Market return	Clark and Ofek (1994) Franks and Sanzhar (2003) Gilson (1989, 1990) Lai and Sudarsanam (1997) Ofek (1993)
Others including debt downgrading and restructuring such as exchange offers, and Z-score	Brian et al (1992) Brown et al. (1993) Franks and Torous (1994) James (1996) Kahl (2001) Lasfer et al. (1996) Olsen (1996)

In the context of China, there have not been any studies known to the author in the financial distress literature. However some indications of the perceived definition of distress in the Chinese context can be drawn: (1) According to ADB (2000), the legal literature states that the reason for a formal restructuring in China is generally due to the debtor's inability to pay off the due debts, (2) In addition, according the Company Law (Article 157 and 158), listed companies which have been making losses (negative net profit) for two consecutive years are categorised as "special treatment" (ST), whereas companies that have been making losses for three consecutive years are to be put into "Particular Treatment" (PT) status and are suspended from the Exchanges. In essence, firms suffering from a lack of profit are also perceived by the capital market regulator to be in financial distress. The ST/PT status has implications on the stock prices movements and will be discussed further in chapter 6.

In this thesis I will use the term **"financial distress"** to describe the situation of financial distress o a flow basis, which is measured by interest coverage ratio. This ratio is similar to the CSRC criteria for the ST/PT status. It has also been widely used in the financial distress literature (as shown in Table 4.1).

4.2 TYPES OF RESTRUCTURING

There are many ways to categorise restructuring. Weston et al. (2001, pp345) separate restructuring into four categories:

(a) Reorganisation of assets including acquisitions, sell-offs or divestitures
(b) Creating new ownership by spin-offs, split-ups and equity carve-outs
(c) Reorganising financial claims by exchange offers, dual-class recapitalisations, leveraged recapitalisations, financial reorganisation (bankruptcy) or liquidation
(d) Other strategies including joint ventures, going-private transactions, using international markets and share repurchase programs.

Gilson (1998) focuses on firms using restructuring as a response to severe financial stress and categorises restructuring into three main types (excluding restructuring under Chapter 11):

- Debt contracts restructuring
- Equity contracts restructuring such as spin-offs, targeted stock offerings
- Employee contracts restructuring

As suggested by Jensen and Mekling (1976), a firm can be viewed as a collection of contracting relationships among individuals (nexus of contracts). These contracts represent claims on the cash flows generated by the firm's assets and operations. Economically, restructuring affects the level and timing of the firm's cash flows and how these cash flows are divided up among the firm's claimholders. The list of claimholders includes shareholders, debt creditors, managers, employees, and suppliers. In essence, therefore, restructuring is the process by which the firm changes the terms of its contracts with one or more of its claimholders. Based on this argument, it is more convenient to separate restructuring into financial and non-financial restructuring (as shown in Figure 3.1):

- ❖ Financial restructuring where the firm renegotiates the existing contract with its creditors and shareholders (debt and equity restructuring).
- ❖ Non-financial restructuring where the firm renegotiates its existing contracts with all other stakeholders including managers, employees and suppliers.

Many of the restructuring mechanisms employed by distressed firms in China fall under these two headings, as listed in section 3.1.2. Whereas section 3.1.2 lists restructuring categories in China described by the ADB study, in this section, I describe the main categories of restructuring methods documented on the official disclosure websites by listed companies. I also illustrate the nature of these restructuring strategies using announcements made by the two distressed case study companies described in section 2.5.

4.2.1 Main types of restructuring methods in China

As discussed briefly in section 2.3.2, listed companies disclose restructuring related announcements in accordance with the CSRC requirements (Appendix 3). Below lists the main restructuring types that are found on the official disclosure websites:

- ❖ M&A. It takes place when there is a change of the controlling shareholder[27]. In the literature this sometimes is classified under asset restructuring (Weston et al. 2001).

  Two points are important for the understanding of the Chinese M&A process. Firstly, as discussed in section 2.3.2, shares are classified into tradable and non-tradable shares both bearing the same rights for voting and cash flow, with the non-tradable shares not floated in the market but still transferable with the approval of CSRC. An acquisition usually involves the transfer of non-tradable shares, at a price agreed upon by both parties. Such transfer can also be arranged without any payment[28] from the existing

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[27] In the case of China, the controlling shareholder, being the single largest shareholder, does not necessarily own over 50% equity. According to Clark (2003), probably the most common complaint about the current Company Law is that it gives too much power to controlling shareholders who do not necessarily own over 50% of the company's shares.

[28] Note that "without payment" should not be confused with "payment terms". Here the contrast between M&A with payment and without payment is entirely different to the usual one found in the M&A literature comparing M& with different payment terms such as cash versus share exchange.

SOE holding company to the new holding SOE company. These two types of M&A present an opportunity for us to study the role of the government in the restructuring process.

Secondly, because of the strict listing requirements, the listed company's access to the capital equity market acts as an attraction to potential buyers, which are in most cases non-listed firms (as will be shown in chapter 6). Therefore when a listed company is in distress, acquisition provides an attractive solution for both the buyer and the seller.

- Asset sales, swap or purchase. Asset includes tangible fixed asset, intangible asset and minority equity shareholding in another company (usually non-tradable). To restructure by selling, transferring or purchasing equity shareholding in another company is rarely observed in other countries in the literature. Asset swap is when the distressed company swaps its assets (fixed asset or equity shareholding), for assets from another company which is often either the distressed company's major or controlling shareholder(s) or another company owned by the same controlling shareholder as the distressed company. The difference between the agreed value of the assets being swapped is settled, often with cash (or is recorded as accounts payable/receivables between the two companies).

- Debt restructuring including swaps, interest forgiveness/deduction/extension, debt obligation transfer and taking on new debt.

- Managerial restructuring, i.e. there is a change of senior management such as board chairman, directors, CEO, managing director and general managers.

- Operational restructuring is when the distressed company changes business it is in, rents out main operational assets, discontinues or suspends its main operations. This type of restructuring does not have immediate cash generating implications.

Distressed Chinese companies selling and transferring their minority shareholding of another company is documented in ADB (2000). Although this strategy does not seem to

be widely adopted by distressed firms elsewhere when they restructure, it is observed in the Netherlands (Frederikslust et al. 2003).

Restructure by reducing capital expenditure, enterprise down-sizing, are not required by the Chinese stock exchanges as activities that must be announced by listed companies[29].

I discussed the operating performance of Jintai in section 2.5.1 and categorised the company as distressed starting Year 2002. As shown in Appendix 4, the company made a total of 36 announcements in compliance with the Stock Exchange requirements on information release of public listed companies, between 2001 and 2003. Among the 36 announcements, four relate to M&A announcement and updates; two relate to asset sales and operational restructuring; three to managerial restructuring; and four to new bank loan or bank loan renewal. Also, there are six multiple announcements relating to changes of senior management, M&A completion, share suspension from the stock exchange and 'ST' status, loan renewal and court order of due payments. In addition, there are 17 announcements relate to the release of company annual/quarter reports and to shareholders' meeting.

An interesting point to note is that most of the company's announcements on asset sales are accompanied by some form of operational restructuring and new investment. On 20/12/01, the company announced the selling of one of its production lines and at the same time the setup of a joint venture with the buyer; again on 24/05/02, the company announced its intention to use the fixed assets of its subsidiary to setup a joint venture with one of its business partner companies; with the same company. These transactions were carried out against the backdrop of deteriorating financial and operating performance such as falling sales, increased bank debts and falling interest cover, as discussed in detail in section 2.5.1. It seems that despite several liquidity constraints and a mounting debt level, the management was still able to experiment with new operating strategies. This provides evidence for the lack of a bankruptcy threat to the firm.

Similarly, as we can see in Appendix 5, Sichuan Joint-WIT made 22 announcements between 2000 and 2003. As shown in section 2.5.2, the company went into distress in Year

2001 with an interest cover of -5.6 times. Among the 22 announcements, four relate to M&A without payments; two relate to M&A with payment; four to asset sales and operations restructuring; one to debt restructuring (debt transfer), one to managerial restructuring, and 10 to the announcements of company quarterly performance reports; of "ST"; suspension and re-listing of the share; and the local municipal government's involvement in employee settlement and redundancy. In 2003 the company started to go through a complex strategic asset restructuring process. It attempted to exit the textile industry by selling its core textile related assets, at the same time acquiring a pharmaceutical company.

In both cases, asset restructuring including M&A (with and without payment) and asset sales, debt and managerial restructuring strategies are employed by both firms. Equity restructuring is not employed. Because the two Chinese stock exchanges impose strict rules on firms wishing to issue further equity, it is very difficult for non-profitable firms to issue additional equity.

Both firms frequently sell assets under distress. The motivation for selling assets does not seem to be associated with enabling the two firms to meet overdue debt obligations. Instead, it is associated with the two firms' several liquidity constraints and with providing liquidity for working capital requirements and, in the Jintai (non-SOE) case, for management to experiment with new operational strategies. In the Sichuan Joint-WIT (SOE) case, managerial restructuring is observed only once, despite the company's continued performance deterioration, while this type of events is more frequently observed in the Jintai case.

Many observed restructuring strategies in the two cases discussed above do not have immediate cash generating implications which are different to what's observed in developed economies (Asquith et al. 1994; Lai and Sudarsanam 1997). This finding suggests that inefficient going concerns exist and that Chinese firms do not face the threat of bankruptcy. Further evidence to support the lack of bankruptcy threat argument comes from that fact that during the first year of distress in the first case, management still had the time to experiment with new operating strategies.

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[29] As a result these strategies have not been included among the restructuring events studied in chapter 6.

M&A and asset sales are perhaps a market mechanism to ensure resource mobility essential to the effective operation of an enterprise economy. In the light of the difficulties in formally liquidating economically unviable firms in the Chinese context, these observed mergers and asset sales are perhaps a beneficial outcome in terms of improved use of resources (Kahl 2001, Weston et al. 2001).

The next two sections review our current understanding of these forms of restructuring based on prior research.

4.3 FINANCIAL RESTRUCTURING

4.3.1 Debt restructuring

Debt restructuring can go in either direction – increase or decrease firm leverage. Increasing firm leverage by taking on debt not only provides the firm with tax shield, but also put pressures on the firm for efficiency to meet debt obligations – i.e. debts provide positive disciplinary role (Jensen 1986, Wruck 1990).

Exchange offer is a popular measure of debt restructuring and is studied extensively in the literature. It provides one or more classes of securities the right (not the obligation) to exchange part or all of their holdings for different class of securities of the firm. Such exchange could result in either increased or decreased leverages[30]. Table 4.2 summarises a number of event studies on exchange offers.

[30] Weston et al. (2004, pp338-339)) believe that further potential explanations for the negative or positive results include a). Implied increases or decreases in future cash flows; b). Implied undervaluation or overvaluation of common stocks; c). Increases or decreases in management share ownership; d). Increases or decreases in control of management use of cash; and e). Positive or negative signaling effects.

Table 4.2 Exchange offer and market reaction

Exchange offer with positive returns (increasing leverage)	
Debt for common stock (Masulis 1983)	+14.0%
Preferred for common stock (Masulis 1983, Pinegar and Lease 1986)	+8.2%
Debt for preferred stock (Masulis 1983)	+2.2%
Income bonds for preferred stock (McConnell and Schlarbaum, 1981)	+2.2%
Exchange offer with negative returns (decreasing leverage)	
Common stock for debt (Masulis 1983)	-9.9%
Private swaps of common for debt (Finnerty 1985, Peavy and Scott 1985)	-0.9%
Preferred stock for debt (Masulis 1983)	-7.7%
Common for preferred stock (Masulis 1983, Pinegar and Lease 1986)	-2.6%

Source: Weston et al. (2001)

Many studies try to explain the observed pattern. In particular, when empirical evidence all seems to suggest that the market reacts unfavourably to exchange offers that decrease firm leverage, why do firms carry out such restructuring measures? One logical motivation is to deal with financial distress when a debt-for-equity swap may be the best available alternative at the time to resolve distress. Another explanation is the effect of a hybrid announcement. When leverage decreases, the soft claims from the equity holders naturally go up, but the disciplinary role of debt may be diminishing. Fearing that the management may have too much free cash flow available, the market may react negatively to the announcement. Lie et al. (2001) study a sample of 126 firms that announced debt-reducing exchange offers. They seek to answer two questions: why firms perform debt-reducing exchange offers and what information is conveyed by this type of events. They believe the good news is that firms perform debt-reducing exchange offers to stave off further financial distress, but the announcements convey negative news on these firms' financial weaknesses to the market.

In addition to equity for debt swaps, other common debt restructuring techniques in financial distress include cash for debt swaps, tender offers, covenant modification, maturity extension or interest rate adjustments, and debt composition (Gilson et al. 1990, Asquith et al. 1994, Jarrow et al. 2001). All these procedures are designed to decrease pressure on the firm due to leverage and are based on the idea that if the distressed firm is given some breathing room to improve operations, the creditors will ultimately receive more than they would otherwise. This is the fundamental difference between debt restructuring under financial distress and under other conditions.

In the case of China, due to the high level of non-performing loans, the continued government ownership post privatisation and the existence of soft budget constraints, debt restructuring may result in patterns that differ from those found in prior research. Neither of the two case companies employs debt for equity swaps, but both have negotiated and borrowed additional loans from their banks during distress. I will be investigating this issue further in chapter 6.

4.3.2. Equity restructuring

In addition to restructuring debt contracts cited by the above studies, restructuring equity contracts is also used in creating firm value and resolving financial distress. Equity restructuring techniques include spin-offs, equity carve-outs, tracking stock, and split-ups. These restructuring types focus on restructuring organisation and ownership relationships, and represent a process during which diversified companies become less diversified by moving toward more focused activities, and in this sense, have something in common with asset restructuring.

A brief description of each type is given below (based on Weston et al. 2004, p289-290):

Spin-off: In a spin-off, a company owns or creates a subsidiary which becomes publicly listed on its own and whose shares are distributed on a pro rata basis to the shareholders of the parent company: The total shares retained by the parent company are usually below 20%.

Equity carve-out: An equity carve-out is the IPO of full or partial of the common stock of a wholly owned subsidiary so it is also called a split-off IPO. An equity carve-out is similar to a voluntary spin-off because in both cases a subsidiary of the parent company is traded separately from the equity claims of the parent company (often followed by spin-offs).

Tracking stock: Tracking stocks are separate classes of the common stock of the parent company. They are traded separately with financial results reported separately from the parent. Yet still under the control of the

board of the parent company, tracking stocks do not represent an ownership interest.

Split-up: A company restructures to create two or more separate entities.

Several event studies find that there is a positive abnormal return to the parent on the spin-off announcement date and that the size of this abnormal return is positively correlated to the size of the spin-off (e.g. Copeland et al. 1987, Mulherin and Boone 2000).

Empirical evidence on split-ups suggests they significantly increase, on average, the market value of firms' assets (Schipper and Smith (1983), Berger and Ofek (1995)). Collis and Montgomery (1998) find that spin-offs reduce agency conflicts between managers and shareholders. Merton (1987) shows that a firm's market value will increase when investors are more "familiar" with the company, and a split-up increases investor familiarity by creating new traded equity claims in the firm's business segments. Equity carve-outs on average are associated with positive abnormal returns (Schipper and Smith 1986, Mulherin and Boone 2000, Vijh 2002). The stock performances of tracking stocks have been uneven and the main determinant is the economic characteristics of the businesses in which the tracking stock subsidiaries have been established. Weston et al. (2004) believe that with few exceptions, the combined parent-tracking stock performance has been superior to the performance of their peer groups.

All in all, empirical evidence shows that the market reacts favourably to all the equity restructuring measures discussed above. As also discussed in the preceding section, distressed equity issues are prevalent in the UK but absent in the US and the determinants may be the supra priority financing. In China, the developing nature of the stock exchanges, the difficulty in floating new firms and in issuing further equity for the already listed ones as discussed in section 2.3.2, may mean that equity restructuring processes that involve access to the stock market (such as spin-offs and equity carve outs) may be infrequent in China – this will be examined in chapters 6.

4.4 NON-FINANCIAL RESTRUCTURING

Following the route indicated in Figure 3.1, I now turn my attention to non-financial restructuring. Conventional methods in this category cover the restructuring of assets, operations and management/employee contracts.

4.4.1 Asset restructuring

In this section I will firstly review the asset restructuring literature in general and then move on to a more specific review of the issues as they affect firms in distress.

Asset restructuring includes mergers & acquisitions (M&A) and divestitures (divestitures are also called sell-offs or asset sales, this thesis will use these terms interchangeably). Both mergers and divestitures represent efforts by companies to adjust to the changing economic and political environments but in very different ways. M&A occurs when one company is acquired by or merges with another company and divestiture is when one company sells a portion of its investments to other companies. Examples of their applications include 1). Merger: one firm seeks to make use of the strengths in its existing product market areas to combine with new capabilities in a new environment – for example entering a foreign market, thus acquisition enables the company to set a foothold in the new market by having market access and a customer base. 2). Divestiture: when a company does not have the capability to effectively exploit the possible opportunities, divestitures enable the company to sell a portion of their business to other firms that can exploit the opportunities more effectively (Loh and Rathinasamy 1997).

Much M&A activity involves moving from industries with unfavourable outlook to industries with more favourable opportunities, and divestiture often goes hand in hand with M&A. For example, in many cases, divestiture is used to dismantle conglomerates, discarding unwanted business from prior acquisitions, warding off takeovers, and to finance major acquisitions (Weston et al. 2001, p349-350). Other main motives include:

- Abandoning the core business;
- Selling into a better fit; and

- Harvest past successes.

Empirical studies on M&A appear to support the notion that value is created by M&A activities. For successful M&As, the gains to acquiring firms around the announcement date are usually close to zero. The gains to target firms are more substantial, around 20-25%. If the takeover is unsuccessful, cumulative abnormal returns for both bidder and target firms are generally negative but not economically significant, which may indicate that the market slightly penalises the firms for the forgone value-creating opportunity (Weston et al. 2001, p221).

In the divestiture category, assets include tangible fixed assets, intangible assets and equity shareholding in another company (usually non-tradable). Studies on divestitures find significant positive abnormal two-day announcement period returns of between 1-2% for selling firm shareholders, whereas the announcement effects on returns to buyers did not appear to be statistically significant (Alexander et al. 1984, Lang et al. 1995). Klein (1986) studies the financial effects of divestiture in greater depth. He analyses the announcement date effects according to whether the selling firms initially announced the price of the sell-off or whether no price was initially announced. When no price was announced, there was no statistically significant effect on share price for the seller. When price was announced, the size of the effect depended on the percentage of the firm being sold, measured by the announced price of the sell-off divided by the market value of the equity on the last day of the month prior to the announcement period. Klein's findings are summarised in Table 4.3:

Table 4.3 The price effects of asset sales on seller firm

Sell-off percentage	Abnormal return
<10%	No effect
10-50%	2.53%
>50%	8.09%

Further more, Lang et al. (1995) study a sample of 93 significant asset sales during the period 1984 to 1989. By separating these 93 firms into a payout sample and a reinvest sample, the event study analysis show that the payout sample had positive abnormal returns of 2% from day –1 to day zero, whereas the reinvest sample had negative event returns of 0.5% over the same window. Therefore they conclude that the positive price effect comes only for firms that planned to pay out the proceeds. As for the reinvest firms, the market is

concerned with the agency costs of managerial discretion in the use of the funds. Weston et al. (2001) argue, that overall, empirical evidence (mainly from the US) suggests that divestitures perform vital economic functions by moving resources from less valued uses to higher valued uses and therefore contribute to the resource mobility essential to the effective operation of an enterprise economy.

In sum, a large number of studies have been conducted on asset restructuring including M&A and divestitures. Having reviewed these activities in general, I now focus on the literature on asset restructuring under financial distress.

Empirical studies suggest that while divestiture is fairly commonly utilised by financially distressed firms, there are barriers to its use. For example, Asquith et al. (1994) document that of the bankrupt firms in their sample only 14% used divestitures for restructuring. They also believe divestitures often lead to successful resolution of distress. However, they argue that there are three potential barriers to use asset sales in distress resolution: 1). Managers and equity holders may have very little incentive to sell assets. When a firm is in serious financial distress, no matter whether the liquidation value[31] of the firm is greater or less than the firm's liabilities, the option value of the firm may be an important component of equity's value. Selling the assets means the equity is giving up the option value of these assets. 2). Consistent with Shleifer and Vishny (1992), industry factors may limit the ability of companies to sell assets at a reasonable price and often managers are unwilling to sell assets under their intrinsic value. 3). Debt covenants may put severe restrictions on the ability of firms to sell assets as well as on the use of the proceeds. Therefore although divestiture may be able to provide the liquidity needed by a financially distressed firm, its use is restricted. Different to the findings of Asquith et al. (1994), Lai and Sudarsanam (1997) find more frequent use of asset sales as a turnaround strategy in their sample data. They document that 27% of their distressed sample firms pursue asset sales during the year of performance decline, and 38% during the two post-decline years.

In many respects, merger is analogous to an asset sale of 100% of the company. However there are some differences. Firstly, the incentives of managers to merge may be very

[31] Either as piecemeal liquidation, or the firm being sold as a going-concern.

different from their incentives to sell-off a significant fraction of their assets. In some cases major sell-offs may be designed for managers to keep their jobs. Secondly, an asset sale permits equity holders to maintain some of their option value, but the option disappears with a merger. Therefore equity-holders' incentive to maintain their option value acts as a deterrent to mergers. Despite what the theory states, Lai and Sudarsanam (1997) find M&A is a frequently employed strategy, nearly 50% of their sample firms carried out M&A during the year of performance decline.

To measure the effectiveness of merger in financial distress resolution, Clark and Ofek (1994) study 38 takeovers of distressed firms between 1981 and 1988. They find that such combinations were more likely to involve firms in the same industry and less likely to be hostile takeovers than general patterns. Within the 38 sample firms, Clark and Ofek classify 20 as failures, nine as marginally successful, and nine as clearly successful. The postmerger performance of the combined and the target firms was evaluated based on cash flow, EBITDA, beta excess return industry adjusted and qualitative measures.

In addition, Clark and Ofek also investigate the relationship between the announcement period cumulative abnormal return (CAR) and each of their five performance variables. The bidder CAR was positively related to each of the five performance measures. Furthermore, they find also that bidder overpays for the distressed target. Much of the post-merger performance results appear to be dominated by industry factors. Takeovers of target firms that are small in comparison to the bidder yield positive returns to the bidder. Clark and Ofek (1994) conclude that in the majority of cases takeovers do not successfully restructure a distressed target. They observe, however, that the effort to do so may appear to be the best alternative available at the time.

In the context of China, merger has been used extensively to resolve distress (World Bank 2000) and thus provides an opportunity to test the conclusions from Clark and Ofek (1994) in a different political and economic context. This issue will be explored further in Chapter 6.

4.4.2 Other non-financial restructuring measures

Other main non-financial restructuring measures employed in dealing with financial distress include capital expenditure reduction, enterprise downsizing, managerial restructuring such as forced senior management departures, and discontinuation of operations (Asquith et al. 1994, Lai and Sudarsanam 1997). These measures are also employed by the two Chinese companies (Appendix 4 & 5). Asquith et al. (1994) find that capital expenditures are one of the few discretionary uses of cash for a financially distressed firm. They find capital expenditures drop dramatically when a firm finds itself in financial distress, and most of the impact appears in the year following the initial interest coverage shortfall. They argue that the credible explanation is that financially distressed firms are poorly managed so it may be desirable and more efficient to reduce capital expenditures. Gilson (1990) believes that labour costs represent the largest single expense category for most companies and that senior managers of underperforming companies may come under considerable pressure to reduce firms' labour costs. However he argues that reduction in labour cost is not the solution for financial distress because of the negative effect associated with it such as workplace morale.

4.5 INFORMAL VERSUS FORMAL RESTRUCTURING

Jensen (1989) argues that highly leveraged companies that are in financial distress should have an easier time restructuring out of court. Because of their high leverage they get into trouble before much value is dissipated. Thus creditors realise that there is a lot to lose by not restructuring efficiently and have strong incentives to do so.

However, empirical studies based on US firms with large amount of public debt find that there are three potential impediments to the privatisation of financial distress resolution: (1) free rider problem, (2) asymmetric information, (3) inter- and intra-group conflicts of interest (Weston et al. 2001). For example, Gilson et al. (1990) suggest that firms are more likely to resolve financial distress through private workouts when the firm has fewer distinct classes of debt outstanding because larger numbers of distinct creditor classes, with larger claimants in each, worsen the problem of asymmetric information and increase

conflicts of interest, and therefore impeding the efficient renegotiation of an informal restructuring plan.

Asquith et al. (1994) provide additional insights and argue that firms filing for Chapter 11 are less likely to have completed an exchange offer. Dispersed debt structure creates barriers for the success of an exchange offer because of problems associated with coordination and free-ridership.

In addition, Jensen (1989) suggests that one would expect operationally healthy companies (measured by operating income and cash flow) that get into trouble just because of high leverage to be able to restructure (almost) costlessly out of court. However Asquith et al. (1994) argue that no evidence suggests that firms with better operating performance deal more successfully with financial distress. They find that in their sample set, operating performance does not seem to affect whether or not a company files for bankruptcy. This issue also warrants further study. Although I cannot contribute directly to this debate, my study hopefully throws light on the pros and cons of a system where formal procedures are, in practice, not available.

4.6 CONCLUSION

In this chapter I define distress and categorise restructuring strategies documented in prior research into financial and non-financial restructuring. Firstly, financial restructuring includes debt and equity restructuring. Extensive studies using event study methodology to investigate the valuation effect of financial restructuring methods suggest that the valuation effect of debt related restructuring is not clear cut due to the effect of debt governance; on the other hand equity restructuring almost always results in positive market reactions. Secondly, in the non financial restructuring category, discussions on the use and effectiveness of asset restructuring (M&A and asset sales) are inconclusive. Restructuring announcements made by two distressed Chinese companies described in section 2.5 are used to illustrate restructuring methods employed in the Chinese context. Among the documented restructuring methods documented in the literature, M&A, asset sales, debt and managerial restructuring are employed by both firms. In particular, both firms frequently sell assets under distress. On the other hand, equity restructuring is not

employed. Because the two Chinese stock exchanges impose strict rules on firms wishing to issue further equity, it is very difficult for non-profitable firms to issue additional equity.

In summary, a large number of theoretical studies have been conducted on corporate restructuring and its implications for shareholder wealth. In the context of known differences in China such as its recent liberalisation and privatisation, its mounting NPLs and lack of formal in-court procedures in practice, its political objectives and government partial ownership of PLCs, important questions arise: What is the nature and cause of distress? In light what is documented in the literature, what are the frequently employed restructuring strategies by the distressed firms in China, given its high level of NPLs, the existence of soft budget constraints and the developing nature of its stock exchanges? Do debt and equity restructuring assume different patterns to what is documented in prior research? How effective are they? How does government ownership impact distress resolution? Chapter 5 and 6 address these questions.

CHAPTER 5 – THE CHARACTERISTICS OF CORPORATE DISTRESS IN CHINA

5.1 INTRODUCTION

This chapter investigates the nature, source and characteristics of corporate distress in China. This study sheds light on the understanding of early signs of distress in a recently liberalised economy, and provides implications for the design of an efficient restructuring mechanism. The characteristics of distress in China are compared to what is documented in the literature, and then within China differences between SOEs and non-SOEs are explored.

Prior to privatisation, many then SOEs in emerging markets were highly leveraged. Claessens et al. (1999) record that most East Asian countries had private claims exceeding GDPs and suggest that one cause of the East Asian financial crisis in 1997 was corporate debt overhang and financial distress. However, the high level of leverage of these former SOEs was significantly reduced following privatisation, especially in those privatised through share issue privatisation (SIP) (D'Souza and Megginson 1999, D'Souza et al. 2001, La Porta and Lopez-de-Silanes 1999, Barberis et al. 1996). In the new competitive post-privatisation environments, inefficient or non-viable firms fail. Important questions arise that need addressing. Firstly, what are the characteristics of distressed firms in China? Do they exhibit distress across a wide range of financial indicators? Do they exhibit the same weak performance in the year prior to distress and following the onset of distress?

Secondly, is it weak financial structure or poor operating performance that is the main contributor to distress? Prior evidence in the inefficiency of Chinese firms and of significant continued state ownership interest in firms, even post-privatisation, pointing to the likelihood that operating factor will predominate. However, the large amounts of NPLs suggest that firms may be allowed to continue with excessive debt in their funding structures without being pressured to restructure their finances on a timely basis. Thirdly, the impact of liquidity constraints on distressed firms' investment behaviour is examined. Fourthly, by comparing distressed firms' investment behaviour between SOEs and non-SOEs, some light is thrown on the continued presence of soft budget constraints post-privatisation.

Finally, those variables providing the strongest prior year indicator of forthcoming distress are examined on a multivariate basis. Special attention is paid to variables which may be of particular significance in the Chinese context such as degree of state ownership, proportion of tradable shares and geographic location.

There are a number of key findings. In relation to findings for China compared to what is documented in the literature, firstly, at one year prior to the onset of distress, the distressed firms are significantly more leveraged than their industry and face severe liquidity constraints. Their prior-to-distress liquidity constraint is evident by their median capital expenditure (scaled by assets) being only one third of that of their industry. The distressed firms also have difficulty paying their suppliers.

Secondly, the main characteristic of the sample of distressed firms is their poor operating performance. Overall, economic distress is responsible for 94% of distressed firms' cash flow shortfall and with only 6% caused by the leverage effect. The results confirm those of Asquith et al. (1994) for the US, although the economic nature of distress in the Chinese context is more dominant than in the US context. Different to my finding and that of Asquith et al. (1994), Andrade and Kaplan (1998) study 33 Highly Leveraged Transactions (HLT) in the US and they find that financial factor was the primary source of distress. Andrade and Kaplan (1998) argue that Asquith et al. (1994) capture firms in both financial and economic distress. The different results here reflect the difficulty in empirically distinguishing financial and economic distress.

In addition, I find that for a significant minority of firms, the leverage factor plays a greater role in causing cash flow shortfall prior to the onset of distress than it does during distress, and this finding suggests that, for these firms, financial distress leads to economic distress. This suggests the absence of an efficient financial renegotiation process for companies in distress in China and this factor should be taken into account in the design of bankruptcy provisions. Furthermore, financial leading to economic distress could potentially explain the difference in my findings, to that of Asquith et al. (1994) and Andrade and Kaplan (1998). It is possible that the interest coverage ratio, as a measure of distress in the Chinese

context, captures firms at a later stage in their distress, when the symptom of economic distress due to earlier financial distress becomes more prominent.

Thirdly, consistent with Asquith et al. (1994), distressed firms reduce capital expenditure dramatically and a credible explanation is liquidity constraints. However, one caution on modelling capital expenditure is that although reduction in capital expenditure is employed to proxy for firms' lack of liquidity due to distress, firms could also be in distress due to lack of investment on capital expenditure prior to the onset of distress. The endogeneity of this proxy is a limitation of this study.

A multivariate logit model confirms my results that distressed firms' significant reduction of capital expenditure (CAPEX) prior to distress is a precursor of the subsequent distress. The multivariate logit regression analysis also confirms that sales, earnings before interest tax depreciation and amortisation (EBITDA) and total liability scaled by assets also have significant influence on the probability of distress. In addition, changes in EBITDA/assets and CAPEX/assets have much greater influence than those in total liability/assets on the probability of distress, confirming my source of distress results that the main contributor to firm distress is economic.

In relation to my findings on SOE versus non-SOE, I separate the 100 distressed firms into SOE and non-SOE subgroups and compare their investment behaviour prior to and during distress. I find that the non-SOE subgroup experiences a significantly greater reduction in capital expenditure and assets, both statistically and economically. One explanation is that non-SOEs face hard budget constraints and have no other alternatives than cutting investment and firm size, whereas their SOE counterparts face soft budget constraints, with the result that the reduction of investment and firm size is less severe. Nonetheless, the fact that SOEs significantly reduce investment over and above their industry median level, and that their performance overall is significantly worse than their industry, suggests that despite the presence of soft budget constraints, the SOE firms selected by my distress selection procedure are indeed distressed, albeit with different investment behaviour compared with their non-SOE counterparts when facing distress. The existence of soft budget constraint does not seem to save the distressed SOEs being distressed, as these

SOEs demonstrate deteriorating financial and operating performance relative to their industry, similar to the full sample of distressed firms.

My findings provide a number of implications for policy makers, investors and firm managers. For policy makers, it is paramount that the long waited new bankruptcy code needs to take into account the existing inefficiency in the distress resolution process and the negative consequence of soft budge constraints, in order to facilitate efficient (re)allocation of resources, so that viable firms are restructured while inefficient ones are not. Efficient bankruptcy code also means that bank loans are not utilised to save non-viable SOEs, market led competition is encouraged and maintained. For investors, the Chinese accounting data seem to provide credible information about the viability of a firm to aid investment decisions. As for SOE firm managers, the fact that distressed SOEs are indeed distressed despite their facing soft instead of hard budget constraints, suggests that investment decisions in adverse conditions need to be proactively managed for the viability of the firms.

The remaining structure of the chapter is as follows. Section 5.2 focuses on these elements in the literature needed to support the various analyses in this chapter that were not included in chapter 4; section 5.3 describes the data and methodology; section 5.4 presents and discusses the empirical findings; section 5.5 presents my robustness checks; section 5.6 summarises these findings and concludes.

5.2 LITERATURE REVIEW ON NATURE AND SOURCE OF DISTRESS

Following the review of the literature in chapter 4, this section specifically focuses on the elements in the literature that are most relevant to support the empirical analyses carried out in this chapter.

There are two competing views in the literature regarding the effect of financial distress on a firm's operating performance. As pointed out by Asquith et al. (1994) and Gertner and Scharfstein (1991), frequently, firms in financial trouble also suffer from poor operating performance and therefore an empirical distinction is difficult. Simply put, is a firm suffering from poor performance because it is not economically viable or because it has an

inappropriate capital structure? However, although it is extremely difficult to draw an absolutely clear line between the two, especially in individual cases, analyses based on large samples gives a good approximate indication.

Conditional on the successful distinction between financial and economic distress, Haugen and Senbet (1978) and Jensen (1986) argue that by applying the Coase Theorem, there are no effects of financial distress. Thus if a firm is in financial trouble because it has an inappropriate capital structure, creditors will restructure their claims to maximise firm value and remedy the situation. However, if the process of renegotiation between the financially distressed firm and its creditors is inefficient[32], firms facing liquidity constraints will be forced to forgo positive NPV investments, and there will be consequences for financial distress (Gertner and Scharfstein 1991). If this is the case, appropriate regulation facilitating such renegotiation may be desirable.

Empirical results on whether economic or financial factors are the main contributors to distress using US data are not clear-cut. For example, Asquith et al. (1994) examine 102 US junk bond issuers in the 1970's and 80's and they believe the cause of distress was principally economic factors (economic distress). Contrary to their results, Andrade and Kaplan (1998) extend the methodology of Asquith et al. (1994) and document high leverage as being the primary cause of financial distress in their study of a sample of 31 Highly Leveraged Transactions (HTL) in the USA in the 1980's. By construct, Asquith et al. (1994) and Andrade and Kaplan (1998) have samples of high leverage yet they yield substantially different results. Andrade and Kaplan argue that a large fraction of the firms in Asquith et al. (1994) have negative operating income and therefore their sample firms are both financially and economically distressed.

Being an emerging market, China has a relatively under-developed financial market with associated greater information asymmetry due to market friction and (partial) state ownership. Also, as discussed in section 3.1, the existing bankruptcy procedure is rarely used so there are no usable formal procedures to facilitate timely restructurings of firms in financial difficulties. Given this context I hypothesise that financial distress and liquidity constraints lead to poor operating performance. Different to the above-cited US studies, I

take a more comprehensive approach by basing my study on an inclusive sample set, not restricting the sample to any particular type of distress. Instead, my aim is to include all firms that are in financial difficulty in order to provide important insights on the interaction between financial and economic distress.

Capital expenditure is used as an indicator of financial constraints in the literature on investment-under-uncertainty. This literature focuses on the importance of uncertainty[33] on investment, and the real option approach (Dixit and Pindyck 1994) argues that uncertainty negatively affects investment. Fazzari et al. (1988) introduced and popularised a methodology which compares the elasticity of investment with a measure of internal funds for different groups of firms, and a higher elasticity suggests firm uncertainty and more severe capital market constraints. Kaplan and Zingales (1997) argue that the Fazzari et al. approach is flawed because it is only meaningful to look at differences in the elasticity of investment to cash flow if the investment-cash flow sensitivity is monotonically increasing with respect to the indicator used to classify firms. There is no consensus on these two competing views. However in this study this is not deemed to be a critical issue as I am not investigating all possible relationships between capital market imperfections, uncertainty and their effect on investment. Suffice it to say I intend to use capital expenditure as an indicator of a distressed firm's liquidity constraints. Because distressed firms face acute uncertainty, this context is a particularly appropriate one to use capital expenditure as an indicator of liquidity constraints. It is also important that most empirical studies find a negative linear investment-uncertainty relationship (Lensink et al. 2001).

Intuitively, when firms are in financial distress and face financial constraints, capital expenditure reduction and asset sales can provide a quick solution to the liquidity problem. Asquith et al. (1994) document dramatic capital expenditure reduction in their sample. They also argue that asset sales are important in providing much needed liquidity and that firms selling a large portion of their assets are considerably less likely to go bankrupt. I will address the issue on the effectiveness of asset sales as a distress resolution strategy in China in Chapter 6. In the meantime, an investigation of behaviour of the distressed firms'

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[32] Due to reasons such as information asymmetry and coordination failure.
[33] With respect to selling price, sales, stock prices, distress, etc.

capital expenditure provides a good indication of the level of liquidity constraint these firms face when in distress.

My sample also provides a unique opportunity to empirically detect the existence of soft budget constraints. The term "soft budget constraints" was first introduced by Kornai (1980,.1986) and has since become widely used in the emerging market literature. As discussed in section 2.4.2, according to Kornai (1980, 1986), an enterprise is said to have a soft budget constraint when it expects to be bailed out when in financial difficulty. Soft budget constraints represent important incentive problems as the managers of the enterprise could fail to observe financial discipline. A number of empirical studies provide evidence on the existence of soft budget constraints. For example, Lu et al. (2001) find that the Chinese banks' lending decisions are systematically biased in favour of SOEs and that although banks ration credits to some extent, they tend to provide liquidity to keep the borrowers in financial distress afloat; Other work include Tian (2004), Bai and Wang (1997), and Yuan (2000). In the light of this, two important questions arise: 1. Are the SOEs among my sample of distressed firms indeed in financial distress? 2. If these selected SOE firms are kept afloat by the government, do they have no or less liquidity constraint than their non-SOE counterparts?

As discussed in section 4.1, although there are no prior systematic studies on distress in China, the legal literature and government regulators perceive a lack of profitability as the key indicator of distress[34]. In addition, as argued by Asquith et al. (1994), market return measure could include some information about the distressed firm's ability to resolve distress, i.e., the stock price reaction reflect the cost of distress resolution and hence bias towards relatively costly financial distress. As such I employ the interest coverage measure to identify distress (see Table 4.1). My full sample includes 100 financially distressed firms. I firstly investigate the nature and source of distress using my 100-firm full sample; I then subgroup my full sample into SOE and non-SOE subgroups, and use capital expenditure as a proxy for liquidity constraints to detect the existence of soft budget constraints; Lastly, as a robustness check, I also define distress using the market return measure and the "ST/PT" measure. There is a high overlap between different definitions. I

[34] Since the measure the regulators use is net profit, which is an after-interest indicator, the regulations capture firms suffering from both financial and economic distress.

repeat all analyses on the subsample of my full 100-firm sample as defined by these other indicators and find that my results are consistent.

5.3 DATA AND METHODOLOGY

In this section I describe my sample selection procedure and present the descriptive statistics of the sample. I also describe the methodology and define the variables.

5.3.1 The sample selection procedure

My sample selection procedure is designed to identify firms in severe financial difficulty. The primary definition of distress is based on interest cover and operating performance, as this approach has been widely used in previous research and is in line with the measure used by the two stock exchanges to identify firms as ST or PT. The sample consists of 100 distressed companies listed either on the Shenzhen Stock Exchange or Shanghai Stock Exchange. I exclude firms with financial services as their primary SIC code.

Data for my sample firms' operating performance and capital structure are collected from Thomson Financial Analytics Database. The primary data source for Thomson Financial Analytics Database for the Chinese listed companies is Compustat, and secondary sources include Worldscope and Extel. From the same database, industry performance controls, capital structure, and size comparisons are also collected by matching the sample firms' principal four-digit code with other public firms with the same principal SIC code for the same year. My motivation to construct industry median performance controls is to statistically compare the operating and financial performance of my sample distressed firms to their respective industry in order to answer the questions on nature and source of financial distress, while controlling for industry-wide effects. This methodology is also employed by Megginson et al (1994) and Wei et al (2003).

Firstly, using the Thomson Financial Analytics Database, I examined all the listed companies over the period 1999 – 2003. Thomson Financial Analytics Database has many missing account data points of Chinese listed firms prior to 1999. In fact a total of 270

firms were identified as being distressed using my procedure between 1994[35] and 2003. However due to missing data, I am unable to compute meaningful industry performance control ratios for the period prior to 1999. Therefore I only include the distress cases between 1999 and 2003. The whole population for my sample selection includes 1238 firms per year or 6190 firm years.

A firm is identified as having suffered from financial distress if it meets one of the two criteria in at least two consecutive years between 1999 and 2003: (a) The firm's earnings before interest, tax, depreciation, and amortisation (EBITDA) are less than its reported interest expense, i.e., interest cover = (EBITDA/interest expenses) < 1 (hereafter I refer to this as having a interest coverage shortfall); (b). In the case when a firm's debt/interest expense=0, the firm's EBITDA is less than or equal to zero. 139 firms (per year) were selected using criterion (a) and one additional firm was selected using criterion (b). Following the procedure, a total of 140 firms were classified as being distressed. The first year in which a firm meets one of the above two criteria is denoted year 0. Year –t (+t) denotes t years before (after) year 0. So year –1 is the year prior to the onset of distress, year 0 is the first year of financial distress and year 1 is the second year of distress.

Secondly, using the four-digit SIC code, 18 firms were found to be either in a monopoly or in a duopoly industry with both firms in distress, and thus were excluded from my study, since industry comparison is impossible. In addition, 19 firms do not have accounting information for either t=-1 or t=+1 and thus were also eliminated from my sample. This leaves 103 firms. Lastly, among the 103 firms, 3 became dormant (sales = 0) during their respective distress periods and were also eliminated from the sample. The resulting sample consists of 100 firms per year (500 firm years) and these 100 firms all had at least two consecutive years of interest cover less than one. The one firm selected by EBITDA being negative as its interest expense is zero was eliminated as it had no sales during the year of distress.

Among the selected 100 firms identified as being distressed at some time during 1999-2003, 51% are controlled by the government, and 3% have foreign investors as their

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[35] My data source Thomson Financial has accounting data for some Chinese listed companies starting 1994, albeit with significant gaps.

controlling shareholder. At the onset of distress (year 0), the average percentage of tradable shares to total shares of my sample is 42.6%. In addition, of the 100 sample firms, 73 suffered interest coverage shortfall for two consecutive years, 26 for three consecutive years and one firm for four consecutive years.

Summary statistics on the sample are provided in Table 5.1. The mean book value of assets in year 0 is RMB1,473 million (approx. £100 million) and the median is RBM 1,003 million (approx. £70 million). The median ratio of total liabilities to total assets is 62%, but 96% of total liabilities are current. Bank debt proxied by total debt, is 43% of total assets (mean), in contrast to the average 25% ratio of bank loans to total assets of all PLCs (Table 2.7 - Tian 2004). Finally, the median interest coverage in year 0 is -2.85, indicating that the median firm in my sample was far from capable of meeting its interest payment obligations.

5.3.2 Research questions, definition of variables and methodology

My primary objective is to explore the nature and main contributors to distress. To achieve this, I firstly use a wide range of accounting ratios to examine the features of the sample of distressed firms and adjust these accounting ratios by industry to eliminate any industry effect. I then evaluate the relative importance of economic versus financial causes of distress. I next examine the investment behaviour of distressed firms to understand the extent of their liquidity constraints. Having gained an understanding of nature and source of distress, I separate my sample into SOE and non-SOE subgroups in order to answer the two questions raised in section 5.2. I firstly compare the two subgroups' investment behaviour to confirm the presence of soft budget constraints. I then repeat my analysis using accounting ratios on the SOE subgroup to confirm whether or not, in the presence of soft budget constraints, these SOEs are indeed distressed. Lastly, I investigate which combinations of the variables provide the strongest prior year indicator of forthcoming distress on a multivariate basis.

Table 5.1 Summary statistics of 100 distressed firms

All summary statistics are presented for the selected 100 firms that enter financial distress between 1999 and 2000. The characteristics are measured in year 0, the first year of interest coverage shortfall. The data are from Thomson Financial Analytics Database. Interest coverage is defined as earnings before interest taxes depreciation and amortisation (EBITDA) divided by interest expenses.

	Median	Mean	Standard Deviation	Min	Max	Skewness	Kurtosis	Jarque-Bera
Assets (RMB million)	1002.88	1472.85	212.73	42.01	17973.84	5.40	37.50	5749.65
Sales (RMB million)	215.36	611.45	1620.08	4.18	13396.25	6.16	44.77	7901.18
Book value total liabilities/assets	0.62	0.75	1.07	0.10	10.56	8.14	73.52	21391.04
Current liabilities/total liabilities	0.96	0.91	0.12	0.36	1.00	-1.97	4.28	123.88
Book value debt/assets	0.36	0.43	0.04	0.00	3.69	5.77	43.32	21391.04
Interest coverage	-2.85	-7.37	2.93	-291.85	1.00	-9.46	92.64	8060.89

Table 5.2 Variable definitions

This table presents the list of empirical proxies I use in this chapter. The proxies for size, operating performance, financial performance, liquidity, employees, ownership, geography, investment and market are computed for every sample firm for a three years period: one year prior to the onset of distress (t=-1), the first year of coverage shortfall (t=0), and the second year of coverage shortfall (t=+1).

Classification Variable name	**Definition**
Selection criterion	
COV	EBITDA/interest expenses, the key measure of distress
Operating performance	
EBITDAAS	(Earnings before interest tax depreciation and amortisation)/assets
GPM	Gross Profit Margin
EBITDASAL	EBITDA/sales
SALAS	Sales/assets
Financial performance	
IntExpAs	Interest Expense/assets
CLIABTLIAB	Current liabilities/total liabilities
CLIABAS	Current liabilities/assets
TLIABAS	Total liabilities/assets (leverage ratio)
DEBTAS	Total debt/assets, proxy for bank loans scaled by assets.
APTL	Accounts payable/total liabilities
APSAL	Accounts payable/sales
Liquidity	
CASCLIAB	Current assets/current liabilities.
Investment	
CAPEXAS	CAPEX/assets, proxy for firm's investment.
Employees	
SALEMP	Sales/number of employees
ASEMP	Assets/number of employees
Ownership	
DSOE	Dummy variable for state control, takes the value of 1 if state is the largest shareholder (not necessarily over 50% of shares – relative control), and 0 otherwise
DSOEO	Dummy variable for state control, takes the value of 1 if state owns at least 50% of shares (absolute control), and 0 otherwise
STATE	Percentage of equity ownership retained by the state after privatisation.
Market	
DummyAshare	Dummy variable for type of tradable shares, takes the value of 1 if only A shares, 0 otherwise (B/H shares, with or without A shares).
FLOATING	Tradable shares/(tradable + non-tradable shares), proxy for governance.
Geography	
DLOC	Dummy variable for geographic location of firms headquarters, equals 1 if in major or coastal cities and 0 otherwise.

Table 5.2 presents the list of empirical proxies I employ for firm performance and efficiency. I firstly compute these empirical proxies for every distressed firm in my sample and its respective industry median, using the four-digit SIC code, for a three years period: one year prior to the onset of distress (t=-1), the first year of interest coverage shortfall (the

first year of distress, t=0), and the second year of interest coverage shortfall (t=+1). I then calculate the median of each variable for the distressed firms and for the industry medians, as well as the difference between firm and industry median values. I employ the Wilcoxon signed-rank test to test for significance in the difference between firms and industry medians. My conclusions are based on the standardised test statistic Z, which for samples of at least 10 follows approximately a standard normal distribution. Since most of my data are highly skewed with extreme values as demonstrated by the Jarque-Bera statistic[36] in Table 5.1, it is appropriate to use non-parametric tests for my comparison analysis.

Having gained an understanding of the characteristics of the distressed firms prior to and during distress, I then adapt the methodology of Asquith et al. (1994) to assess the relative importance of leverage and firm operating performance in triggering distress. Cash flow is defined as EBITDA less interest expense; the ratio of interest expense to assets is used to proxy for leverage effect; and EBITDA to assets as a proxy for operating performance effect. Two distinct changes in firm cash flow are calculated to represent leverage effect and firm operating performance effect. First, leverage effect is calculated as the improvement that would occur in the firm's cash flow in year 0 if the firm had the same ratio of interest expense to assets as the median firm in its industry; Second, firm operating performance effect is the improvement that would occur in the firm's cash flow in year 0 if the firm had the same ratio of EBITDA to assets as its industry median firm. The sum of the above two changes in cash flow is the total cash flow shortfall caused by distress. The portion of cash flow shortfall caused by leverage effect is the first calculated cash flow change divided by the sum of total cash flow shortfall. The portion of cash flow shortfall caused by firm performance effect is the second calculated cash flow change divided by the sum of total cash flow changes. The full details of the calculations are presented in Appendix 2.

Thirdly, I examine my sample firms' capital expenditure in detail to provide insights on the issue of firm liquidity constraints. I compute distressed firms' capital expenditure during

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[36] The Jarque-Bera test is a goodness-of-fit measure of departure from normality, based on the sample kurtosis and skewness. The statistic has an asymptotic chi-squared distribution with two degrees of freedom and can be used to test the null hypothesis that the data are from a normal distribution; since samples from a normal distribution have an expected skewness of 0 and an expected kurtosis of 3. Any deviation from this increases the JB statistic.

the three-year window. Following the literature discussed in section 5.2, large reductions in capital expenditure indicate that the distressed firms face severe liquidity constraints. However, one caution on modelling capital expenditure is that capital expenditure reduction could be either a cause or an effect in financial distress. Although reduction in capital expenditure is used in the literature and in this study to proxy for firms' lack of liquidity due to distress (the effect), firms could also be in distress due to lack of investment on capital expenditure prior to the onset of distress (the cause). This endogeneity issue of this variable is a limitation in my study.

Next, I separate the sample into SOE and non-SOE subgroups and I expect the SOE subgroup has less reduction in capital expenditure, because they have less of a problem with liquidity due to soft budget constraints; whereas the non-SOE subgroup is expected to have greater reduction in capital expenditure and/or assets, as they are subject to hard budget constraints and have greater need to reduce the pressure of liquidity constraints. In addition, following the discussion in section 4.1 and 5.2, since the definition of financial distress is severe financial difficulty, in the presence of soft budget constraints, are the SOEs among my sample of distressed firms indeed in financial distress? I.e. do these distressed SOE firms defined by my interest coverage criteria also demonstrate similar financial and operating performance deterioration? To answer this question, similar to the full sample firms, I use the Wilcoxon signed-rank test to test for significance in the difference between my sample SOE firms and their industry median to confirm their distress status.

Finally, having assessed the different causes of distress on a univariate basis, by matching each distressed sample firm with its industry median firm by interest coverage ratio in the same year, I construct a logit model to test for the determinants of financial distress on a multivariate basis. The use of logit model is appropriate considering the distributional property of my data. The dependent variable is a dummy variable taking on the value of zero if the firm is in distress and one otherwise. I am particularly interested in testing how leverage, operating performance and investment behaviour affect the probability of firm going into distress. I also use other firm characteristics as control variables. Hence the independent variable is a vector of performance ratios prior to the onset of distress across the following categories: operating performance (SALAS, EBITDAAS, and EBITDASAL),

financial performance (TLIABAS, CLIABAS and APSAL), firm investment (CAPEXAS), ownership (DSOEO, DSOE and STATE), location (DLOC), and market (DummyAShare and FLOATING). These variables are fully defined in Table 5.2.

I expect distress to be associated with poor operating performance (EBITDAAS), investment level (CAPEXAS) and high leverage (TLIABAS or CLIABAS). In addition, I expect that operating performance and investment behaviour have a larger impact on the probability of firms going into distress than leverage.

Due to the complexity of share ownership in China and its emerging nature, I test for the relationship between a variety of ownership indicators and firm distress and the effect of soft budget constraints. The ownership category includes three alternative variables: two are dummy variables and one is a continuous variable. DSOE is a dummy for relative state control, equal to one if the State is the largest shareholder of the company (may not necessarily own over 50%) and zero otherwise, whereas DSOEO is a dummy for absolute state control and only equal to one if the State owns at least 50% of the company[37]. I also run a parallel specification using the percentage of state ownership (STATE) instead of the state control dummies (DSOE and DSOEO), in an attempt to capture different dynamics in the relationship. Due to the soft budget constraint hypothesis, I expect SOEs to have a better chance to stay out of trouble hence I expect that the state variables have a negative impact on the probability of distress.

DummyAshare is a dummy to proxy for ownership types in the tradable shares, equal to 1 if the firm issued only A shares and 0 otherwise. In other words, the "0" firms have foreign investors as their (tradable) shareholders whereas the "1" firms have only domestic investors as their (tradable) shareholders. This dummy is to control for the potential impact of foreign ownership in the listed firms on the probability of distress. FLOATING is the ratio of tradable shares divided by total number of shares (tradable + non-tradable) and is generally a proxy for governance (Wang and Xu 2004, Liu 2005), with a higher ratio indicating more transparency and better governance[38]. It is also a representation of

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[37] Both definitions of state ownership have been used in previous China studies. For a thorough discussion of this issue see Clarke (2003).

[38] As stated by Xu and Wang (1999), Qian et al. (2002), Tian (2004), and Clarke (2003), tradable A shares are predominately held by widely dispersed individual investors. For the biggest shareholders holding

ownership concentration. However, contrary to the purpose of governance proxy, the higher the FLOATING ratio, the lower the ownership concentration. In a situation of distress, ownership concentration could be a positive factor with respect to overcoming coordination failure among shareholders. Hence the expectation that the two different proxies of the same ratio are opposite signed. However, since government is the single largest shareholder as discussed in section 2.3.2 C, ownership concentration measure may be correlated with government ownership measures. As expected, FLOATING is relatively strongly negatively correlated with STATE and DSOEO (-0.30 and -0.35 respectively), a low FLOATING ratio also indicates high State ownership. Due to this strong correlation, FLOATING will not be used in the regressions simultaneously with either STATE or DSOEO.

Lastly, DLOC is a geographic location dummy, equal to 1 for firms with their headquarters located in major or coastal cities/districts such as Beijing, Shanghai, Wuhan and Guangdong, and 0 otherwise. The rationale behind the location dummy is that these coastal/major cities and districts are potentially more advanced because of more efficient management and better educated workforce (Wei et al. 2003). It is also possible that the financial systems in the major and coastal areas are more advanced, not only for the reasons stated above, but also because foreign financial institutions have been permitted to operate in these regions since the early 1990s. As such I expect that firms located in non-coastal cities are more likely to be distressed and those located in coastal cities have a better chance of avoiding distress.

As a robustness check, I select distressed firms using two alternative definitions of distress, namely the market return measure and the ST/PT measure. The market return measure is a widely employed methodology in previous research which selects firms that are in the bottom 5% of three-year cumulative market returns of all listed firms; The ST/PT measure on the other hand, as discussed in section 4.1 and section 5.2, is used by the stock exchange regulators as an indication of distress. I form two subgroups by selecting sub-samples of firms from my full 100-firm sample using each of these two selection procedures in turn. I

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tradable A shares, that make it to a firm's top 10 shareholders (of total shares, including tradable and non-tradable), their aggregate shareholding is less than 0.5% of the firm's total market capitalisation. Detailed discussion on the unusual tradable/un-tradable shareholding structure in the Chinese context is given in detail in section 2.3.2 C and summarized in Table 2.8.

then repeat the univariate, cause of distress and multivariate analyses on these market return and the ST/PT subgroups.

5.4 RESULTS

In this section I present my empirical results. This section consists of three subsections. I will first look at the nature of financially distressed firms in China as a whole in section 5.4.1; then in section 5.4.2 I will investigate specifically differences between SOEs and non-SOEs, particularly the issue of the presence of soft budget constraints among SOEs; lastly, section 5.4.3 will be dedicated to examine the precursors of financial distress on a multivariate basis.

5.4.1 Characteristic and source of distress

In this section, I present and discuss the results of my full 100 sample firms' industry-adjusted performance, the main contributors of distress and these firms' liquidity constraints.

A. Industry-adjusted firm performance and efficiency – univariate analysis

In this section, the operating and financial performance, and the efficiency of the sample distressed firms is analysed in detail. Table 5.3 reports the results for the full sample for t=-1, 0 and +1. The results show that the distressed firms' overall operating and financial performance is significantly worse than that of their industry during all the three years (t=-1 to +1). At the 1% significance level, the median distressed firms' industry adjusted operating performance measured by EBITDA over assets is negative in year -1. This measure drops considerably from -0.0335 in year -1 to -0.133 in year 0 and continues to deteriorate through to year +1. This confirms that indeed the distressed firms suffer from poor operating performance[39].

In addition, distressed firms' median sales scaled by assets are already significantly worse than industry median at year -1, and this situation deteriorates further in year 0. The trend continues to year +1. Interestingly, however, distressed firms' gross and operating profit

[39] Using EBIT as a proxy for operating performance yield very similar results to EBITDA, so I only report the EBITDA results here.

margin is similar to industry median during t=-1 and these measures only become worse relative to industry in year 0. Industry-adjusted sales/employee ratio was negative significantly in contrast to the insignificant industry-adjusted asset/employee ratio. The results suggest that distressed firms were performing perfectly well on a profit margin basis in the year prior to the onset of distress, but already in that year their asset and employee levels were being managed poorly relative to the level of sales. This inefficiency seems to have severely damaged profit margins by the following year (year 0).

The financial performance variables show that distressed firms' leverage is indeed higher than the industry median. The distressed firms' median industry adjusted total (current) liabilities to assets of -0.063 (-0.065) is significant, at the 1% level in year -1 and this ratio doubled in year 0. Furthermore, although distressed firms' median accounts payable to total liabilities ratio drops from year -1 to year 0 and then to year +1, the continued increase in the accounts payable to sales ratios indicate that accounts payables continue to increase relative to sales, suggesting that distressed firms are having increased difficulty paying back their suppliers.

Table 5.3 Performance indicators of sample firms compared with their industries between t=-1, 0 and +1

This table presents empirical results of the comparison of the 100 distressed firms with their industries, in terms of operating and financial performance, liquidity, employees and investment, before and during the first year of coverage shortfall and during the second year of coverage shortfall (t=-1, 0, +1). For each empirical proxy I give median values of the proxy for the firm and its industry median, the median change in the proxy's value between firm and industry median, and a test of significance of the difference. I employ the Wilcoxon signed rank test (with its Z-statistic) as my test for significance for the difference between firm and industry median.

	t=-1			t=0			t=+1		
	Sample firm Median	Industry median Median	firm - industry adjusted Median	Sample firm Median	Industry median Median	firm - industry adjusted Median	Sample firm Median	Industry median Median	firm - industry adjusted Median
Selection criteria									
Interest cover	3.3547	7.6274	**-4.1601** ***	-2.8529	6.7015	**-11.4833** ***	-4.1994	6.7015	**-12.4148** ***
Variables									
Operating performance									
EBITDA/asset	0.0547	0.0856	**-0.0335** ***	-0.0540	0.0781	**-0.1330** ***	-0.1058	0.0722	**-0.1809** ***
Gross Profit Margin	0.2005	0.2081	-0.0233	0.1278	0.1971	**-0.0965** ***	0.1120	0.2030	**-0.1225** ***
EBITDA/sales	0.1613	0.1563	-0.0019	-0.2207	0.1439	**-0.3771** ***	-0.5617	0.1343	**-0.7084** ***
Sales/asset	0.3347	0.5460	**-0.1873** ***	0.2584	0.4972	**-0.2448** ***	0.2341	0.4962	**-0.2408** ***
Financial performance									
Interest Expense/assets	0.0160	0.0120	**0.0049** ***	0.0227	0.0118	**0.0125** ***	0.0282	0.0113	**0.0179** ***
Current liab/total liab	0.9521	0.9410	0.0096	0.9574	0.9378	0.0025	0.9631	0.9410	0.0043
Current liab/asset	0.4522	0.3958	**0.0648** ***	0.5391	0.4023	**0.1467** ***	0.6750	0.4144	**0.2590** ***
Total liab/asset	0.5124	0.4829	**0.0631** ***	0.6228	0.4672	**0.1541** ***	0.7400	0.4829	**0.2546** ***
Total debt/asset	0.3275	0.2366	**0.0874** ***	0.3621	0.2486	**0.1747** ***	0.4468	0.2708	**0.1951** ***
Accounts payable/total liab	0.1398	0.1894	-0.0335	0.1116	0.1921	**-0.0899** ***	0.0876	0.1619	**-0.0714** ***
AccountsPayable/Sales	0.2183	0.1360	**0.0767** ***	0.2553	0.1436	**0.1050** ***	0.2963	0.1334	**0.1389** ***
Liquidity									
Current asset/current liab	1.1204	1.4102	**-0.2186** ***	0.8172	1.3739	**-0.5160** ***	0.5312	1.2565	**-0.691301** ***
Investment									
Capex/assets	0.0147	0.0414	**-0.0199** ***	0.0100	0.0535	**-0.0398** ***	0.0054	0.0509	**-0.0414** ***
Market									
MR	0.1588	0.0917	0.0060	-0.3143	-0.1913	**-0.1131** ***	-0.4191	-0.2412	**-0.1856** ***
Employee									
Sales/employee	0.1922	0.3043	**-0.0823** *	0.1192	0.3496	**-0.1837** ***	0.1180	0.4053	**-0.1959** ***
Asset/employee	593085.3	587925.5	-22653.0	555169.5	671905.4	-77557.5	578774.37	786225.8	-140053.7

* Significant at the 10% level
** Significant at the 5% level
*** Significant at the 1% level

Current liabilities are a relatively weaker form of finance compared with long term liabilities. From Table 5.3 we can see that for both the distressed firm and the industry median firm, current liabilities constitutes the same proportion of total liabilities, as the median differences between firm and industry median during the three-year period are insignificant. Thus the results suggest that in China, the common form of financing is provided in current liabilities, regardless whether or not the firm is in distress.

Sample firms' investment proxied by capital expenditure scaled by assets is significantly worse than their industry during the entire three-year period. At year -1, sample firms' median CAPEX/assets is only 0.0147 versus industry median of 0.0414. Moreover, sample firms' median CAPEX/assets declines sharply over the three years period, from 0.0147 to 0.0054.

B. Source Of distress (economic VS financial)

Table 5.4 is constructed adapting the methodology of Asquith et al. (1994), in order to assess the relative importance of the two factors[40] discussed in section 5.3.2, i.e., leverage and firm level performance, in triggering financial distress. Panel A presents the results for year 0 and Panel B for year -1. There are three sets of columns in both panels. The first set of column in Panel A presents the mean and median percentage of cash flow shortfall caused by leverage and operating performance factors for the full sample. The 100 distressed firms are then separated into five subgroups by sorting their leverage factors in year 0. The same analysis is repeated for the 5 subgroups. Results for Subgroup 1 (with highest leverage effect in year 0) and Subgroup 5 (with lowest leverage effect in year 0) are also presented in the second and third sets of columns of Panel A. The same analysis for the full sample and for these five subgroups is repeated for year -1 and the results are presented in Panel B. The mean and median financial and economic factors in causing cash flow shortfall for the full five subgroups during year -1 and 0 are also presented in Figure 5.1.

Panel A shows that relatively poor operating performance is the primary feature of firm distress, not leverage. A median of 94% cash flow shortfall is caused by poor operating performance;

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[40] Following the methodology of Asquith et al. (1994), I initially distributed coverage shortfall to three factors: economic, financial and industry downturn. The results show industry downturn does not contribute to coverage shortfall in my sample hence the results are not presented here.

only 6% cash flow shortfall is caused by leverage. As for the subgroups, Subgroup 1 has the highest leverage effect and Subgroup 5 has the lowest leverage effect. Even in subgroup 1, however, a median of 80% of cash flow shortfall is caused by operating performance.

Importantly, Panel B shows that at year -1, leverage factor plays a more important role in causing cash flow shortfall, for the full sample as well as for Subgroup 1. For the full sample in the year prior to distress, a mean of as much as 55% of the cash flow shortfall is due to leverage, compared with only 6.5% a year later. However, the contrast in the leverage effect between year -1 and 0 using median values is not as dramatic as mean value, albeit with the same trend. As for subgroup 5, since both the mean and median leverage factors are negative during year -1 and year 0, these firms' coverage shortfall was caused purely by economic factors. In addition, the normalised mean operating factor for subgroup 1 in year -1 was negative at 0.821, indicating that some of the firms in subgroup 1 enjoyed a better operating performance than their respective industry median firms. For the mean firm in this subgroup, interest coverage shortfall was caused entirely by financial factor. Figure 5.1 shows that except Subgroup 4 (the subgroup with the second lowest leverage effect in year 0), all other subgroups have a greater median financial leverage effect in causing cash flow shortfall in year -1 than in year 0. It is clear that the importance of the mean leverage effect in year -1 is due to a significant minority of firms with high leverage skewing the mean.

Evidence suggests that firms facing financial distress and liquidity constraints in the year prior to distress have lower level of capital investment, and this low level of capital investment results in severe underperformance at the operating level in the year of distress. The evidence on investment (capital expenditure trend) is examined next.

Table 5.4 Source of cash flow shortfall

This table is constructed to assess the relative importance of leverage and firm operating performance in triggering financial distress. Details of the methodology are presented in Appendix 2. The first year of coverage shortfall is denoted t=0, one year prior to the first year of coverage shortfall is denoted t=-1. Panel A presents the results for year 0 and Panel B for year -1. There are three sets of columns in both panels. The first set of column in Panel A presents the mean and median percentage of cash flow shortfall caused by leverage and operating performance factors for the full sample. The 100 distressed firms are then separated into five subgroups by sorting their leverage factors. The same analysis is repeated for the 5 subgroups. Results for Subgroup 1 (with highest leverage effect) and Subgroup 5 (with lowest leverage effect) are also presented. The same analysis for the full sample and for these five subgroups is repeated for year -1 and the results are presented in Panel B.

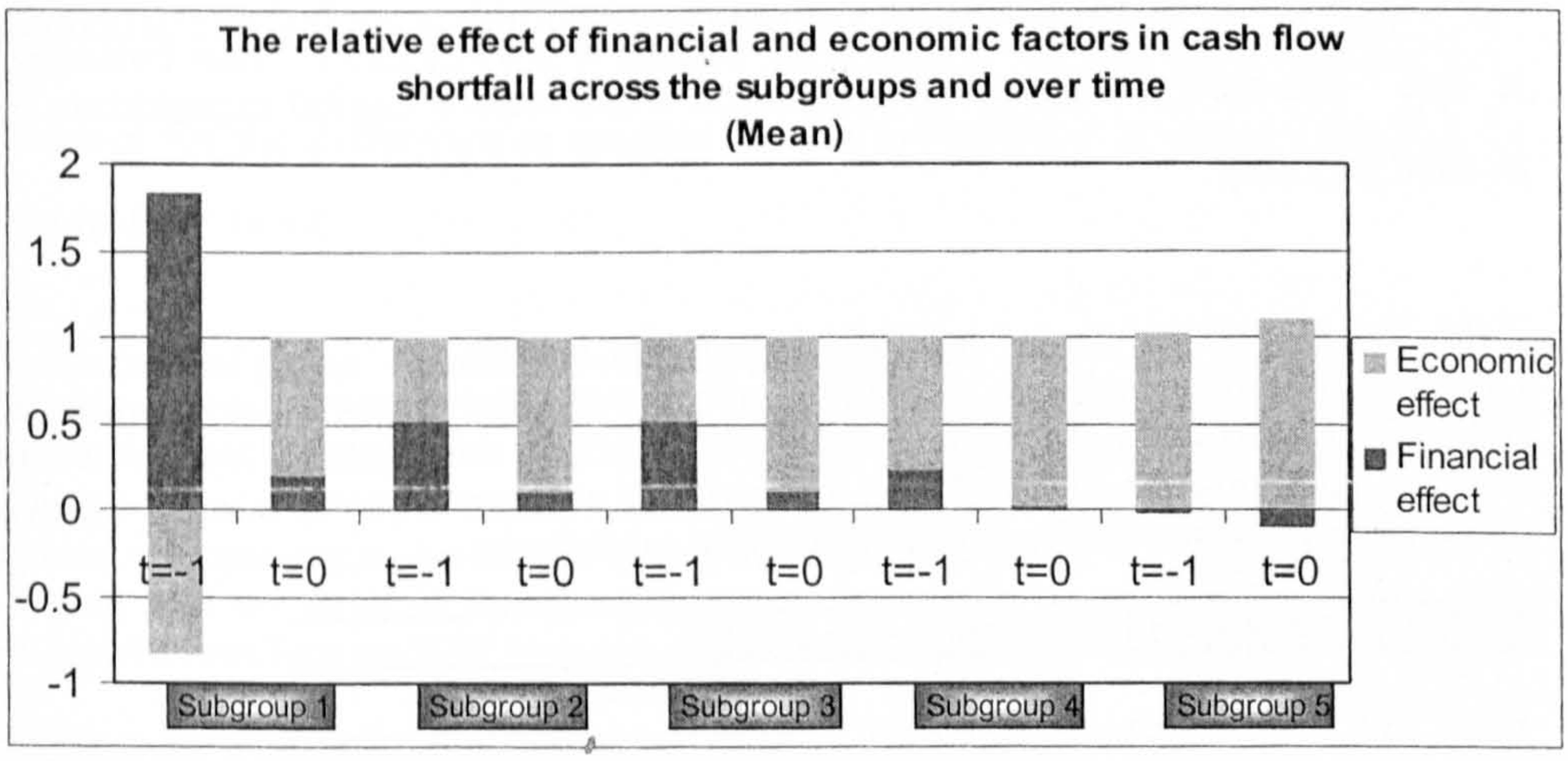
Panel A: Normalised sources of coverage shortfall in first year of distress (t=0)

	Full sample			Subgroup 1			Subgroup 5		
Factor	Mean	Median	Standard Deviation	Mean	Median	Standard deviation	Mean	Median	Standard deviation
Leverage	0.065	0.058	0.11553	0.214	0.198	0.06109	-0.088	-0.056	0.11949
Operating performance	0.935	0.942	0.11553	0.786	0.802	0.06109	1.088	1.056	0.11949

Panel B: Normalised sources of coverage shortfall in prior year of distress (t=-1)

Factor	Full sample			Subgroup 1			Subgroup 5		
Leverage	0.550	0.088	3.78903	1.821	0.198	8.23414	-0.015	-0.004	0.43162
Operating performance	0.450	0.912	3.78903	-0.821	0.802	8.23414	1.015	1.004	0.43162

Figure 5.1 The relative effect of financial and economic factors in cash flow shortfall across the subgroups and over time (mean and median graphs)



C. Liquidity constraints

Table 5.5 presents distressed firms' capital expenditure trends over a variety of time windows. Capital expenditure growth rates are calculated as current year capital expenditures less previous year capital expenditures divided by previous year capital expenditures. The three rows in Table 5.5 shows capital expenditure growth rates between year -1 and 0, year 0 and +1, and year -1 and +1.

As we can see in the table, between year -1 and 0, 75% of distressed firms have a lower capital expenditure growth rate than their industry medians, and that the median industry-adjusted growth rate is -61%; between year -1 and +1, 84% distressed firms have a lower capital expenditure growth rate than their industry medians, and the median industry-adjusted growth rate drop to a median of 111%. In addition, from Table 5.3 we can see that firm capital expenditure scaled by assets in year -1 is 0.015, and this reduced to 0.010 in year 0 and again to 0.005 in year +1. So the reduction in capital expenditure is not just due to companies contracting in size. The results suggest that distressed firms reduce capital expenditure to provide much needed liquidity.

Table 5.5 Distressed firms' capital expenditure trends

This table shows distressed firms' capital expenditure over a three-year window: one year prior to the onset of distress (t=-1), the first year of interest coverage shortfall (t=0), and the second year of interest coverage shortfall (t=+1). Capital expenditure growth rates are calculated as current year capital expenditures less previous year capital expenditures divided by previous year capital expenditures.

Median capital expenditure growth - full sample

From t=	To t=	Median growth rate	Fraction negative	Median Industry-adjusted growth rate	Fraction negative
-1	0	-0.2831	0.6237	-0.6105	0.7527
0	1	-0.4954	0.7500	-0.5060	0.7300
-1	1	-0.7085	0.7957	-1.1094	0.8387

In summary, my results in this section show that distressed firms significantly under-perform their industry median across a range of financial and operating variables, even in the year prior to distress. Indeed distressed firms have statistically and economically significantly higher level of leverage than their industry in the year prior to distress. Distressed firms' leverage ratios

deteriorate during distress. There are also signs of sample firms having difficulty to pay back their suppliers. In addition, the results from source of distress investigation show that poor operating performance is the primary feature of firm distress, not leverage. Lastly, my sample firms make significantly less capital expenditure investment prior to the onset of distress, as well as significant reductions in capital expenditure during distress, to provide much needed liquidity. The relative value of these variables in indicating distress in the year prior to its onset of distress is examined on a multivariate basis in section 5.4.3.

5.4.2 Nature of distress among SOEs and non-SOEs

In this section, I investigate the existence of soft budget constraint using firm liquidity measure – capital expenditure trend. In addition, I also investigate the distressed SOE sub-sample to confirm that they are indeed distressed.

Table 5.6 shows distressed SOE and non-SOE firms' capital expenditure trends over a variety of time windows, i.e., between year -1 and 0, year 0 and +1, and year -1 and +1, on an absolute and industry-adjusted basis. I employ the Wilcoxon signed rank test (with its Z-statistic) as my test for significance for the difference in median capital expenditure growths rates between SOE firms and non-SOE firms.

Table 5.6 Distressed firms' capital expenditure trends

This table compares distressed SOE vs non-SOE firms' capital expenditure growth rates over a three-year window: one year prior to the onset of distress (t=-1), the first year of interest coverage shortfall (t=0), and the second year of interest coverage shortfall (t=+1). Capital expenditure growth rates are calculated as current year capital expenditures less previous year capital expenditures divided by previous year capital expenditures. I employ the Wilcoxon signed rank test (with its Z-statistic) to test for significance for the difference in median capital expenditure growths rates between SOE firms and non-SOE firms.

Median capital expenditure growth comparison - SOEs vs Non-SOEs

From t=	To t=	SOE Median	Non-SOE Median	Wilcoxon Z-statistics		Ind-adj SOE Median	Ind-adj non-SOE Median	Wilcoxon Z-statistics	
-1	0	-0.1985	-0.36887	1.5723		-0.3561	-0.96232	**2.0724**	**
0	1	-0.4657	-0.59078	0.4374		-0.6144	-0.41224	0.4864	
-1	1	-0.5575	-0.81618	**2.1768**	**	-1.0916	-1.45505	0.6479	

* Significant at the 10% level
** Significant at the 5% level
*** Significant at the 1% level

Table 5.6 provides some evidence for the existence of soft budget constraints for distressed SOE firms. On an absolute basis (not industry-adjusted), over the three years period, non-SOEs have a

significantly greater reduction in capital expenditure than SOEs (-82% vs. -56%). In addition, between year -1 and 0, on an industry adjusted basis, non-SOE firms reduce their capital expenditure at a much greater rate (both statistically and economically) than their SOE counterpart. The median industry adjusted capital expenditure growth rate between year -1 and 0 for non-SOE firms is -96%, and the median figure for SOE firms is only -36%.

Although evidence suggests that distressed SOEs face soft budget constraint whereas their non-SOE face hard budget constraint, these distressed SOEs seem to still face liquidity constraints, albeit to a lesser extent than their non-SOE counterparts. To fully understand the characteristics of the distressed SOEs , I repeat the Table 5.3 univariate analysis for the 51 distressed SOEs. The results are presented in Table 5.7.

The results in Table 5.7 are very similar to those of the full sample analysis reported in Table 5.3. Overall the distressed SOE firms experience poor performance across all categories during distress. Prior to distress, they are more leveraged than their industry and their operating performance is also significantly worse than their industry median. Of particular interest and different to the full sample, the distressed SOEs industry-adjusted gross profit margin is negative and is statistically different from zero in the year prior to the onset of distress, suggesting that the distressed SOEs are less efficient at an earlier stage than their non-SOE counterparts on an industry-adjusted basis. In addition, different to the full sample results in Table 5.3, distressed SOE firms' employee/asset for SOEs are significantly higher than their industry median in year -1, providing further evidence on the inefficiencies of SOEs.

The analysis in this section shows that the distressed SOEs significantly reduce investment over and above their industry median level, and that their performance overall is significantly worse than their industry. In the context of soft budget constraint, the SOE firms selected by my distress selection procedure are indeed distressed, albeit with different investment behaviour when facing distress. The existence of soft budget constraint does not seem to save the distressed SOEs being distressed, as these SOEs demonstrate deteriorating financial and operating performance relative to their industry, similar to the full sample of distressed firms.

Table 5.7 Performance indicators of the 51 distressed SOE firms compared with their industries between t=-1, 0 and +1

This table presents empirical results of the comparison of the 51distressed SOE firms with their industries, in terms of operating and financial performance, liquidity, employees, and investment, before and during the first year of coverage shortfall and during the second year of coverage shortfall (t=-1, 0, +1). For each empirical proxy I give median values of the proxy for the firm and its industry median, the median change in the proxy's value between firm and industry median, and a test of significance of the difference. I employ the Wilcoxon signed rank test (with its Z-statistic) to test for significance for the difference between firm and industry median.

	t=-1			t=0			t=+1		
	Sample firm Median	Industry median Median	firm Industry-adjusted Median	Sample firm Median	Industry median Median	firm Industry-adjusted Median	Sample firm Median	Industry median Median	firm Industry-adjusted Median
Selection criteria									
Interest cover	3.4939	7.3271	**-4.0071 *****	-3.1657	6.1197	**-9.6552 *****	-3.8374	6.2944	**-11.1100 *****
Variables									
Operating performance									
EBITDA/asset	0.0563	0.0830	**-0.0234 *****	-0.0549	0.0788	**-0.1267 *****	-0.1058	0.0770	**-0.1792 *****
Gross Profit Margin	0.1809	0.2121	**-0.0380 ***	0.1226	0.2036	**-0.0965 *****	0.0897	0.2064	**-0.1420 *****
EBITDA/sales	0.1538	0.1596	-0.0093	-0.1582	0.1621	**-0.3625 *****	-0.2664	0.1576	**-0.4145 *****
Sales/asset	0.3947	0.4663	**-0.1546 *****	0.2791	0.5100	**-0.2112 *****	0.3019	0.4845	**-0.1793 *****
Financial performance									
Interest Expense/assets	0.0152	0.0122	**0.0038 *****	0.0219	0.0127	**0.0081 *****	0.0268	0.0116	**0.0156 *****
Current liab/total liab	0.9505	0.9356	0.0072	0.9493	0.9371	-0.0010	0.9547	0.9371	0.0052
Current liab/asset	0.4192	0.3765	**0.0881 ***	0.5009	0.3928	**0.1430 *****	0.6422	0.4093	**0.2335 *****
Total liab/asset	0.5139	0.4679	**0.0899 ****	0.6298	0.4592	**0.1477 *****	0.7263	0.4829	**0.2307 *****
Total debt/asset	0.3273	0.2328	**0.0944 *****	0.3491	0.2496	**0.1695 *****	0.4447	0.2720	**0.1771 *****
Accounts payable/total liab	0.1396	0.1905	-0.0291	0.1408	0.1981	**-0.0668 ****	0.1116	0.1619	**-0.0525 ****
AccountsPayable/Sales	0.2214	0.1315	**0.0620 *****	0.2680	0.1317	**0.1376 *****	0.2953	0.1329	**0.1656 *****
Liquidity									
Current asset/current liab	1.1354	1.3920	**-0.1771 ***	0.7234	1.3207	**-0.5566 *****	0.5460	1.1943	**-0.693686 *****
Investment									
Capex/assets	0.0140	0.0416	**-0.0247 *****	0.0122	0.0535	**-0.0256 *****	0.0082	0.0509	**-0.0411 *****
Employee									
Sales/employee	0.1582	0.2332	-0.0773	0.1111	0.3024	**-0.1742 *****	0.1181	0.3451	**-0.1822 *****
Asset/employee	456365.8	532136.0	**-95560.7 *****	473760.3	574695.8	-84750.8	470660.6	695966.3	**-157924.7 *****

* Significant at the 10% level
** Significant at the 5% level
*** Significant at the 1% level

5.4.3 Early indicators of distress

In this section, I conduct multivariate analysis to take account of the relative influence of the various factors discussed in the previous subsections as early indicators of distress. As discussed in section 5.3.2, the dependent variable is a dummy variable that takes on the value of zero if the firm becomes distressed during the period of study, and one if otherwise. Independent variables include accounting ratios from year -1, measuring the financial and operating performance of sample firms. Other variables include ownership, market (tradability) and geographic location. The sample consists of the 100 distressed firms and 84 matching non-distressed sample firms. The 84 matching firms are selected by matching industry SIC and year, and then choosing the firm with interest coverage ratio equal or closest to the industry median[41].

My previous analyses in section 5.4.1 provide strong associations between distress and firm performance one year prior to the onset of distress. In particular, I find that in year -1, the median earnings before interest tax depreciation and amortisation scaled by assets (EBITDA/assets) of the distressed firms are significantly lower than their industry median, and these distressed firms face severe liquidity constraints. In addition, distressed firms' industry adjusted median sales/assets is low. Finally, the source of distress analysis in section 5.4.2 shows that in year 0, the key feature of distress is poor operating performance, contributing to 96% of coverage shortfall.

As such I expect that firm operating and financial performance and investment behaviour in the year prior to distress provide significant indicators of the probability of distress. I also expect operating performance to provide stronger signal of the probability of distress than financial performance. Table 5.8 reports the correlation matrix of the variables and Table 5.9 reports the regression results. I report the coefficients and the associated z-statistic. As a standard practice, since the coefficients in logit regressions cannot be interpreted as the marginal effect of a unit change of the independent variables on the probability of distress, I also report the marginal effects in the table.

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[41] Some of the 100 distressed firms have the same 4-digit SIC, in this case I only choose one matching healthy firm for this 4-digit SIC industry. This is why there are fewer matched firms than distressed firms.

Table 5.8 shows that there are very few significant correlations between the variables. As expected, there are significant correlation between the two leverage variables (TLIABAS and CLIABAS); the SALAS ratio and the APSAL ratio; the three ownership variables (DSOE, DSOEO and STATE); and between the DSOEO ownership dummy and the FLOATING ratio. These have been taken into account when constructing and running the regression specifications.

I report seven specifications for the regression. SALAS, EBITDAAS and CAPEXAS are all significant at the 1% level and the signs are as expected in all seven specifications. The marginal contributions of CAPEXAS and EBITDAAS are much larger than that of TLIABAS, indicating that a unit change in EBITDAAS and CAPEXAS has a greater influence on the probability of distress than a unit change in TLIABAS. In Specifications (1) and (2), DSOE and DSOEO carry positive signs, as predicted, but not significant. The third State ownership variable STATE is not significant either and the results are not reported here.

Specification (3) removes the state dummies but introduces the FLOATING variable. The overall test statistics for the regression demonstrated by the McFaddden R^2 and Loglikelihood slightly improve, while SALAS, EBITDAAS and CAPEXAS are still significant with similar magnitudes in their marginal contribution to the probability of distress. FLOATING has a negative but significant coefficient. The interpretation of this coefficient is somewhat complicated. As discussed in Section 3.2, this variable can be viewed as a proxy for governance, as a larger proportion of tradable shares signals transparency in management. However it also means that, since tradable-share shareholders are more dispersed (Xu and Wang 1999, Qian et al 2002), coordination failure may occur in the event of performance decline/distress. The negative sign shows the higher the FLOATING ratio, the more likely the firm is distressed. My explanation is that in this case, the effect of coordination failure dominates the governance effect. Another potential explanation is that since FLOATING is negatively correlated with STATE and DSOEO, with a correlation in the region of -0.35. This negative coefficient could also mean that the higher the FLOATING ratio, the lower the absolute State ownership ratio, hence firms are more likely to be distressed.

Table 5.8 The correlation matrix for the logit regression

	Y	TLIABAS	STATE	SALAS	FLOATING	EBITDAAS	DUMMYASHARE	DSOEO	DSOE	DLOC	CLIABAS	CAPEXAS	APSAL
Y	1												
TLIABAS	-0.25034	1											
STATE	0.127798	-0.053631	1										
SALAS	0.323304	0.001698	0.154774	1									
FLOATING	-0.21956	0.107908	-0.30279	-0.20125	1								
EBITDAAS	0.312973	-0.192574	0.10963	0.183502	-0.15257	1							
DUMMYASHARE	-0.05507	0.081673	-0.02074	0.056575	-0.12278	1.66E-03	1						
DSOEO	0.146036	-0.056393	**0.843434**	0.129976	**-0.35474**	0.148467	-0.10684	1					
DSOE	0.072892	-0.037999	**0.869263**	0.080578	-0.14568	0.078464	-0.03152	**0.65163**	1				
DLOC	-0.01496	0.122255	-0.09914	-0.06109	-0.06842	0.040231	-0.09967	-0.03284	-0.12576	1			
CLIABAS	-0.27983	**0.945734**	-0.08734	0.037721	0.151792	-0.18753	0.085307	-0.09886	-0.07607	0.169863	1		
CAPEXAS	0.406692	-0.162752	-0.12272	0.117072	-0.02068	0.189174	-0.08189	-0.02788	-0.08978	-0.13152	**-0.24248**	1	
APSAL	-0.20125	0.161501	-0.05853	**-0.25547**	0.077227	-0.09858	-0.08147	-0.09109	-0.10404	0.010861	0.169338	**-0.20264**	1

Table 5.9 Early indicators of distress

This table shows seven specifications of logit regressions denoted by (1), (2), (3), etc., estimating the probability of distress (measured by interest coverage ratio<1 in two consecutive years). The dependent variable is a dummy variable that takes on the value of zero if the firm become distressed during the period of study, and one if otherwise. The independent variables are accounting ratios from year -1, one year before the onset of distress. The sample consists of 100 distressed firms and 84 matching non-distressed sample firms. Not all variables are available for all firms. N denotes the number of observations for each specification. I categorise the independent variables into operational, financial, investment, ownership, market and geographic location. For the operational category, SALAS denotes the ratio of sales over assets; EBITDAAS denotes the ratio of earnings before interest tax depreciation and amortisation divided by assets. In the financial category, TLIABAS denotes the ratio of total liabilities over assets; CLIABAS denotes the ratio of current liabilities over assets. In the investment category, CAPEXAS denotes capital expenditure over assets. In the ownership category, DSOEO takes the value of one if the firm is under the absolute control of the State and zero otherwise; as a substitute for DSOEO, DSOE takes the value of one if the firm is under the relative control of the State and zero otherwise. STATE is the percentage of State ownership. FLOATING ratio denotes the tradability of the sample firms' equity shares; it is the ratio of the number of tradable shares over total shares (tradable + non-tradable). DLOC is a geographic location dummy, equals 1 if the firm's headquarter is located in a major or coastal city, and 0 otherwise. The coefficient of an independent variable is under the number of the regression specification; underneath the coefficient is its z-statistic. The number to the right of each coefficient is the marginal effect of that independent variable.

Variable	Expected sign	(1)		(2)		(3)		(4)		(5)		(6)		(7)	
Constant		**-1.528**	-1.17	**-1.637**	-1.18	0.244	1.02	**-1.368**	-1.15	**-1.256**	-1.13	**-1.340**	-1.14	**-1.522**	-1.16
		-2.049 **		-2.065 **		0.228		-1.882 *		-1.810 *		-1.927 **		-2.100 **	
Operational															
SALAS	+	**2.194**	1.25	**2.176**	1.24	**2.131**	1.24	**2.191**	1.24	**2.250**	1.25	**2.255**	1.25	**2.265**	1.25
		3.310 ***		3.276 ***		3.123 ***		3.287 ***		3.279 ***		3.258 ***		3.276 ***	
EBITDAAS	+	**16.711**	5.32	**17.397**	5.70	**15.604**	4.76	**16.836**	5.39	**17.420**	5.71	**18.310**	6.24	**18.263**	6.21
		2.951 ***		3.045 ***		2.771 ***		2.998 ***		3.013 ***		3.134 ***		3.110 ***	
EBITDASAL	+														
Financial															
TLIABAS	-	**-3.832**	-1.47	**-3.765**	-1.46	**-3.946**	-1.48	**-3.802**	-1.46						
		-3.091 ***		-3.053 ***		-3.152 ***		-3.103 ***							
CLIABAS	-									**-4.533**	-1.57	**-5.071**	-1.66	**-5.031**	-1.65
										-3.360 ***		-3.633 ***		-3.585 ***	
Investment															
CAPEXAS	+	**13.460**	3.84	**13.406**	3.82	**14.124**	4.11	**13.172**	3.73	**10.840**	2.96	**11.325**	3.10	**11.639**	3.20
		3.084 ***		3.074 ***		3.256 ***		3.045 ***		2.515 ***		2.621 ***		2.664 ***	
Ownership															
DSOEO	+	0.494	1.05											0.407	
		1.215												0.983	
DSOE	+			0.358	1.04										
				0.904											
Market															
FLOATING	?					**-0.039**	-1.00								
						-2.005 **									
Location															
DLOC	+											**0.746**	1.08	**0.768**	1.08
												1.624 *		1.672 *	
Loglikelihood		-82.488		-82.816		-81.098		-83.230		-80.908		-79.560		-79.076	
McFadden R^2		0.326		0.324		0.338		0.320		0.326		0.337		0.341	
N		178		178		178		178		174		174		174	

* Significant at the 10% level
** Significant at the 5% level
*** Significant at the 1% level

Specification (4) drops the FLOATING variable but both McFaddden R^2 and Loglikelihood decrease. Specification (5) replaces TLIABAS with CLIABAS and the results are very similar. Specification (6) introduces the location dummy DLOC, and the coefficient for DLOC is positive and significant at the 10% level, confirming the results from Wei et al. (2003), i.e. firms located in a major or coastal city have a better chance of avoiding distress, all else being equal. Possible explanations are firms have better access to funds and/or their management is sounder. Specification (7) includes DSOEO. The magnitude and sign of the coefficient for DSOEO is consistent with what I find in Specifications (1) and (2), and is also insignificant.

In summary, overall the investment, operational and financial performance variables are statistically significant, mostly at the 1% level, and the signs are as expected. However the marginal contributions to the probability of distress by investment and operational variables are much larger than those of the financial variables. This confirms my previous analyses that the main cause of distress is poor operating performance and lack of investment. The location dummy variable is significant while the state control variables are not significant in the logit model, although the sign is as expected.

5.5 ROBUSTNESS CHECKS

For a robustness check, I use the two alternative methods defined in section 5.2 to locate distressed firms. Firstly I use the market returns approach and select firms at the bottom 5% of 3-year cumulative market returns. 303 firms were selected for the period 1999-2003. Of the 303 companies, 44 companies coincide with the accounting measure. In other words, 44 out of the selected 100 firms (44%) are also defined as in distress by the cumulative 3-years market return measure. Secondly I use the method employed by the Chinese stock exchange regulator to define ST/PT firms and find that 74 of the 100 selected firms were ST/PT firms between t=-2 and t=+2. This further confirms the severity of distress of my sample firms. I repeat the three main forms of empirical analyses on the two sub-samples and the results are analysed in this section.

5.5.1 Market measure subsample

I firstly repeat the univariate analysis on the 44 distressed firms and the results as shown in Table 5.10 are very similar to the full sample. As shown in Table 5.11, the source of distress analysis shows that the main feature of distress at year 0 is poor operating performance, with operating factor contributing to 94% of cash flow shortfall. The mean and median operating and leverage factors are not very different from each other so the values are not as skewed as the full sample. In addition, in the year prior to distress, the leverage factor plays a more important role than in the year of distress itself, the mean leverage factor accounts for 34% of cash flow shortfall and the median leverage factor accounts for 15% of cash flow shortfall. So these results confirm those from the full sample, that leverage factor plays a greater role in year -1 than in year 0 for a significant minority of firms.

In the multivariate logit regression analysis, I repeat the standard procedure to derive the most appropriate specifications, i.e. by considering the correlation table and adopt the backward procedure, rather than merely using the significant independent variables from the full sample analysis. The results, as shown in Table 5.12, are again similar to those from the full sample, with EBITDAAS, CLIABAS (TLIABAS) and CAPEXAS significant at the 1% level. The location dummy DLOC and the FLOATING ratio are no longer significant and so are not reported here. The STATE variable was not significant in the full sample but is highly significant here (specification (1) and (2)).

Table 5.10 Performance indicators of the 44 distressed firms compared with their industries between t=-1, 0 and +1

This table presents empirical results of the comparison of the 44 distressed firms selected by the market measure with their industries, in terms of operating and financial performance, liquidity, employees and investment, before and during the first year of interest coverage shortfall and during the second year of interest coverage shortfall (t=-1, 0, +1). For each empirical proxy I give median values of the proxy for the firm and its industry median, the median change in the proxy's value between firm and industry median, and a test of significance of the difference. I employ the Wilcoxon signed rank test (with its Z-statistic) to test for significance for the difference between firm and industry median.

	t=-1			t=0			t=+1		
	Sample firm Median	Industry median Median	firm - Industry-adjusted Median	Sample firm Median	Industry median Median	firm - Industry-adjusted Median	Sample firm Median	Industry median Median	firm - Industry-adjusted Median
Selection criteria									
Interest cover	4.1467	8.6862	**-4.3212 *****	-3.3925	7.0132	**-13.4394 *****	-4.8400	6.7954	**-13.7681 *****
Variables									
Operating performance									
EBITDA/asset	0.0636	0.0953	**-0.0270 *****	-0.0673	0.0780	**-0.1531 *****	-0.1120	0.0700	**-0.1905 *****
Gross Profit Margin	0.2348	0.1853	0.0278	0.1266	0.1866	**-0.0613 ****	0.1169	0.1801	**-0.0981 *****
EBITDA/sales	0.1707	0.1452	0.0051	-0.2846	0.1254	**-0.4628 *****	-0.6723	0.1293	**-0.7995 *****
Sales/asset	0.3607	0.6774	**-0.2321 *****	0.2279	0.5620	**-0.2886 *****	0.1888	0.5734	**-0.3050 *****
Financial performance									
Interest Expense/assets	0.0155	0.0117	**0.0055 *****	0.0220	0.0117	**0.0134 *****	0.0291	0.0097	**0.0214 *****
Current liab/total liab	0.9612	0.9429	0.0104	0.9773	0.9595	0.0062	0.9896	0.9469	0.0041
Current liab/asset	0.4169	0.3936	0.0296	0.4884	0.3943	**0.1355 *****	0.6750	0.4274	**0.2690 *****
Total liab/asset	0.5023	0.4600	**0.0309 ***	0.5559	0.4579	**0.1453 *****	0.7416	0.4720	**0.2509 *****
Total debt/asset	0.3193	0.1866	**0.0562 *****	0.3445	0.2067	**0.1923 *****	0.4342	0.2357	**0.2302 *****
Accounts payable/total liab	0.1355	0.2047	**-0.0489 ***	0.1190	0.2190	**-0.1142 *****	0.0736	0.1691	**-0.0965 *****
AccountsPayable/Sales	0.1665	0.1378	**0.0547 ****	0.2409	0.1440	**0.1195 *****	0.3070	0.1572	**0.1656 *****
Liquidity									
Current asset/current liab	1.2703	1.4555	**-0.2174 ***	0.9742	1.3914	**-0.5160 *****	0.5191	1.3356	**-0.8287 *****
Investment									
Capex/assets	0.0154	0.0420	**-0.0232 *****	0.0118	0.0525	**-0.0419 *****	0.0023	0.0473	**-0.0414 *****
Employee									
Sales/employee	0.1891	0.3507	**-0.1363 *****	0.1424	0.3653	**-0.2229 *****	0.1033	0.4380	**-0.2841 *****
Asset/employee	607986.2	585505.9	-16471.4	641391.1	721379.3	-81444.2	561313	840983.1	-140053.7

* Significant at the 10% level
** Significant at the 5% level
*** Significant at the 1% level

Table 5.11 Source of cash flow shortfall analysis for the 44 distressed firms selected by the market measure

This table shows distressed firms' capital expenditure over a three-year window: one year prior to the onset of distress (t=-1), the first year of interest coverage shortfall (t=0), and the second year of interest coverage shortfall (t=+1). Capital expenditure growth rates are calculated as current year capital expenditures less previous year capital expenditures divided by previous year capital expenditures. Panel A shows median capital expenditure growth rates between year -1 and 0, year 0 and +1, and year -1 and +1. In Panel B, I employ the Wilcoxon signed rank test (with its Z-statistic) to test for significance for the difference in median growths rates between SOE firms and non-SOE firms over the same three-year window.

Panel A: Normalised sources of coverage shortfall in first year of distress (t=0)

	Full sample		
Factor	Mean	Median	Standard Deviation
Leverage	0.067	0.061	0.09330
Operating performance	0.933	0.939	0.09330

Panel B: Normalised sources of coverage shortfall in prior year of distress (t=-1)

Leverage	0.336	0.152	0.99061
Operating performance	0.664	0.848	0.99061

Table 5.12 Early indicators of distress for the 44 distressed firms selected by the market measure

This table shows five specifications of logit regressions denoted by (1), (2), (3), etc., estimating the probability of distress (measured by interest coverage ratio<1 in two consecutive years). The dependent variable is a dummy variable that takes on the value of zero if the firm become distressed during the period of study, and one if otherwise. The independent variables are accounting ratios from year -1, one year before the onset of distress. The sample consists of 44 distressed firms and 40 non-distressed matching sample firms. Not all variables are available for all firms. N denotes the number of observations for each specification. I categorise the independent variables into operational, financial, investment, ownership, market and geographic location. For the operational category, SALAS denotes the ratio of sales over assets; EBITDAAS denotes the ratio of earnings before interest tax depreciation and amortisation divided by assets. In the financial category, TLIABAS denotes the ratio of total liabilities over assets; CLIABAS denotes the ratio of current liabilities over assets. In the investment category, CAPEXAS denotes capital expenditure over assets. In the ownership category, DSOEO takes the value of one if the firm is under the absolute control of the State and zero otherwise; as a substitute for DSOEO, DSOE takes the value of one if the firm is under the relative control of the State and zero otherwise. STATE is the percentage of State ownership. FLOATING ratio denotes the tradability of the sample firms' equity shares; it is the ratio of the number of tradable shares over total shares (tradable + non-tradable). DLOC is a geographic location dummy and takes on the value of 1 if the firm's headquarter is located in a major or coastal city and 0 otherwise. The coefficient of an independent variable is under the number of the regression specification; underneath the coefficient is its z-statistic.

Variable	(1)	(2)	(3)	(4)	(5)
Constant	-0.249	0.141	-2.092	-0.203	-4.290
	-0.206	0.111	-1.057	-0.140	-2.979 ***
Operational					
SALAS				6.472	
				2.278 **	
EBITDAAS			42.309		45.938
			2.061 **		2.633 ***
Financial					
TLIABAS	-7.816				
	-2.981 ***				
CLIABAS		-9.490	-7.338	-9.074	
		-2.971 ***	-2.156 **	-2.675 ***	
Investment					
CAPEXAS	49.575	46.997	29.478	22.921	31.749
	3.275 ***	3.192 ***	2.372 **	2.207 **	2.433 **
Ownership					
STATE	4.167	3.945	2.212		
	2.656 ***	2.498 ***	1.090		
Location					
DLOC				-1.708	
				-1.1667	
Loglikelihood	-20.470	-19.739	-14.270	-18.547	-17.830
McFadden R^2	0.635	0.648	0.742	0.669	0.678
N	81	81	80	81	80

* Significant at the 10% level
** Significant at the 5% level
*** Significant at the 1% level

5.5.2 ST/PT measure subsample

Here I report the empirical analysis on the selected 74 ST firms. The univariate analysis again shows very similar results to the full sample, as shown in Table 5.13. The source of distress analysis results presented in Table 5.14 shows the same trend, i.e. leverage factor plays a greater role in causing cash flow shortfall in year -1 than in year 0, although the difference in magnitude is not as great as in the full sample.

Table 5.13 Performance indicators of the 74 distressed firms compared with their industries between t=-1, 0 and +1

This table presents empirical results of the comparison of the 74 distressed firms selected by the ST/PT measure with their industries, in terms of operating and financial performance, liquidity, employees and investment, before and during the first year of interest coverage shortfall and during the second year of interest coverage shortfall (t=-1, 0, +1). For each empirical proxy I give median values of the proxy for the firm and its industry median, the median change in the proxy's value between firm and industry median, and a test of significance of the difference. I employ the Wilcoxon signed rank test (with its Z-statistic) to test for significance for the difference between firm and industry median.

	t=-1			t=0			t=+1		
	Sample firm Median	Industry median Median	firm Industry-adjusted Median	Sample firm Median	Industry median Median	firm Industry-adjusted Median	Sample firm Median	Industry median Median	firm Industry-adjusted Median
Selection criteria									
Interest cover	3.2443	7.7998	**-4.4373 *****	-2.8944	6.7015	**-11.6964 *****	-4.3445	6.8894	**-12.0517 *****
Variables									
Operating performance									
EBITDA/asset	0.0565	0.0919	**-0.0335 *****	-0.0608	0.0783	**-0.1526 *****	-0.1075	0.0673	**-0.1854 *****
Gross Profit Margin	0.1937	0.2023	-0.0319	0.1266	0.1871	**-0.0894 *****	0.1080	0.1940	**-0.1195 *****
EBITDA/sales	0.1560	0.1596	-0.0067	-0.2538	0.1351	**-0.4528 *****	-0.6283	0.1326	**-0.7551 *****
Sales/asset	0.3556	0.5643	**-0.2120 *****	0.2549	0.5084	**-0.2542 *****	0.2196	0.4904	**-0.2786 *****
Financial performance									
Interest Expense/assets	0.0167	0.0118	**0.0054 *****	0.0231	0.0117	**0.0134 *****	0.0305	0.0113	**0.0203 *****
Current liab/total liab	0.9600	0.9356	0.0211	0.9012	0.9345	0.0060	0.9580	0.9410	0.0032
Current liab/asset	0.4531	0.4072	**0.0805 *****	0.5459	0.3990	**0.1552 *****	0.6959	0.4274	**0.2727 *****
Total liab/asset	0.5149	0.4857	**0.0353 *****	0.6305	0.4646	**0.1680 *****	0.7635	0.4829	**0.2910 *****
Total debt/asset	0.3305	0.2396	**0.0848 *****	0.3767	0.2333	**0.1913 *****	0.4664	0.2625	**0.2176 *****
Accounts payable/total liab	0.1395	0.1844	**-0.0448 ****	0.1116	0.1970	**-0.0968 *****	0.0789	0.1671	**-0.0987 *****
AccountsPayable/Sales	0.2142	0.1378	**0.0755 *****	0.2518	0.1489	**0.0861 *****	0.2952	0.1405	**0.1303 *****
Liquidity									
Current asset/current liab	1.0059	1.3729	**-0.2326 *****	0.8090	1.3914	**-0.5999 *****	0.4652	1.2733	**-0.8307 *****
Investment									
Capex/assets	0.0130	0.0426	**-0.0218 *****	0.0072	0.0532	**-0.0429 *****	0.0049	0.0509	**-0.0431 *****
Employee									
Sales/employee	0.2052	0.3086	**-0.0688 *****	0.1065	0.3496	**-0.1876 *****	0.1026	0.4053	**-0.1953 *****
Asset/employee	575364.8	546587.6	-5749.6	513461.4	669646.0	-78851.1	594552	780863.3	**-134778.7 ****

* Significant at the 10% level
** Significant at the 5% level
*** Significant at the 1% level

Table 5.14 Source of cash flow shortfall analysis for the 74 distressed firms selected by the ST/PT measure

This table shows distressed firms' capital expenditure over a three-year window: one year prior to the onset of distress (t=-1), the first year of interest coverage shortfall (t=0), and the second year of interest coverage shortfall (t=+1). Capital expenditure growth rates are calculated as current year capital expenditures less previous year capital expenditures divided by previous year capital expenditures. Panel A shows median capital expenditure growth rates between year -1 and 0, year 0 and +1, and year -1 and +1. In Panel B, I employ the Wilcoxon signed rank test (with its Z-statistic) to test for significance for the difference in median capital expenditure growths rates between SOE firms and non-SOE firms over the same three-year window.

Panel A: Normalised sources of coverage shortfall in first year of distress (t=0)

Factor	Mean	Median	Standard Deviation
Leverage	0.070	0.058	0.10989
Operating performance	0.930	0.942	0.10989

Panel B: Normalised sources of coverage shortfall in prior year of distress (t=-1)

Leverage	0.680	0.069	4.41451
Operating performance	0.320	0.931	4.41451

Table 5.15 Early indicators of distress for the 74 distressed firms selected by the ST/PT measure

This table shows four specifications of logit regressions denoted by (1), (2), (3), etc., estimating the probability of distress (measured by interest coverage ratio<1 in two consecutive years). The dependent variable is a dummy variable that takes on the value of zero if the firm become distressed during the period of study, and one if otherwise. The independent variables are accounting ratios from year -1, one year before the onset of distress. The sample consists of 74 distressed firms and 64 non-distressed matching sample firms. Not all variables are available for all firms. N denotes the number of observations for each specification. I categorise the independent variables into operational, financial, investment, ownership, market and geographic location. For the operational category, SALAS denotes the ratio of sales over assets; EBITDAAS denotes the ratio of earnings before interest tax depreciation and amortisation divided by assets. In the financial category, TLIABAS denotes the ratio of total liabilities over assets; CLIABAS denotes the ratio of current liabilities over assets. In the investment category, CAPEXAS denotes capital expenditure over assets. In the ownership category, DSOEO takes the value of one if the firm is under the absolute control of the State and zero otherwise; as a substitute for DSOEO, DSOE takes the value of one if the firm is under the relative control of the State and zero otherwise. STATE is the percentage of State ownership. FLOATING ratio denotes the tradability of the sample firms' equity shares; it is the ratio of the number of tradable shares over total shares (tradable + non-tradable). DLOC is a geographic location dummy, equals 1 if the firm's headquarter is located in a major or coastal city and 0 otherwise. The coefficient of an independent variable is under the number of the regression specification; underneath the coefficient is its z-statistic.

Variable	(1)	(2)	(3)	(4)
Constant	-4.956	-0.239	0.837	-2.521
	-2.311 **	-0.186	0.930	-1.476
Operational				
SALAS	2.301	4.007	3.740	
	1.774 *	3.435 ***	3.476 ***	
APSAL				
EBITDAAS	49.315			52.252
	3.386 ***			4.207 ***
Financial				
TLIABAS	-6.254	-8.581	-8.579	
	-2.670 ***	-4.723 ***	-4.704 ***	
CLIABAS				
Investment				
CAPEXAS	24.182	22.719	21.556	25.676
	3.086 ***	4.010 ***	3.957 ***	3.233 ***
Ownership				
STATE				
DSOE				
Market				
FLOATING				-0.063
				-1.644 *
DummyAShare	2.072	1.014		
	1.602	0.257		
Location				
DLOC	2.34299	1.8745	1.8923	1.2057
	2.49261 ***	2.7442 ***	2.7922 ***	1.6295 *
Loglikelihood	-29.173	-43.951	-44.594	-33.801
McFadden R^2	0.690	0.536	0.530	0.641
N	136	137	137	136

* Significant at the 10% level
** Significant at the 5% level
*** Significant at the 1% level

The multivariate regression also confirms the results from the full sample, i.e., EBITDAAS, CAPEXAS and CLIABAS (TLIABAS) are significant at the 1% level. DSOE, DSOEO and STATE are not significant, and so are not reported here. Different to the market measure subgroup, the location dummy DLOC is positive and significant at the 1% level. This result suggests that the market does not pick up on the location element, but when the firms are defined as distressed by the exchange regulators, its headquarter location becomes a significant contributor to the probability of distress.

In summary, I select two distinct subgroups of distressed firms from my full sample of 100 firms, using two alternative distress definitions. I repeat the full empirical analyses on these two sub-samples and the findings are very similar to the full sample, thus providing evidence for the robustness of my full sample results.

5.6 SUMMARY AND CONCLUSION

This chapter analyses distressed firms' operating and financial performance and operating efficiency before and during the first two years of distress for 100 firms that became distressed between 1999 and 2003. I firstly investigate the nature and source of distress in China versus what is documented in the literature, I then explore differences within China between SOEs and non-SOEs.

Firstly by examining my full sample of distressed firms, I find that prior to distress, distressed firms have statistically and economically significantly higher level of leverage than their industry, but very low capital expenditure. In addition, their profitability measured relative to asset base is also significantly worse than their industry, although profit margin on sales is not worse than industry median until the first year of distress.

In my attempt to assess the relative contribution of leverage effect (financial distress) and operating performance effect (economic distress), I find that firm level poor operating performance is the main feature. In the first year of distress, the poor operating performance effect is responsible for 94% of distress firms' cash flow shortfall and only the remaining 6% is caused by the leverage effect. My results are consistent with the findings of Asquith et al. (1994) but are different to those of Andrade and Kaplan (1998). The difference probably reflects the difficulty in empirically distinguishing financial and economic distress.

In addition, I find that the leverage effect plays a greater role in the year prior to distress than it does during distress. The findings support the view that financial renegotiations in distress in China are inefficient. The economic nature of distress in my sample firms is more prominent than what Asquith et al. (1994) find. There are three potential explanations for this predominant economic nature of distress in these Chinese firms: 1. My sample selection criteria of at least two consecutive interest coverage shortfall means that the selected firms suffer more sustained distress than those studied in Asquith et al. (1994); 2. Due to the inefficient renegotiation process in China between distressed firms and their creditors, i.e. as firms in financial difficulty are less likely to be able to access vital funds,

they are more likely to experience sustained distress; 3. Managers are less proactive in managing financial distress due to lack of experience (since competition is a relatively new concept) and the lack of bankruptcy threat. As for the cause of such inefficiency in renegotiation during firm distress, in addition to information asymmetry, potential explanations include the lack of a timely financial renegotiation process for companies in distress. Also, consistent with Asquith et al. (1994), distressed firms reduce capital expenditure dramatically to relief severe liquidity constraints.

The multivariate logit regression analysis confirms my results that distressed firms' significant reduction of capital expenditure (CAPEX) prior to distress is a precursor of the subsequent distress. In addition, sales, earnings before interest tax depreciation and amortisation (EBITDA) and total liability scaled by assets also have significant influence on the probability of distress. Changes in EBITDA/assets and CAPEX/assets have much greater influence than in total liability/assets on the probability of distress, confirming my source of distress results that the main contributor to firm distress is economic. I repeat my empirical analyses on two subgroups selected by two alternative definitions of distress, and find my main results robust.

Secondly I examine the existence of soft budget constraint in the Chinese context by comparing SOEs with non-SOEs in their investment behaviour. I find that the distressed non-SOE firms experience a significantly greater reduction in capital expenditure, both statistically and economically, than their SOE counterparts. The results suggest that as non-SOEs face hard budget constraints, they have no alternatives but to cut investment; whereas their SOE counterparts have soft budget constraints and the reduction of investment is less severe. Nonetheless, the fact that the distressed SOEs also significantly reduce investment over and above their industry median level, and that their performance overall is significantly worse than their industry, suggests that in the context of soft budget constraint, the SOEs selected by my distress selection procedure are also distressed, albeit with different level of liquidity constraints when facing distress. The existence of soft budget constraints does not seem to save the distressed SOEs from being distressed. With this result financial resources (bank loans) are not efficiently allocated. Furthermore, distressed SOE firms suffer statistically significantly lower gross profit margin than their industry median, partially as the result of significantly higher employee headcount (scaled

by assets) relative to industry median, suggesting that these firms are less efficient at an earlier stage than their non-SOE counterparts on an industry-adjusted basis.

Based on my empirical results, the policy implications are, firstly, the long waited new bankruptcy code needs to address the existing inefficiencies in the distress resolution process in order to facilitate the efficient (re)allocation of resources, creditor protection should be provided and contract enforcement strengthened; secondly, the negative consequence of soft budge constraints should be avoided so that bank loans are not utilised to save non-viable SOEs, and that market led competition is encouraged and maintained. For investors, the Chinese accounting data seem to provide credible information about the possibility of a firm entering into distress. As for SOE firm managers, the fact that distressed SOEs are indeed distressed despite their facing soft instead of hard budget constraints, suggests that investment decisions in adverse conditions need to be proactively managed for the viability of the firms.

In this chapter I use accounting information to examine the nature and source of corporate distress in China. Next I will examine the valuation effect of restructuring announcements made by these 100 distressed companies.

CHAPTER 6 – VALUATION EFFECT OF RESTRUCTURING ANNOUNCEMENTS BY CHINESE FIRMS IN DISTRESS

6.1. INTRODUCTION

This chapter investigates the distress resolution process in China by examining the valuation effect of 303 hand-collected restructuring announcements made by the 100 distressed companies studied in chapter 5. The main restructuring types covered in this chapter include mergers and acquisitions, asset sales, debt and managerial restructuring.

This chapter identifies successful restructuring strategies that have proven to be value enhancing against the backdrop of government ownership and under-developed legal and financial systems. This is the first study to investigate distress resolution process in China. This is important as this topic is under-researched in the context of emerging markets. The establishment of the two Chinese stock exchanges offers the opportunity to apply the established event study methodology and facilitates the inclusion of China in the literature.

Following the previous chapter, I also follow two distinct themes in this chapter. Firstly I will investigate all relevant issues using my full sample announcements; I will then separate my sample by ownership, into SOE and non-SOE subgroup, to shed light on the role of government in the distress resolution process.

As discussed in section 4.4.1, existing literature states that although M&A does not seem to be successful in revamping the performance of distressed firms, it may be the best available alternative at the time (Clark and Ofek 1994). In addition, its use is limited by equity-holders' incentive to maintain their option value (Weston et al. 2001). Using US data, Kahl (2001) argues that M&A are used in re-allocating assets to more efficient uses and that although Chapter 11 tends to maintain inefficient going concerns, these distressed firms are not tolerated for long by the market. In the case of China, WB (2000) documents frequent employment of M&A. My data confirms the findings in WB (2000) and Kahl (2001), as in my sample, 22% announcements were related to M&A. Due to the difficulties in officially liquidating economically unviable firms in the Chinese context due to the lack of effective

bankruptcy laws, these observed mergers are perhaps a beneficial outcome in terms of improved use of resources.

Although there are extensive event studies in the literature on M&A, there is very little study in the context of distress. As summarised by Weston et al. (2001), empirical studies on M&A appear to support the notion that value is created by M&A activities and that target firms receive positive premium. My full sample event study results show that consistent with the literature, M&A with payment announcements generate positive market reaction.

Asset sales and swaps constitute over one third of our sample announcements. Empirical studies from developed economies suggest asset sales are fairly commonly and successfully utilised by financially distressed firms (Asquith et al 1994, Lasfer et al 1996, Lai and Sudarsanam 1997, and Kahl 2001). Lasfer et al. (1996) argue that the main driver for shareholder wealth enhancement of the distressed firms comes from the avoidance of bankruptcy costs by using cash generated from selling assets to meet debt obligations.

Contrary to the above findings from the above US/UK studies, my event study results show that neither voluntary nor forced asset sales are perceived as positive news by the Chinese market. My explanation is that the lack of bankruptcy threat in China minimises the potential benefit of avoiding bankruptcy costs which shareholders otherwise have to bear. This is a credible explanation - recall that in the two case studies in section 4.2.1, the motivation for asset sales is associated with providing liquidity for the operations of the firm and for managers to embark upon new operating strategies, rather than for meeting debt obligations as recorded elsewhere (Asquith et al. 1994; Lasfer et al. 1996). Another potential explanation for the negative market reaction is that distressed assets are sold below their intrinsic value (Pulvino 1998, Shleifer and Vishny 1992, and Garnaut et al. 2004).

Debt related restructuring consists of 17% of my sample announcements. The relatively low number of debt related restructuring confirms the claim that there may be a lack of creditor participation/protection in the Chinese bankruptcy and distress resolution process. Debt restructuring can only go in one of two directions – increasing or decreasing firm

leverage. However, to successfully restructure a distressed firm by increasing its leverage relies on an effective debt governance environment. Extensive studies based on developed economies provide strong evidence to support the notion that debt has a positive disciplinary role (Jensen 1986, Wruck 1990) and that the market reacts unfavourably to announcements on decreasing leverages but favourably to those on increasing leverages. In the case of China, according to Tian (2005), debt governance is not at work especially among SOEs. My full sample results on debt related restructuring is not clear cut and this issue will be further examined in the SOE and non-SOE subgroups.

Managerial restructuring consists of 21% of my sample announcements. Evidence from developed economies shows that forced senior management departure is greeted with relief by the market, but voluntary resignations do not cause a price reaction (Denis and Denis 1995, Dherment-Ferere and Renneboog 2002). In a socialist economy, if there is asymmetric information on managerial skills, good managers have little incentives to exert effort (Roland and Sekkat 2000). Furthermore, Garnaut et al. (2004) argue the main problem in China is that poor performance is not credibly punished. Also, this type of announcement may signal to the market about the unfavourable current and future performance of the companies. As expected, I find that managerial restructuring is not seen by the market as an effective restructuring strategy, except for the foreign invested enterprises (FIE). There are two potential explanations for the different results between the FIE firms and the domestic firms (SOE plus non-SOE): 1). FIEs are not subject to the domestic managerial pool; 2). FIEs are more efficient in monitoring their managers and incumbent managers are replaced more quickly than they are by the domestic companies. Unfortunately this positive result is derived on a small sample - with data availability this topic would provide an interesting avenue for future research.

Having examined my full sample event study results, I then categorise my sample firm announcements by ownership, into SOE and non-SOE subgroups. Firstly, consistent with my expectations, M&A with payment strategy works for the non-SOE firms where the announcements signal the market that the distressed firm is of value to the acquirer, whom the market expects to manage the distressed firm more efficiently. On the contrary, the

market reacts negatively to M&A without payment[42] announcements made by the distressed SOE firms (the targets). This negative market reaction suggests that a mere controlling ownership "transfer" of a distressed SOE firm, from one government agency to another is not perceived as effective by the market and is value destroying. This finding highlights the undesired role of government in the M&A process.

Furthermore, M&A with payment announcements made by SOE firms do not cause statistically significant price reaction. For this type of announcement, if the potential buyer is a non-SOE, the intended transaction would entail the privatisation of the seller SOE; however if the potential buyer is another SOE, the market may anticipate no real change to the distressed enterprise. In addition, as highlighted by the Joint-WIT case in section 2.5.2, distressed SOEs may be associated with overly large labour force which can be costly to settle. This non-reaction by the market suggests that the negative and the positive effects in this type of announcement cancel each other out.

The effectiveness of debt restructuring is mixed. As argued by Tian (2004), for SOEs, larger bank loans lead to higher free cash flow and significantly higher administrative expenditure. As expected, I find the market reacts strongly in favour of leverage increasing announcements made by non-SOE firms but is somewhat indifferent to those made by the SOE firms (the results are negative but not statistically significant). The evidence supports the argument that debt governance is not at work among SOEs. As a result, restructuring distressed SOEs by increasing their leverage is not seen as good news by the market.

In addition, the market reacts significantly negatively to non-SOEs' attempt to renegotiate their debt contracts with their banks, but not significantly (economically but not statistically significant) to the same announcements made by SOEs. In the presence of soft budget constraint, this result suggest that the market perceive non-SOEs' attempt to renegotiate with their banks to be unsuccessful. These results provide weak evidence to suggest that there may be lending bias by the Chinese banks towards SOEs. The evidence so far suggests that the role of government in corporate China is not desirable yet resources are

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[42] Note that "without payment" should not be confused with "payment terms". Detailed explanation has been given in section 4.2.1.

still allocated with a bias towards SOEs. This finding raises the question of what needs to be done to ensure the efficient allocation of financial resources (bank loans).

The fundamental message of the findings is that the political motivation of the government manifests itself in the distortion of fund allocation and operating investment decisions in the Chinese distress resolution process.

The rest of this chapter is structured as follows: section 6.2 summarises the relevant literature, defines research questions and discuss some practical issues in using event study in the context of China, in which section 6.2.1 contains the China-related hypotheses and section 6.2.2 the SOE versus non-SOE ones; section 6.3 presents event study methodology; section 6.4 describes the data sample; section 6.5 discusses the empirical results and section 6.6 concludes.

6.2 LITERATURE REVIEW ON RESTRUCTURING STRATEGIES AND HYPOTHESES

Studies based on developed economies such as US and UK show that firms in distress often employ a variety of restructuring strategies to resolve the situation, including financial and non-financial restructuring strategies. As discussed in section 3.1.2 and section 4.2, I broadly group restructuring strategies into three categories: asset, financial, and managerial restructuring, and look at each in turn. I will firstly review the literature for my full sample event study, and then review the literature on these three categories in a SOE vs non-SOE context.

6.2.1 Valuation effect of restructuring announcements in China (China vs non-China)

A. Asset restructuring

Following Weston et al. (2001), I categorise both M&A and asset sales in the asset restructuring category.

As discussed in detail in section 4.4.1, existing literature states that although M&A does not seem to be successful in revamping the performance of distressed firms, it may be the best available alternative at the time. In addition, its use is limited by equity-holders' incentive

to maintain their option value. Despite what the literature predicts, M&A has been used extensively in China to resolve distress (WB 2000). The popularity of such strategy is partly motivated by the institutional features of China, as discussed in detail in section 4.2.1.

There is very little existing literature on M&A using event study in a distress context. However as discussed in section 4.4.1, extensive empirical studies on M&A show that following M&A announcements, target firms receive significantly positive premium. As such I expect M&A with payment announcements made by my sample firms, which are all targets, receive positive market reaction.

H1: M&A with payment announcements generate positive market reaction.

In the asset sales category, assets include tangible fixed assets, intangible assets and equity shareholding in another company (usually non-tradable)[43]. Existing empirical studies suggest asset sales is fairly commonly utilised by financially distressed firms and often leads to successful resolution of distress (Asquith et al 1994, Lasfer et al 1996, Lai and Sudarsanam 1997 and Kahl 2001). Lasfer et al (1996) argue that the main driver for shareholder wealth enhancement comes from distressed firms' asset sales generating sufficient cash to meet their debt obligations and avoiding bankruptcy. In general, the empirical evidence on the impact of paying down debt on shareholder wealth gains from asset sales is positive, albeit at differing magnitudes (Ofek 1993, Brown et al 1994, Lasfer et al 1996, Denis and Kruse 2000).

However this evidence is gathered from developed economies. In the case of China, although there exist formal insolvency and liquidation procedures, these procedures are rarely used and distressed and insolvent firms tend to be kept afloat (WB 2000, Garnaut et al. 2004, Tian 2005, Allen et al. 2005, and chapter 5 of this thesis). Without the explicit threat of bankruptcy, the shareholders would not gain the benefit of avoiding bankruptcy costs by selling assets to avoid "bankruptcy". Also, these assets may be sold or exchanged

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[43] Distressed Chinese companies selling and transferring their minority shareholding of another company is documented in ADB (2000). Although this type of asset sales does not seem to be widely adopted by distressed firms elsewhere when they restructure, it is observed in the Netherlands (Frederikslust et al. 2003).

under their intrinsic values (Shleifer and Vishny 1992; Pulvino 1998), especially for those sold in a hurry to pay back debt. As such I expect the market reacts negatively to the asset sales/swaps type of announcement.

H2: Announcements both of asset sales, whether voluntary or forced, and of asset swaps generate negative market reaction.

B. Debt restructuring

Debt restructuring is when a firm restructures its debt structure by either increasing or decreasing firm leverage, for example interest forgiveness / deduction / extension, debt obligation transfer or taking on new debt, or debt-for-equity swaps.

As discussed in detail in section 4.3.1, increasing firm leverage by taking on debt not only provides the firm with tax shield, but also puts pressure on the firm for efficiency to meet debt obligations, in other words, debt provides positive disciplinary role (Jensen 1986, Wruck 1990). Studies on exchange offers provide empirical evidence to support this claim (Weston et al 2001). However, according to Tian (2004), debt governance is not at work in China, as larger bank loans lead to higher free cash flow and significantly higher administrative expenditure. Therefore I expect negative market reaction to distressed firms' announcements on increasing leverage.

H3: Announcements to increase leverage receive negative market reaction.

C. Managerial restructuring

This includes senior management and board members departure (voluntary or forced) and new appointments. The issue of managerial restructuring as a response to performance decline has been studied extensively in the developed economies and the findings on forced managerial resignations are ambiguous. Denis and Denis (1995) study 69 forced resignations and find that the dismissal of underperforming management is greeted with relief by the market. Dherment-Ferere and Renneboog (2002) recorded a 0.5% positive abnormal return over forced CEO departure in a sample of listed French companies, whereas voluntary resignations do not cause a price reaction. On the contrary, Warner et

al. (1988) uncover significantly negative cumulative abnormal returns of –4.3% subsequent to forced turnover (in the period of 5 to 30 days following the dismissal). This negative market reaction is explained by an information effect which masks the real impact of forced turnover on shareholder wealth: forced turnover may signal poor current and future performance which had not yet been uncovered nor anticipated by the market.

In a socialist economy, if there is asymmetric information on managerial skills, good managers have little incentives to exert effort (Roland and Sekkat 2000). Also, according to Garnaut et al (2004), the main problem in the Chinese managerial system is that managers are rewarded for their success but not credibly punished for their failure. Furthermore, this type of announcement signals to the market about the unfavourable current and future performance of the companies. So I expect the event study results on this type of news to be negative. Furthermore, FIE firms have better access to international managerial labour market and hence this type of announcements made by FIE firms is expected to receive positive market reaction, consistent with Denis and Denis (1995) and Dherment-Ferere and Renneboog (2002).

H4: Domestic firms' managerial restructuring announcements are associated with negative price reaction.

H5: FIE firms' aanagerial restructuring announcements are associated with positive price reaction.

6.2.2 SOE vs non-SOE

A. Asset restructuring

For the M&A category, as discussed in detail in section 4.2.1, one pertinent feature of the Chinese M&A is that for some SOEs, mergers take place under the initiative of the government without payment involved, i.e., the without payment type of merger is when the former government controlling shareholder simply transfers its holding to another government shareholder. Since the government has a very different motivation when restructuring, I expect the market to react differently to the different types of M&A.

I expect that M&A with payment announcements enhance shareholder wealth. As the new owner is willing to pay a price for the distressed company, the market has a positive anticipation of the new company and I expect the market to react favourably. I also expect that the without payment announcements generate negative abnormal returns, as this type of transaction merely changes the ownership of the distressed firm from one government agency to another, with the government's primary motivation being maintaining political and social stability over profit maximisation. Explicitly:

H6: M&A with payment announcements by non-SOEs generate positive market reaction.
H7: M&A without payment (by SOEs) announcements generate negative market reaction.

The expectation of M&A with payment announcements by SOEs is mixed. On the one hand, the payment effect of the announced transaction signals the market the positive prospect of the company. In other words, the distressed company is of value to the buyer and the buyer may be able to manage the company more effectively. In addition, the case of a non-SOE buyer means the state controlled shares will be privatised. On the other hand, as highlighted by the Joint-WIT case in section 2.5.2 and the significantly lower assets/employee ratio in Table 5.7, distressed SOEs often face inefficiency caused by overly large labour force which could result in costly settlement for the new owner. As such I expect mixed market reaction:

H8: M&A with payment announcements by SOEs do not generate significant market price reaction.

B. Debt restructuring

As discussed in the previous section, Tian (2004) argues that larger bank loans lead to higher free cash flow and significantly higher administrative expenditure. He also finds such relationship is positive and significant in SOEs but in the case of non-SOEs, it is not significant. Consistent with what the literature predicts, I expect that the market reacts positively to increasing debt announcements made by non-SOEs but negatively to those by SOEs.

H9: The market reacts negatively to the increasing leverage type of news made by non-SOE firms

H10: The market reacts negatively to the increasing leverage type of news made by SOE firms

In addition, renegotiation[44] between debtors and creditors is also frequently observed in other studies (Asquith et al. 1994, Lai and Sudarsanam 1997). Naturally, the distressed firms' ability to renegotiate debt with their lenders is perceived as good news. In the context of soft budget constraints, I would expect that the SOEs have more power in their attempt to renegotiate with their banks than their non-SOE counterpart. Thus I expect that the market anticipates the likelihood/success of creditor renegotiations and reacts favourably to such announcements made by SOEs, but not is necessarily positively to those made by non-SOEs.

H11: The market reacts favourably to debt renegotiation announcements made by SOEs

H12: The market does not react favourably to debt renegotiation announcements by non-SOEs (so the expected result is either negative or no reaction).

6.3 EVENT STUDY METHODOLOGY

Event study methodology has been widely employed to study China related topics (Chui and Kwok 1998, Abdel-khalik et al. 1999, Bailey et al. 1999, Cheng 2000, Gao and Tse 2004, Barnes and Ma 2002). Barnes and Ma (2002) provide evidence to support the semi-strong form efficiency of the Chinese stock markets.

Some of the typical emerging market characteristics which may affect the design of the model are worth mentioning here. For example, Mei et al. (2004) believe the Chinese stock market's trading is speculative. Abdel-khalik et al. (1999) use Sharpe's market model as they believe that given the lack of quality of the published financial data or the information generating these data, more rigorous research designs are not justified. Gao and Tse (2004) suggest there is information leakage before events take place. In addition, as discussed in

[44] Note that unlike for H9 and H10, this type of announcement does not necessarily change the firm's leverage level.

section 4.1, listed companies which have been making losses (negative net profit) for two consecutive years are categorised as "special treatment" (ST), whereas companies that have been making losses for three consecutive years are to be put into "Particular Treatment" (PT) status and are suspended from the Exchanges. ST firms are limited to 5% share-price movements up or down daily. The above characteristics need to be taken into account in my event study model specification.

I employ the market model as the benchmark for expected returns[45]. One motivation for employing the market model benchmark is that, in general this model results in smaller variances of abnormal returns and produces smaller correlations across security abnormal returns giving closer conformity to standard statistical tests (Beaver, 1981).

Using the notation from Strong (1992), the basic model is:

$$H_O : E(R_j \mid y_j) - E(R_j) = E(\varepsilon_j \mid y_j) = 0, \text{ for all } y_j$$

$$H_A : E(R_j \mid y_j) - E(R_j) = E(\varepsilon_j \mid y_j) \neq 0, \text{ for at least one } y_j \qquad (1)$$

where R_j is the return on security j in an event period of interest;

y_j is the information signal of the firm specific event of interest, in this case the restructuring announcement;

$E(R_j \mid y_j)$ is the expected value of the return distribution on security j during the event period;

$E(R_j)$ is the expected value of the return distribution on security j, unconditional with respect to y_j, but will be conditional on information available prior to the event period and, in some research design, on the return of the market index in the event period;

$E(\varepsilon_j \mid y_j)$ denotes the unexpected or abnormal return on security j conditional on the signal y_j.

[45] We also employ the market adjusted model and the results do not change.

The alternative hypothesis states that for the information signal y_t to possess information content, $E(\varepsilon_j \mid y_j)$ must be non-zero.

The alternative hypothesis states that for the information signal y_t to possess information content, $E(\varepsilon_j \mid y_j)$ must be non-zero. As stated by Strong (1992), the basic structure of an event study analysis is:

1. Identify event dates;
2. Within the overall test period (TP) of interest, calculate abnormal returns for each firm and for each period within TP:

   $$\varepsilon_{jt} = R_{jt} - E(R_{jt}), \text{t} \in \text{TP is the measurement interval}$$

3. Compute the mean abnormal return across firms in the sample, possibly cumulated over the TP, as an estimate of $E(\varepsilon_j \mid y_j)$ and test whether $E(\varepsilon_j \mid y_j)$=0 using a test statistic of the form: $\frac{\text{mean abnormal return}}{\text{standard deviation}}$.

Within this structure, various dimensions affect the calculation of abnormal returns such as calculation of returns, return measurement interval, the benchmark for abnormal returns, the choice of estimation period (ET) and test period (TP), and the choice of market index. As a result in the current literature there is an established spectrum of experimental designs over which researchers are given discretion. As stated by Jarrow et al. (2001), it is important to note that only when underlying assumptions are valid can refinements improve the power of tests and efficiency of parameter estimates. In addition, minor variations in empirical methods have little impact on inferences. Hence, in general simplicity is preferred over the sophistication in modelling or statistical techniques (Brown & Warner 1980, 1985; Malatesta 1986; and Strong 1992). More recently, Levy (2000) also indicates that the choice of model does not significantly affect the results. These observations are particularly applicable to the Chinese context due to the emerging nature of its stock market.

Next, I will explain the steps by which the event study analyses will be carried out and define my choice of the above mentioned dimensions.

Step 1: The benchmark of abnormal return – the expected return

The market model[46] is expressed as follows:

$$R_{jt} = \alpha_j + \beta_j R_{mt} + \varepsilon_{jt} \qquad (2)$$

Where ε_{jt} is a mean zero, independent disturbance term in period t, β_j is the beta, i.e. the sensitivity of return j to the market movements, α_j measures the mean return over the period not explained by the market, and R_{mt} is the return on the respective stock exchange all shares index for the period t. This equation partitions R_{jt} into a systematic component linearly related to R_{mt} and an unsystematic component ε_{jt}, which is uncorrelated with R_{mt}. The effect of the restructuring announcements is meant to be fully captured in this unsystematic component, ε_{jt}, and the assumption being that the information signal and R_{mt} are independent.

In addition, the market adjusted returns benchmark will also be employed to compare the results and check for the robustness of the models. The market adjusted returns benchmark uses the same formula as equation (2), and it specifies that α_j=0 and β_j=1. This is based on the assumption that, because alpha equals zero in the long run and betas vary over time, their estimation will be inaccurate to base around a model of expected returns, though they will eventually converge to unity. In this case, the ex-post abnormal return of security j in period t that controls for market effects is given by:

$$AR_{jt} = \varepsilon_{jt} = R_{jt} - R_{mt} \qquad (3)$$

Step 2: Estimation Period (EP) and Test Period (TP)

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[46] According to Strong (1992), the market model has probably been the most popular benchmark adopted in event studies.

The implementation of the two models requires the definition of the event of interest, the event date, the event window or test period (TP), which is the period over which the returns will be examined and the estimation period for benchmark returns. The event day (t=0) is defined as the day when the firm announces its restructuring plan. However there might be information leakages before the announcement or drifts after the announcement in restructuring related events. Furthermore, the price cap of +/-5% for ST firms also needs to be taken into account. In order to fully capture the information content of the announcements, we use a wider event window of 81 days (t=-41, ..., 0, ..., +41). This width of event window is also employed by other studies of similar nature, e.g. Lasfer et al. (1996).

EP needs to be specified to estimate the benchmark expected return, i.e. the alpha and beta in equation (2) for the market model, and subsequent t-tests for both the market model and the market adjusted model. I employ daily log returns and an estimation window of 200 days (t=-241 to -41).

Step 3: The calculation of abnormal returns and cumulative abnormal returns

Daily returns are used and the calculation is given by:

$$R_{jt} = \ln(P_{jt}) - \ln(P_{jt-1}) \qquad (4)$$

Where P_{jt} and P_{jt-1} are the closing price of security j at the end of day t and t-1 respectively.

Market return is calculated as follows:

$$R_{mt} = \ln(I_t) - \ln(I_{t-1}) \qquad (5)$$

Where I_t and I_{t-1} are the market index levels at the end of day t and t-1 respectively.

For the market adjusted model, the expected return is the market return hence the abnormal return AR_{jt} equals $(R_{jt} - R_{mt})$.

Cumulative Abnormal returns (CAR) are calculated as follows:

$$CAR_j = \sum_{t \in TP} AR_{jt} \qquad (6)$$

For the market model, before expected returns of each security during TP can be estimated, the security's alpha and beta will be estimated by performing an OLS regression using security returns during EP. Therefore the abnormal return for each security is given by equation (2) and calculated as follows:

$$AR_{jt} = R_{jt} - (\alpha_j + \beta_j R_{mt}) \qquad (7)$$

CARs are used to fully capture the effect of an event on share prices, and to accommodate uncertainty over the exact date of the event (Strong 1992). Also, this takes care of the issue of price movement cap for 'ST' firms discussed in section 6.3.2. In this chapter, CAR(0, +1) or CAR_2 denote the accumulation of abnormal returns over a two days window (t=0, +1); CAR(-2, +2) or CAR_5 denote that of a 5 days window (t=-2, …0, …+2); and CAR(-5, +5) or CAR_{11} denote that of a 11 days window (t=-5, …0, …+5).

The significance tests of the AR will be carried out, using equation 8 below:

$$AR_t : t = \frac{\varepsilon_{t \in TP}}{S(AR)} \approx N(0,1), \qquad (8)$$

where $S(AR) = \sqrt{\frac{\sum_{t \in EP} (\varepsilon_t - \frac{1}{T-s+2} \sum_{t \in EP} \varepsilon_t)^2}{T-s+1}}$ (9)

The significance tests of the CAR will be carried out, using equation 10 below:

$$CAR_{TP} : t = \frac{\sum_{t \in TP} \varepsilon_{jt}}{S(CAR)} \approx N(0,1), \qquad (10)$$

$$\text{where } S(CAR) = \frac{S(AR)}{\sqrt{T-s+1}} \qquad (11)$$

Step 4: Average abnormal returns (AAR) and cumulative average abnormal returns (CAAR)

AARs are calculated to measure the average impact of a distress resolution category with multiple events that have been announced in multiple dates. The calculation is as follows:

$$AAR_t = \frac{1}{N}\sum_{j=1}^{N} \varepsilon_{jt}, t \in TP \quad (12)$$

Where N = number of announcements relating to the same distress resolution category.

Similarly, CAAR are calculated by accumulating AARs over an event window:

$$CAAR_{TP} = \sum_{t \in TP} AAR_t \quad (13)$$

The significance tests of the AAR and CAAR will be carried out, using equations (14) and (16) below respectively.

$$AAR_t : t = \frac{\frac{1}{N}\sum_{j}^{N} \varepsilon_{jt}}{S(AAR)} \approx N(0,1), \quad (14)$$

$$\text{where } S(AAR) = \sqrt{\frac{\sum_{t \in EP} (AAR_t - \frac{1}{T-s+2}\sum_{t \in EP} AAR_{jt})^2}{T-s+1}} \quad (15)$$

$$CAAR_{TP} : t = \frac{CAAR_{TP}}{S(CAAR)} \approx N(0,1), \quad (16)$$

$$\text{where } S(CAAR) = \frac{S(AAR)}{\sqrt{T-s+1}} \quad (17)$$

The parametric t-test on AAR assumes implicitly that the mean effect of the event is identical across securities within the group (Strong 1992, p545) and that cross-sectional abnormal returns are independent (absent of cross-correlation). Considering the small sample properties and possible non-normal distribution of the abnormal returns, I also apply a nonparametric generalised sign test (Cowan 1992). The test examines if the number of stocks with positive abnormal returns exceeds the number expected in the absence of abnormal performance in the event window. The null hypothesis for the traditional sign test is that p=0.5. In the generalized sign test, the null hypothesis does not

specify p as 0.5, but as the fraction of positive returns computed across stocks and across days in the parameter estimation period. The fraction of positive abnormal returns expected in the 200-day estimation window under the null hypothesis is:

$$\hat{\rho} = \frac{1}{n}\sum_{i=1}^{N}\frac{1}{200}\sum_{t=-240}^{-41} S_{it} \qquad (18)$$

where $S_{it} = 1 \text{ if } AR_{it} > 0$
0 otherwise

The generalised sign test statistic uses the normal approximation to the binomial distribution (with parameter ρ) and is defined as follows:

$$Z_G = \frac{w - n\hat{\rho}}{\sqrt{n\hat{\rho}(1-\hat{\rho})}} \qquad (19)$$

where w is the number of stocks in the event window for which the (cumulative) average abnormal return (CAR_i) is positive. The generalised sign test is more powerful than the rank test as the length of the event window increases and for highly volatile stock returns (Cowan 1992).

6.4 DATA

I use the 100 distressed companies defined in section 5.3.1 as my distressed companies universe, and collected 417[4748] restructuring announcements made by these 100 companies in compliance with the Stock Exchanges' official announcement requirements, over a six years period, between year -2 (i.e. two years prior to the onset of distress) and year +3 (three years following the onset of distress). The details of the source of these announcements are discussed in section 2.3.2 and 4.2.1. A list of the announcements is presented in Appendix 6. In the M&A category, all firms in my sample are a takeover target. In addition, in the asset sales category, I classify announcements into forced and

[47] I have in fact collected 479 announcements, of which 417 are initial announcements (when the news first arrive at the market) and 62 are made up by updates and approval/completion announcements, mainly for the M&A category. I conducted event study on these 62 announcements and the results show that updates do not carry information but the approval/completion announcements carry extra information content to which the market responds. This result suggests that the added certainty of completion, rather than the stated intention of M&A, carry significant additional information content.

[48] In all M&A cases, the target remains a listed entity with its own independent annual reports after the completion of the takeover transactions.

voluntary asset sales subgroups. An asset sales announcement is classified into the forced asset sales subgroup if it explicitly states that the proceeds of the intended asset sales (or assets being auctioned under court order) are used to pay back debts due, and an asset sales announcement without the explicit mention of using proceeds to pay back debts due is classified into the voluntary asset sales subgroup.

In the debt related restructuring category, I classify announcements into three subgroups: increasing leverage; renew debts and debt renegotiation. The increasing leverage subgroup includes both announcements on taking new bank loans and on the firms' intention to take new bank loans; the renew debts subgroup includes announcements on these firms' bank debt renewal; the debt renegotiation subgroup includes announcements on details of the firms' renegotiations with their creditors on debt renewal, interest and/or principal forgiveness/reduction, or maturity extension. In all three subgroups, the bank loan due dates are either imminent or already overdue. Lastly, in the managerial restructuring category, there are three subgroups: a). resignation and appointments; b). termination and appointments; and c). appointments only.

Among the 417 announcements, 94 were eliminated to avoid confounding measurement of price reaction discussed in the previous section. In addition, 20 events were eliminated as there are more than 30 missing daily returns in the test period (TP) for each of the 20 events. Table 6.1 presents the remaining 303 announcements by distress year and by restructuring type. 17% of these announcements are M&A with payments and 5% are M&A without payments; 40% are asset sales or swaps; 17% are debt related restructuring; and 21% relate to managerial restructuring. Of the 303 announcements, 1% was made during the second year prior to the onset of distress (year -2) and 15% were made during the first year prior to the onset of distress (year t = -1); the percentage nearly doubled to 28% during the onset of distress (year 0) and peaked to 29% during the year following the onset of distress (year +1); only 4% were announced three years after the onset of distress (year +3).

Table 6.1 Announcement data

This table presents the 303 announcements by restructuring type, ownership and distress year. Column 1 shows the announcement type; Column 2 presents ownership type; Column 3 – 8 present the number of announcements made in each distress year, where t=0 denotes the first year the firm suffers from interest coverage shortfall, and t=-2 denotes two years prior to the first year of interest coverage shortfall; Column 9 presents the total of different restructuring announcement categories and Column 10 presents the percentage by announcement type. Ownership type includes foreign invested enterprises (FIE), Other (i.e. non-SOE) and SOE firms. FIE type does not occur in all restructuring categories.

Announcement type	Ownership	Year t = -2	Year t = -1	Year t = 0	Year t = +1	Year t = +2	Year t = +3	Grand Total	%
1. Asset Restructuring									
1.1 M&A									
M&A with payments	Other		3	9	8	2		22	
	SOE		6	9	8	7		30	
Subtotal			**9**	**18**	**16**	**9**		**52**	**17%**
M&A without payments	SOE	1	4	6	2	3		16	
Subtotal		**1**	**4**	**6**	**2**	**3**		**16**	**5%**
1.2 Asset sales/swaps									
Asset sales	Other		7	7	2	13	1	30	
	SOE		7	9	7	6		29	
Subtotal			**14**	**16**	**9**	**19**	**1**	**59**	**20%**
Forced asset sales	FIE				1			1	
	Other		1	2	3	3	1	10	
	SOE			2	6	4		12	
Subtotal			**1**	**4**	**10**	**7**	**1**	**23**	**8%**
Asset swaps	Other	1	1		5	3		10	
	SOE	1	3	10	6	6		26	
Subtotal		**2**	**4**	**10**	**11**	**9**		**36**	**12%**
2. Debt related restructuring									
Debt related – increasing leverage	Other		4	3	5	1	2	15	
	SOE		1	3	4	2	2	12	
Subtotal			**5**	**6**	**9**	**3**	**4**	**27**	**9%**

Debt related - renew debts	Other	1	2	2	3		8	
	SOE		1		1		2	
Subtotal		**1**	**3**	**2**	**4**		**10**	**3%**
Debt related - renegotiation with creditors	FIE	2	1	2			5	
	Other	1	1	3	2		7	
	SOE	1	2		1		4	
Subtotal		**4**	**4**	**5**	**3**		**16**	**5%**
3. Managerial restructuring								
Resignation/appointments	FIE	1					1	
	Other	1	9	7	1		18	
	SOE	1	5	7	5	3	21	
Subtotal		**6**	**19**	**21**	**14**	**4**	**40**	**13%**
Termination/appointments	FIE			1	1		2	
	Other		1	3	2		6	
	SOE		2	1			3	
Subtotal			**3**	**5**	**3**		**11**	**4%**
Appointments only	FIE					1	1	
	Other		1	2	1		4	
	SOE		1	3	2	2	8	
Subtotal			**2**	**5**	**3**	**3**	**13**	**4%**
Grand Total		**3**	**45**	**86**	**88**	**69**	**12**	**303**	**100%**
%		**1%**	**15%**	**28%**	**29%**	**23%**	**4%**	**100%**	

6.5 EMPIRICAL RESULTS AND DISCUSSIONS

6.5.1. China versus other economies

The event study results for the three main restructuring categories are presented in Table 6.2. As we can see in Table 6.2, broadly the non-parametric sign test results are consistent with the parametric t-tests. Below I discuss the event study results for M&A, asset sales, debt related restructuring and managerial restructuring announcements in turn. In principal all results that are significant either in the parametric or non-parametric (or both) are discussed.

A. M&A

As Table 6.2 and Figure 6.1 shows, as expected, the market embraces M&A with payment announcements on and around the announcement day 0. AAR_0 is 1.3%, CAAR(-40, 0) is 9.4%, CAAR(-40, +20) decreases to 6.9% but CAAR(-40, +40) is no longer significant. The market reacts positively prior to and around the announcement day but CAARs decline post announcement day. The full 81-day CAAR is not significant. This result supports hypothesis 1.

Figure 6.1 Cumulative average abnormal returns for 81-day event period centered on announcement day for the M&A with payment category

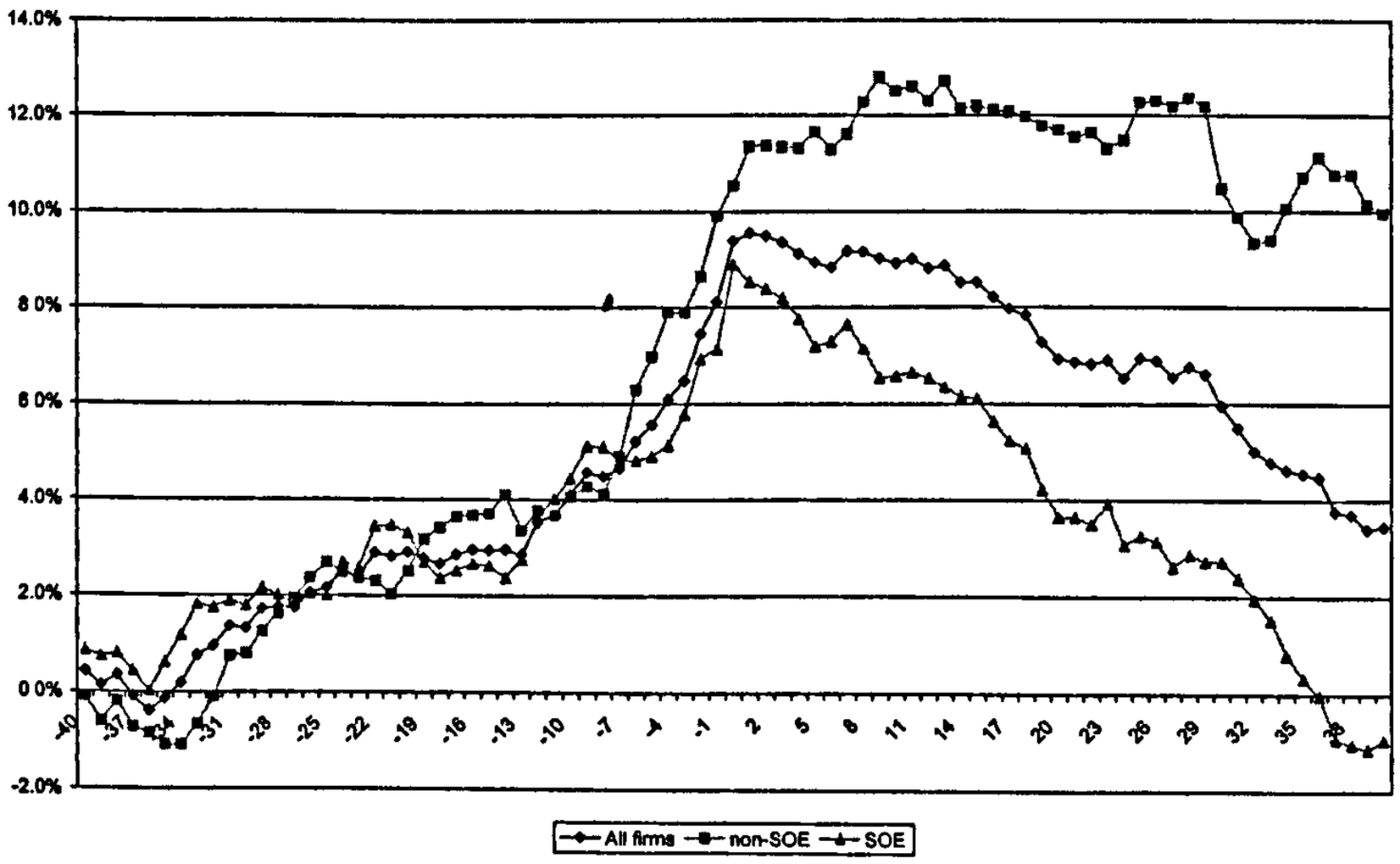


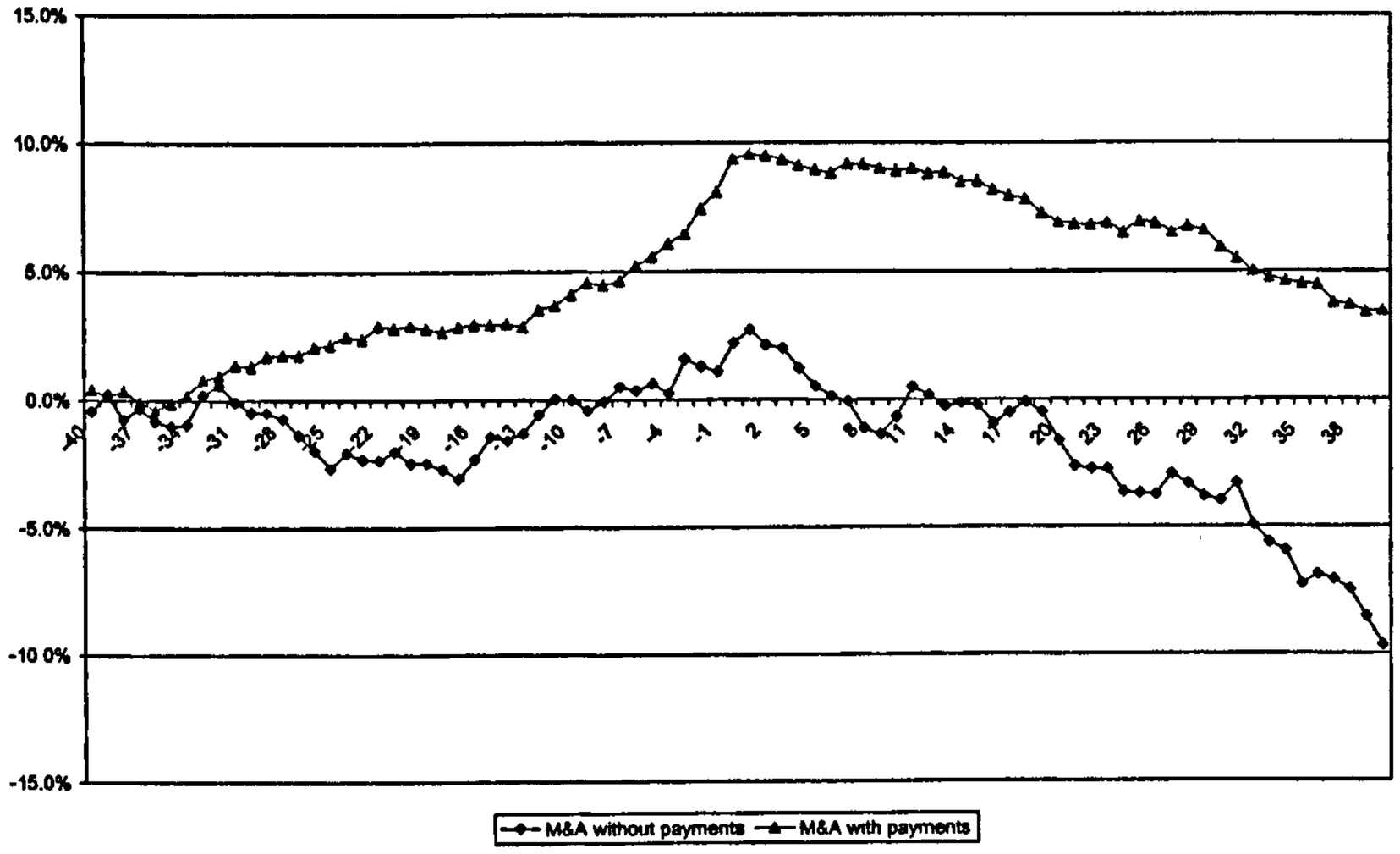
Table 6.2 Event study results for the full sample

This table presents the event study results for the three restructuring categories: asset restructuring including M&A and asset sales/swaps; debt and managerial restructuring. Column 1 givens the types of restructuring and the sub-sample by ownership type; Column 2 provides the number of observations in each category (sub-category); Columns 3 -7 present the cumulative average abnormal returns (CAAR) on day -40, -20, 0, +20 and +40; Column 8 presents the average abnormal returns (AAR) on the event day (day 0).

Asset restructuring	N	$CAAR_{-40}$	$CAAR_{-20}$	$CAAR_{0}$	$CAAR_{+20}$	$CAAR_{+40}$	AAR_{0}
M&A							
M&A with payment							
Full sample	52	0.4%	2.9% ** b	9.4% *** a	6.9% *** b	3.5%	1.3% *** b
Asset sales							
Voluntary asset sales							
Full sample	59	-0.4%	-0.9%	-0.9%	-4.2% *	-5.3% *	0.6% * b
Forced asset sales							
Full sample	23	-0.2%	2.2%	0.8%	-2.5%	-8.4% *	0.0%
Asset swaps							
Full sample	36	-0.7% b	0.7%	1.3%	0.0%	-2.4%	1.2% *** b
Debt restructuring							
Increasing leverage							
Full sample	27	0.4%	2.0%	4.8% *	3.7%	4.5%	0.2%
Renew debts							
Full sample	10	-0.7%	0.3%	-0.2%	-2.3%	-0.3%	0.4%
Debt renegotiation							
Full sample	16	-0.4%	0.4%	2.4%	-3.5%	-6.2%	0.4%
Managerial restructuring							
Resignation/appointments							
Full sample	40	-0.5% * b	-1.6%	-2.6%	-4.0%	-7.4% **	-0.1%
Termination/appointments							
Full sample	11	-0.3%	-1.8%	-2.2%	-1.3%	-6.4%	-0.5%
Appointments only							
Full sample	13	0.1%	-1.3%	-3.6%	-4.8%	-2.6%	-0.2%
Managerial related							
non-SOE	28	-0.2%	-3.0% *	-4.2% *	-7.1% **	-10.6% ***	0.1%
SOE	32	-0.5% b	-0.6%	-2.7%	-3.5%	-5.6% *	-0.2%
FIE	4	-0.7%	-1.1%	8.1%	16.9% * b	14.6% b	-1.8% *

*** Significant at the 1% level in the t-test
** Significant at the 5% level in the t-test
a Significant at the 1% level in the sign test
b Significant at the 5% level in the sign test

Figure 6.2 Cumulative average abnormal returns for 81-day event period centered on announcement day for the M&A with and without payments categories



B. Asset sales and swaps

As we can see in Table 6.2, CAAR(-40, +40) for the voluntary asset sales announcements is -5.3%, for the forced asset sales announcements is -8.4%[49], and for the asset swaps announcements is negative but not significant. Therefore in the case of asset sales and swaps, different to existing literature based on US/UK studies, market reacts negatively as expected. Hypothesis 2 is supported. The magnitudes CAARs for the three types of asset sales/swaps are presented in Figure 3, 4 and 5.

[49]Results for both voluntary and forced asset sales are only significant at 10% in the parametric test but not significant in the non-parametric test.

Figure 6.3 Cumulative average abnormal returns for 81-day event period centered on announcement day for the voluntary asset sales category

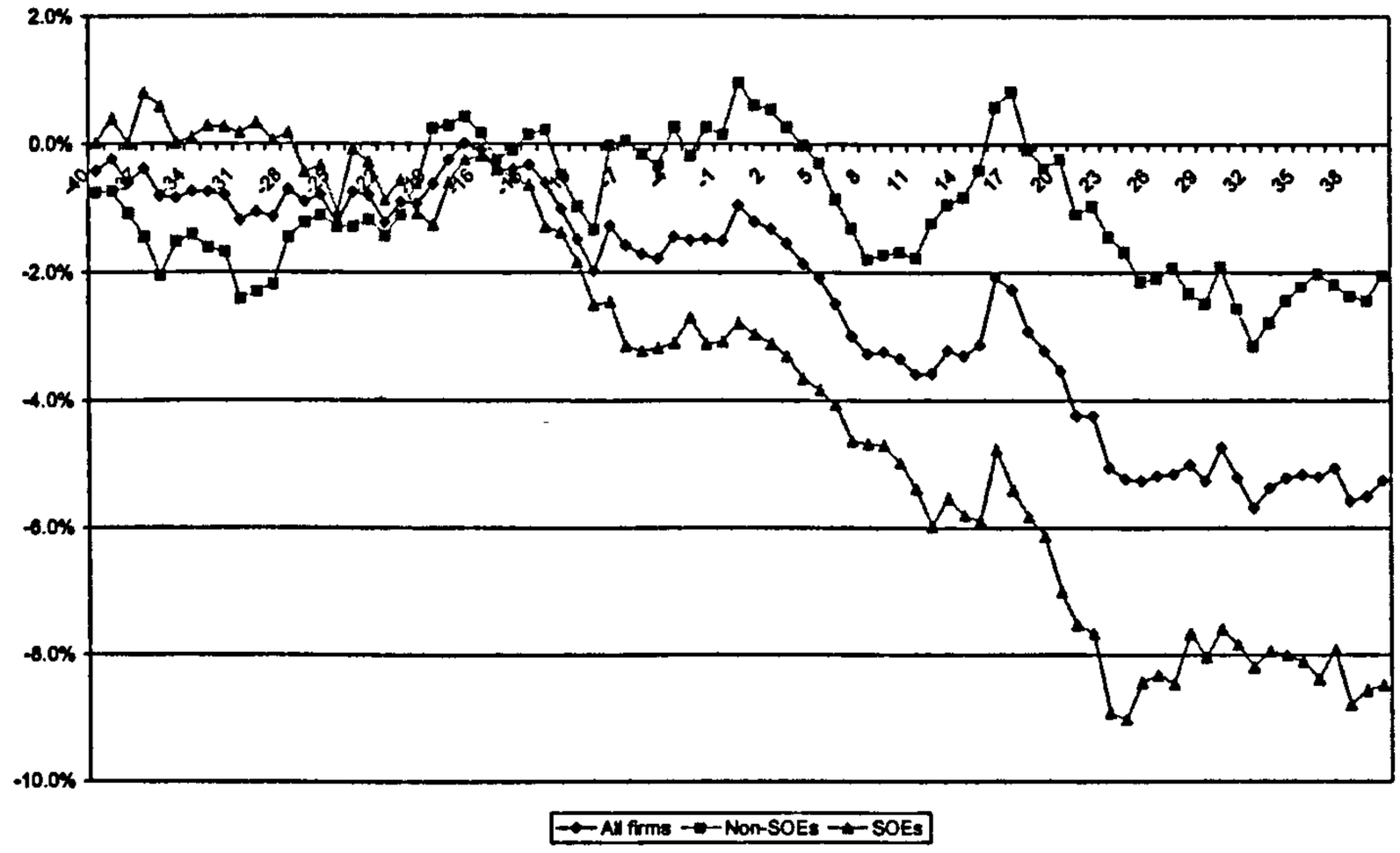


Figure 6.4 Cumulative average abnormal returns for 81-day event period centered on announcement day for the forced asset sales category

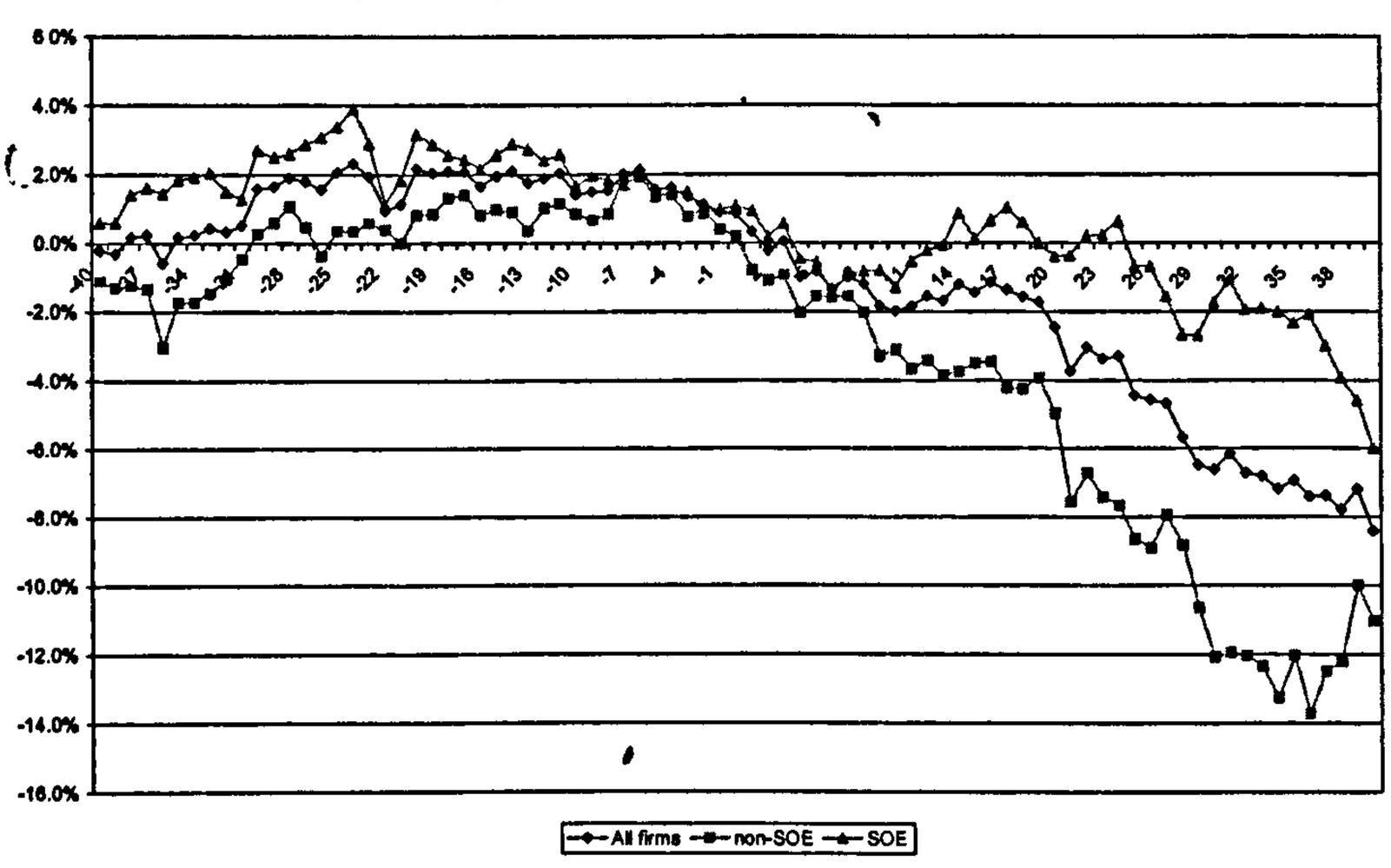
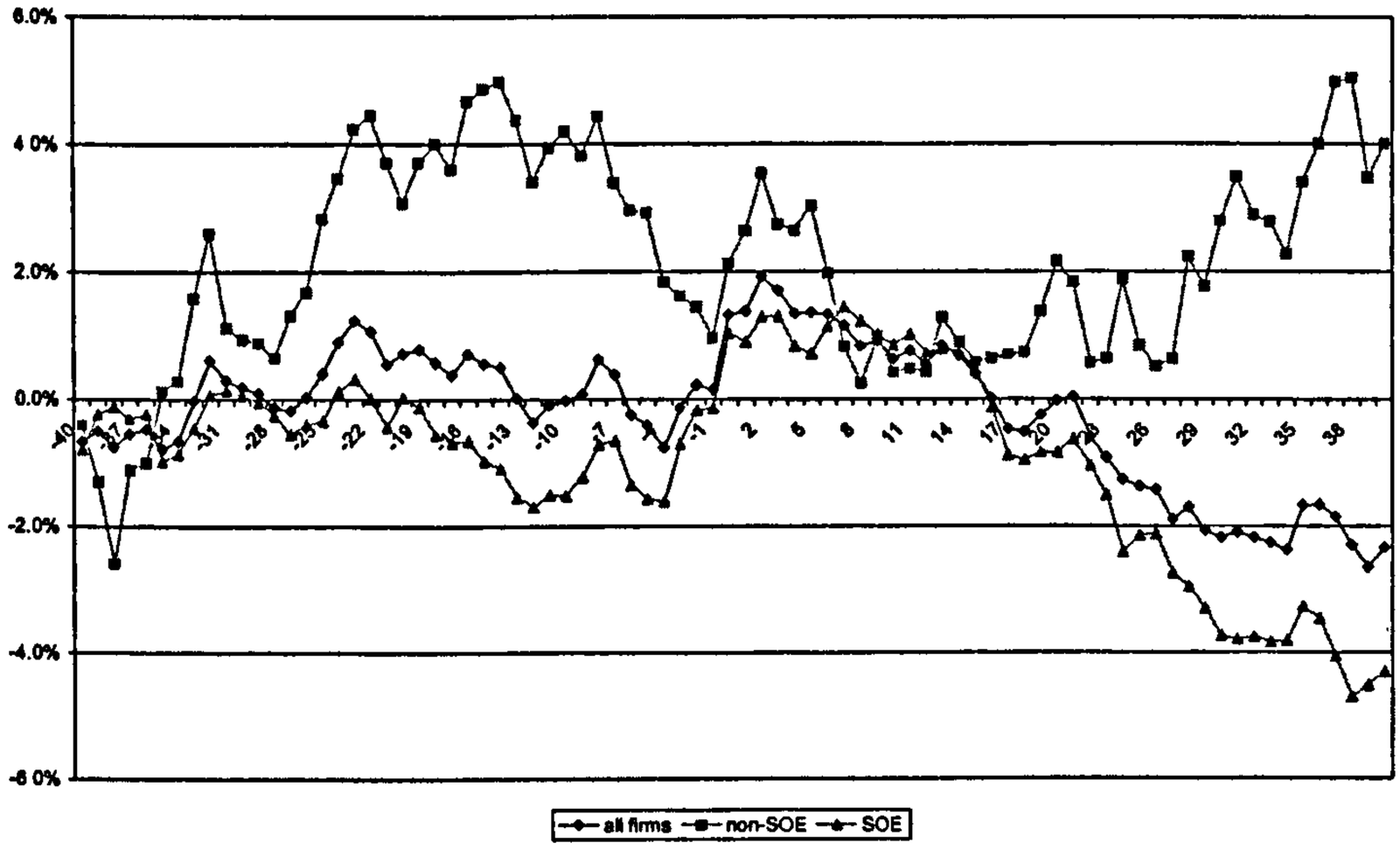


Figure 6.5 Cumulative average abnormal returns for 81-day event period centered on announcement day for the asset swaps category



C. Debt restructuring

As we can see in Table 6.2 and Figure 6.6, the increasing leverage type of news receive positive but not significant cumulative average abnormal returns. Hence hypothesis 3 is rejected. In other words, in the distress context in China, debt does not seem to play a disciplinary role as argued by Jensen (1986) and Wruck (1990). My results are consistent with that of Tian (2004). In addition, Tian documented different debt governance effects in SOE and non-SOEs. I will examine this issue further in the next section.

Figure 6.6 Cumulative average abnormal returns for 81-day event period centered on announcement day for the increasing leverage category

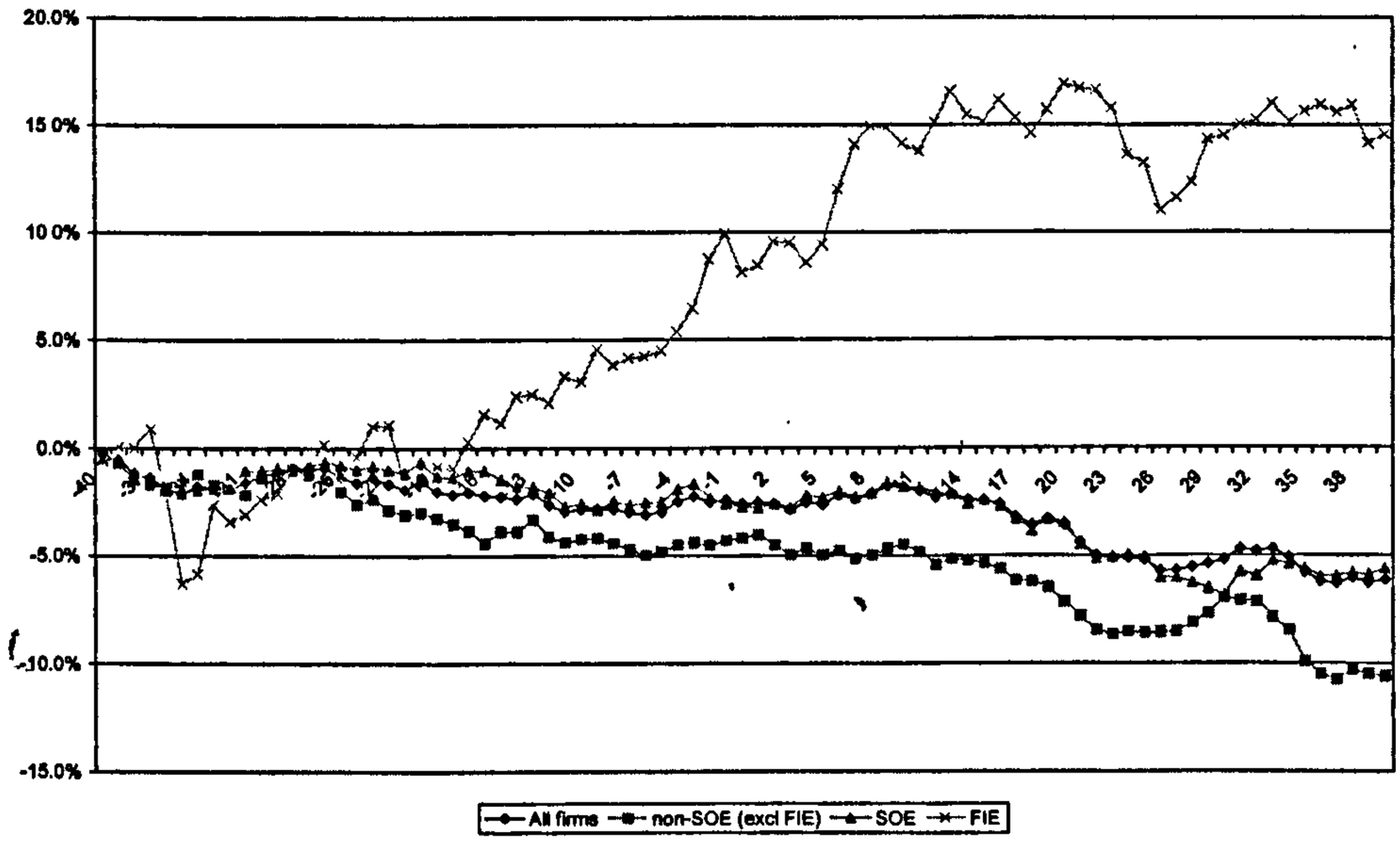
D. Managerial restructuring

Table 6.2 shows that the three subgroups of managerial restructuring announcements, i.e., resignation/appointment, termination/appointment and appointment only, generate negative price reactions over the full event window, although only the resignation/appointments subgroup has a significant CAAR(-40 , +40) of -7.4%. There is no announcement day effect for the three subgroups suggesting there may be leak of information before the announcement day.

When I regroup the managerial restructuring announcements by ownership type, into foreign ownership (FIE) and domestic (SOE and non-SOE) subgroups, CAAR(-40, +40) for the domestic subgroups are negative, i.e. for the non-SOE subgroup is significant and negative at -10.6%, for the SOE subgroup is negative at 5.6% but only significant at the 10% level. However, as expected, CAAR(-40, +40) for the FIE subgroup is significant and positive at 14.6%, consistent with the results in Denis and Denis (1995) and Dherment-Ferere and Renneboog (2002). Figure 6.7 shows the full 81-day event window cumulative average abnormal returns for the different ownership subgroups. Hence hypothesis 4 and 5 are supported. The significantly positive result for the FIE subgroup provide evidence to suggest that foreign invested companies may not be subject to the same domestic managerial pool where credible punishment for poor performance and incentive to exert

effort may be lacking. An alternative explanation could be that FIE firms monitor their management more efficiently and that underperforming management are replaced more quickly than they are in a domestic company. However this finding is based on only four events and should be treated with caution. To provide meaningful implications for the use of managerial restructuring strategies in the Chinese context, further research is needed when more data become available.

Figure 6.7 Cumulative average abnormal returns for 81-day event period centered on announcement day for the managerial restructuring category



6.5.2. SOE vs non-SOE

Similarly, the event study results for the ownership subgroups for the three main restructuring categories are presented in Table 6.3. Again the non-parametric sign test results are broadly consistent with the parametric t-tests. I will discuss the event study results for M&A and debt restructuring in turn. In principal all results that are significant either in the parametric or non-parametric (or both) are discussed.

A. M&A

As can be seen in Figure 6.1, the non-SOE and SOE subgroup analysis provides some understanding on the drivers for the initial increase and then post event-day decrease of the CAARs for the full sample. As Table 6.3 shows, the non-SOE subgroup has strong positive market reaction throughout the full 81-day event window, including the event-day.

Its CAAR(-40, 0) is 10.5%, CAAR(-40, +20) is 11.7% and CAAR(-40, +40) is 10%. On the other hand, for the SOE subgroup, CAAR(-40, 0) is 8.9% and AAR_0 is 1.8%; however post event-day cumulative average abnormal returns decline, neither CAAR(-40, +20) nor CAAR(-40, +40) are significant. Clearly we can see in Figure 6.1, M&A with payment announcements made by non SOE firms create sustainable shareholder wealth over the full event window. The results support hypothesis 6.

Table 6.3 Event study results for the SOE and non-SOEsubgroups

This table presents the event study results for the SOE and the non-SOE subgroups, for the M&A and debt restructuring categories. Column 1 givens the types of restructuring and the sub-sample by ownership type; Column 2 provides the number of observations in each category (sub-category); Columns 3 -7 present the cumulative average abnormal returns (CAAR) on day -40, -20, 0, +20 and +40; Column 8 presents the average abnormal returns (AAR) on the event day (day 0).

Asset restructuring	N	$CAAR_{-40}$	$CAAR_{-20}$	$CAAR_0$	$CAAR_{+20}$	$CAAR_{+40}$	AAR_0
M&A							
M&A with payment							
non-SOE	22	-0.1%	2.5%	10.5% *** a	11.7% *** b	10.0% **	0.6%
SOE	30	0.9% **	3.3% *	8.9% *** a	3.6%	-0.9%	1.8% *** b
M&A without payment							
Full sample (SOE only)	16	-0.4%	-2.5%	2.2%	-1.6%	-9.7% *	1.1% *
Debt restructuring							
Increasing leverage							
non-SOE	15	0.2%	3.1%	10.7% ***	7.6% *	12.1% ***	-0.2%
SOE	12	0.7%	0.5%	-2.6% *	-1.1%	-4.2%	0.6% b
Debt renegotiation							
non-SOE	7	-0.1%	-6.1%	-7.5%	-11.1%	-14.4% **	0.5%
SOE	4	-0.5%	8.8%	20.7%	13.2%	8.2%	0.7%
FIE	5	-0.7%	0.9%	-0.8%	-8.9%	-9.7%	0.0%

*** Significant at the 1% level in the t-test
** Significant at the 5% level in the t-test
a Significant at the 1% level in the sign test
b Significant at the 5% level in the sign test

Determined by the nature of the transaction there were only SOEs in the M&A without payment category. As shown in Table 6.3 and Figure 6.2, M&A without payment announcements generate a negative 9.7%[50] of CAAR(-40, +40). Figure 6.2 also shows the magnitudes of the CAARs between the M&A with and without payments announcements. The results show that M&A without payment type of announcement is value destroying and provide some weak support for hypothesis 7.

The results discussed above confirm my expectations that M&A with payment announcements made by non-SOE firms create value for shareholders (CAAR(-40,

+40)=10%), and that M&A without payment announcements are not perceived by the market to be successful in revamping the firms' performance. In addition, M&A with payment announcements made by distressed SOEs do not receive significant market reactions over the full event window, as can be seen in Table 6.3 and Figure 6.1, although this type of announcements are embraced by the market pre- and on announcement day. The lack of market response to the M&A with payment announcements made by SOE firms suggests that the negative and positive effects discussed in section 6.2.2 cancel each other out and hypothesis 8 is supported.

Evidence suggests that M&A with payment strategy is perceived by the market as effective in restructuring distressed firms only when the firms are not controlled by the state and are therefore more subject to market competition.

B. Debt restructuring

As can be seen in Table 6.3 and Figure 6.6, the non-SOE firms' announcements on increasing leverage are perceived favourably by the market, the full event window CAAR(-40, +40) for the non-SOE subgroup is 12.1% and is significant by the parametric t-test. On the other hand, although the market reacts positively to the SOE subgroup on the announcement day (AAR_0 = 0.6%), the full event window cumulative average abnormal return is negative but not significant. As Figure 6.6 shows, the market reacts favourably to increasing leverage announcements made by non-SOE firms and this wealth enhancing effect is sustainable in the 81 days event window, whereas the market does not react to the same announcements made by SOE firms. Hypothesis 9 is supported and hypothesis 10 is partially supported.

The results complement the finding in Tian (2005), i.e. debt governance is not effective in SOE firms and institutional features matter. When a distressed firm is controlled by the government, the firm's attempt to restructure by increasing leverage is not perceived favourably by the market.

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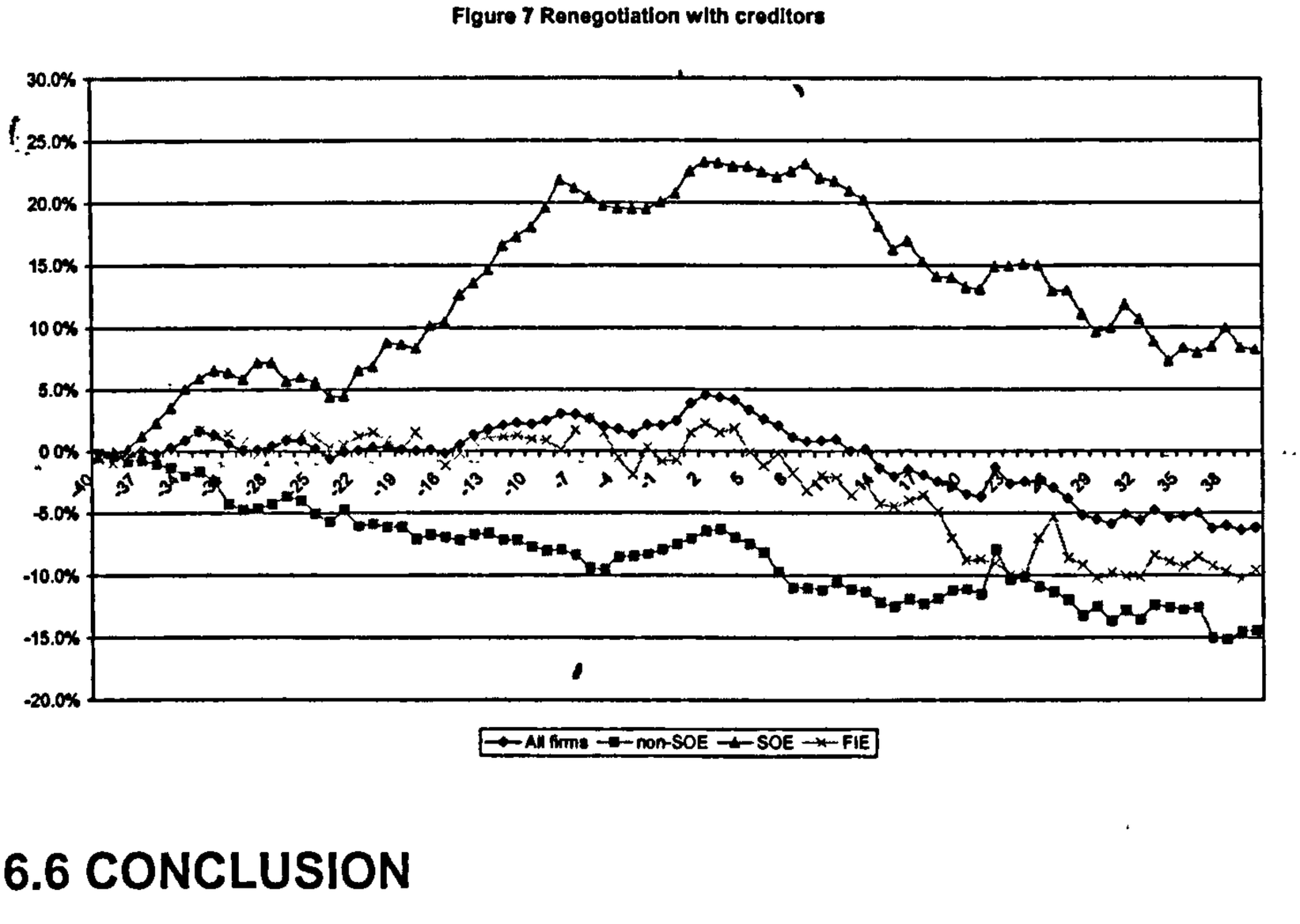
[50] Only significant at the 10% level in the parametric test and not significant in the non-parametric test though.

For the debt renewal type of announcement, there is no significant market reaction. As for the debt renegotiation category, overall there is no announcement day effect. Over the full event window, the market reacts negatively to announcements made by the non-SOE firms with a CAAR(-40, +40) of -14.4%; the full event window CAAR for FIE firms is also negative but not significant. These results indicate that the distressed non-SOEs' intention to renegotiate with their creditors is seen as negative news, as the market does not anticipate the negotiation to be successful. On the other hand, although the announcements made by the SOE firms do not generate statistically significant cumulative average abnormal returns, market reaction is positive. Hypothesis 11 is partially supported and hypothesis 12 is supported. Evidence suggests there may be lending bias by the banks to SOE firms. The magnitudes of the full event window CAARs for the three subgroups can be seen in Figure 6.7.

Figure 6.7 Cumulative average abnormal returns for 81-day event period centered on announcement day for the debt renegotiation category



6.6 CONCLUSION

My study is the first to examine the valuation effects of restructuring announcements by distressed Chinese firms. This is an important topic in the recently liberalised economy. With the relatively "new" concept of competition, what is the mechanism by which unviable and inefficient firms fail, with the result that assets are (re)allocated? This study

provides insights on which restructuring mechanisms are value enhancing in an emerging market context.

I examine market reactions to three main types of restructuring: asset restructuring including M&A and asset sales, debt and managerial restructuring. The descriptive statistics in Table 6.1 show that asset restructuring including M&A and asset sales/swaps make up 62% of all restructuring announcements. Sample data statistics provide evidence to support the argument that as a result of difficulties in officially liquidating economically unviable firms in the Chinese context due to the lack of effective bankruptcy laws, these observed mergers and asset sales act as an asset mobility mechanism and are a beneficial outcome in terms of improved use of resources. On the other hand, the lack of creditor participation in distress resolution is confirmed by the overall lowest percentage (17%) of debt restructuring related announcements among the three main categories in my whole 303 sample announcements.

Firstly I focus on the full sample and compare evidence from China to what's documented in the existing literature. Consistent with the literature that target firms receive positive premium, my overall M&A with payment announcements generate positive market reaction.

Different to the current literature based on developed economies such as US and UK, asset sales are not perceived as positive news by the market. Instead of enhancing shareholder wealth by reducing bankruptcy costs as recorded in the UK, it appears that the lack of bankruptcy threat in China minimises the potential benefit of avoiding bankruptcy costs which shareholders otherwise have to bear.

Overall the effect of debt restructuring announcements is not clear cut. Different to the documented disciplinary role of debt in a developed economy, Tian (2004) argues that debt governance is not at work in China. My event study results are positive not significant.

Managerial restructuring is not seen by the market as an effective restructuring strategy. Our explanation is that there is a lack of effective management pool in the domestic market due to the documented lack of managerial incentives to perform and of credible punishment

for poor performance in the current emerging market literature. This explanation is supported by the positive market reactions to announcements made by FIE firms which may not subject to the domestic managerial pool. Alternative explanation for the positive market reaction to managerial disciplinary events by FIEs is that FIE firms monitor their management more effectively.

Secondly, given the significant role of government in corporate China, I separate my full sample by ownership structure to provide further insight on the role of state ownership. In the M&A category, M&A with payment strategy is effective only for the non-SOE firms, where these firms are subject to a market driven mechanism and competitive environment. M&A with payment strategy for non-SOE target firms signifies to the market that the distressed firm is of value to the new owner and that the new owner may be able to manage the firm as a viable going concern effectively - in this circumstance, changing ownership stands a good opportunity for the distressed firm to be restructured successfully. The M&A with payment announcements made by the SOE firms do not create shareholder wealth. The M&A without payment announcements are seen as value destroying. The government's attempts to revamp firm performance by transferring ownership, either with or without payment, are not perceived as effective by the market, providing evidence to support the argument that the government's primary motivation rests in providing employment rather than in profit maximisation.

The effectiveness of debt restructuring is mixed. The market reacts positively to non-SOE firms' announcements of increasing leverage, but the same type of news made by SOE firms do not cause significant price reaction. The lack of success in this strategy by SOEs is because debt governance is not at work among SOEs. In addition, the market reacts significantly negatively to non-SOEs' attempt to renegotiate their debt contracts with their banks, but not significantly (economically but not statistically significant) to the same announcements made by SOEs. These results provide weak evidence to suggest that there may be lending bias by the Chinese banks towards SOEs. The evidence so far suggests that the role of government in corporate China is not desirable yet resources are still allocated with a bias towards SOEs. This finding raises the question of what needs to be done to ensure the efficient allocation of financial resources (bank loans).

My findings provide important insights for the understanding and the effective organisation of distress resolution in an emerging market context. By identifying successful restructuring strategies and investigating why certain chosen restructuring methods fail in terms of share price reaction, this study sheds light on the design of an effective mechanism for the efficient economic and social (re)allocation of resources in an emerging market context. My fundamental conclusion is that government ownership has an undesirable impact on the successful distress resolution process as it distorts capital allocation and management incentives. This issue is discussed in the next chapter in the light of the findings from this and the previous empirical chapter of this thesis.

CHAPTER 7 CONCLUSION

This thesis examines corporate distress and its resolution in China. Little research has been done on this topic in the context of emerging economies. Given the impact of privatisation on the world's economic landscape in recent times, this study provides important insights for the design of an efficient mechanism through which viable firms survive while the non-viable ones do not, thus ensuring assets of poor performers are reallocated to better uses.

The bankruptcy code comparison study highlights a number of issues. Firstly, bankruptcy in China has been a bureaucratic process with little creditor involvement. Secondly, there is a bias against creditor interests, and a lack of a timely restructuring mechanism to provide much needed distress financing to prevent the still viable firms from failing, while liquidating the economically unviable firms, in order to ensure timely reallocation of assets to their best alternative use. Also, the hindrance of creditors' rights defers the unfolding of market based lending and borrowing. Thirdly, the government's political interests and intervention, aggravated by the country's weak enforcement mechanism, result in the formal bankruptcy procedures rarely being used in practice. With this result there may be lack of bankruptcy threat to distressed companies. The empirical work in this thesis is designed to test the consequences of the lack of timely re-organisation mechanisms and the lack of/weakened bankruptcy threats in China.

Next, I analyse the operating and financial performance and operating efficiency before and during the first two years of distress for 100 firms that became distressed between 1999 and 2003. I find that, although distressed firms have statistically and economically significantly higher level of leverage than their industry prior to distress, the nature of distress is economic, not financial. In the first year of distress, the poor operating performance effect is responsible for 94% of cash flow shortfall in my sample firms, only the remaining 6% is caused by the leverage effect. My results are consistent with the findings of Asquith et al. (1994) for the US, although the role of operating under-performance is far stronger in China than in the US.

In addition, I find that the leverage effect plays a greater role in the year prior to distress than it does during the first year of distress itself. The findings support the view that

financial renegotiations in distress in China are inefficient[51]. As for the cause of such inefficiency, in addition to information asymmetry, a further explanation includes the lack of a timely financial restructuring process.

This study also shed light on the important issue of soft budget constraint. Using capital expenditure (CAPEX) scaled by assets to proxy for firm investment behaviour, I find evidence to suggest that distressed firms face severe liquidity constraints, and the level of liquidity constraints for non-SOE firms is significantly more severe than for SOE firms. Evidence suggests that non-SOEs face hard budget constraints whereas their SOE counterparts face soft budget constraints. Nonetheless, the fact that the distressed SOEs also significantly reduce investment over and above their industry median level, and that their performance overall is significantly worse than their industry, suggests that despite the presence of soft budget constraints, the SOEs selected by my distress selection procedure also exhibit the standard characteristics of distress, albeit with a different level of liquidity constraint when facing distress. The existence of soft budget constraints does not seem to save the distressed SOEs from being distressed.

The multivariate logit regression analysis confirms my results that distress is preceded by a significantly low level of capital expenditure. In addition, earnings before interest, tax, depreciation and amortisation (EBITDA) and total liabilities scaled by assets also have significant influence on the probability of distress. Furthermore, changes in EBITDA/assets and CAPEX/assets have much greater influence on the probability of distress than changes in total liabilities/assets, confirming my finding that the main contributor to firm distress is economic.

The results so far highlight the fact that the lack of a timely restructuring mechanism and the political motivation to keep firms alive leads to the extreme economic nature of corporate distress. Having used accounting information to examine the nature and source of corporate distress in China, I use 303 hand-collected restructuring announcements by the 100 distressed firms to quantify the value-enhancing effect of restructuring announcements using event study methodology. I find that asset restructuring including mergers and

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[51] As financial problems could have been expected to trigger corrective actions sooner.

acquisitions and asset sales/swaps is the most popular strategy in firm distress resolution. In the light of the documented nature of distress being economic (chapter 5) as a result of difficulties in officially liquidating distressed firms due to the lack of effective bankruptcy laws, these observed mergers and asset sales are perhaps a beneficial outcome in terms of improved use of resources. In addition, the relatively low number of debt related restructuring announcements confirms the claim that there is a lack of creditor participation/protection in China.

Firstly I compare my event study results from China to what's documented in the literature. Consistent with the literature, M&A with payment transactions create positive premium for the announcing firms – in this case all are targets. However, different to the literature, asset sales and swaps do not create shareholder wealth. Instead of enhancing shareholder wealth by reducing bankruptcy cost as recorded in the UK, it seems the weakened bankruptcy threat in China minimises the potential benefit of avoiding bankruptcy costs which shareholders otherwise have to bear. Evidence also suggests that debt governance is not at work in China and this affects the effectiveness of debt-related restructuring. Managerial restructuring method seems to work only for firms that are controlled by foreign investors. My explanation is that there is a lack of effective management pool in the domestic market. Further explanation is that FIE firms monitor their management more effectively.

Secondly, given the importance of state ownership in the context of China, I investigate the different valuation effect of restructuring announcements by SOE and non-SOE firms. My findings are as follows. M&A with payment strategy is effective for the non-SOE firms. On the contrary, the government's attempt to revamp firm performance by transferring the ownership, either with or without payment, is not perceived as effective by the market. This finding supports the argument that the government's primary motivation rests in providing employment rather than in profit maximisation.

In addition, there is some evidence to support the notion of Chinese banks' lending bias towards SOEs. These findings suggest that government ownership in corporate China is not desirable yet resources are still allocated with a bias towards SOEs. This raises the question of what needs to be done to ensure the efficient allocation of funds (bank loans). The fundamental conclusion is that government ownership has an undesired impact on the

successful distress resolution process as it distorts capital allocation, management incentives and investment decisions.

The two empirical chapters provide evidence to support the arguments on the lack of bankruptcy threat, low creditor protection and absence of timely restructuring mechanism in China. Poor operating performance is the key characteristic of firms in distress – including high employment levels found among distressed firms. The event study results show that restructuring events are consistently perceived by the market as being more value-enhancing for non-SOEs than for SOEs. This finding highlights the role of government in the restructuring processes. With the government's primary motivation rests in providing employment and curbing non-performing loans, its continued corporate ownership results in the maintenance of inefficient going concerns. The continued existence of soft budget constraints, furthermore, distorts efficient capital allocation and management incentives.

My bankruptcy code comparison study of the Chinese bankruptcy code with seven other codes raises questions on what is the best practice. Although both the UK and the US codes have deficiencies, they provide a framework for the current debate on what is the best practice. The US system is a collective procedure with a bias towards keeping the firm as a going concern. The UK system, on the other hand, is based on "freedom of contracts" (Franks 2000) which preserves the rights and preferences of the parties as reflected in the debt contract. In light of the empirical findings in this study, is a UK type system preferable when a country is exposed to a strong political interference? My study does not provide a complete answer to this important question and much remains to be done.

Findings in this thesis take a step towards gaining an understanding of distress resolution in China. As the most influential emerging economy, evidence from China forms an essential part of the distress literature in emerging markets and an integral part of the extended current literature on privatisation.

APPENDICES

Appendix 1 - Recent reforms – a brief chronology

1995	A new commercial banking law is adopted, as is a law governing the People's Bank of China (PBC, the central bank); provisional regulations guiding foreign investment; an insurance law; legislation to implement a move to a five-day week; and legislation to regulate the securities and debt markets. Import tariff reductions of 30% for 4,000 of 6,000 lines and the replacement of 179 non-tariff barriers (30% of the total) by tariffs are announced.
1996	A programme of transforming 1,000 state-owned enterprises (SOEs) into fully autonomous corporations is announced. Smaller enterprises are encouraged to merge. The average unweighted tariff falls to less than 23%, with implementation of the reductions from April.
1997-99	Experimentation with different forms of ownership, including joint-stock shareholding, is declared to be compatible with socialism; it becomes clear that the authorities are willing, indeed eager, to countenance the merger, closure or privatisation of thousands of smaller state-owned enterprises while ensuring retention by the state of its majority stake in larger enterprises and its total control of around 500 of the largest enterprises. The government slashes the number of industrial ministries. The average tariff rate on imports is reduced to 17%.
2000-01	Progress is made in restructuring SOEs. It is reported that the sector made total profits of Rmb230bn (US$28bn) in 2000, up by 130% year on year. Of the 6,599 large and medium-sized SOEs that had been in loss in 1997, 70% had moved into profit, been restructured or merged by end-2000. Aside from restructuring and mergers, this improvement stemmed from the provision of cheap credit by the state commercial banks, whose ability to lend benefited from the transfer of Rmb395.7bn of non-performing loans to asset management corporations by end-2000. Large conglomerates, which may raise capital on international stock markets and compete internationally, are being formed. At the beginning of 2001, the average tariff on imports was further reduced, to 15.3%.

Source: Euromonitor

Appendix 2 - The calculaton of relative contribution to financial distress by leverage and firm operating performance

The full detail on the calculation of relative contribution to financial distress by leverage and firm operating performance is shown below:

1. In order to calculate the leverage effect, I set the firm's $(\text{IntExp/assets})_{t=0}$ = industry median $(\text{IntExp/assets})_{t=0}$, and keep the firm's assets figure unchanged, this way I get a calculated IntExp $(\hat{IntExp})$ at t=0.

Therefore, the calculated cash-flow change is:

$$\Delta CashFlow_1 = (EBITDA - \hat{IntExp}) - (EBITDA - IntExp) = IntExp - \hat{IntExp} \quad \text{.....(1)}$$

2. Similarly, to calculate the firm performance effect, I set the company's (EBITDA/assets) to equal the corresponding industry median (EBITDA/assets) at t=0, in order to get the calculated EBITDA for the firm $(\hat{EBITDA})$. The cash-flow change relating to this effect is then:

$$\Delta CashFlow_2 = (\hat{EBITDA} - IntExp) - (EBITDA - IntExp) = \hat{EBITDA} - EBITDA \quad ....(2)$$

Although all sample firms have been in distress for at least two years, the above three steps calculation was carried out using only the cash-flow changes from one year prior (t=-1) to the first year of shortfall (t=0), similar to Asquith et al. (1994) and Andrade and Kaplan (1998).

The sum of the two cash flow changes would take our sample firms' cash flows to those of the average firm in an average industry. Thus the portion of distress caused by leverage is calculated as: $\Delta CashFlow_1 / (\Delta CashFlow_1 + \Delta CashFlow_2)$, and so on.

Appendix 3 - A translation of regulatory requirements on information disclosure for listed companies

A translation of some of <<The formats of announcements by listed companies>>, Shenzhen Stock Exchange[52], effective 12th March 2002

1. Purchase/sell assets and debt restructuring.
   a. General information of the transaction, including names of both parties, nature of transaction (sell/buy/debt restructuring), prices, agreement date and transaction dates, if the transaction is between related parties.
   b. Board of directors' decision, voting details, etc. Also, if this transaction needs approval from certain government bodies, if agreement from creditors is required, if any agreement from a third party is required.
   c. List all necessary procedures for approval and other requirements and potential barriers for the intended transaction.
   d. Information about other parties. If the transaction involves the forgiveness of debts, information about the creditor, its relationship with the company.
   e. Debt restructuring here only refers to non-cash arrangements for debt reduction, interest payment suspension or reduction, change of covenants, and debt forgiveness.
   f. If the transaction is between related parties, see relevant legal provision for announcements.
2. Transactions between related parties
   a. Generation introduction: agreement date, venue, relationship between parties, shareholder meeting and board of directors meeting's decision and voting details, if such transaction requires approvals, etc.
   b. Details about the transaction, etc.
3. Distribute and transfer equity shares (with or without payments)
   a. Meeting time and details of the shareholder meeting when the notion to issue further equity shares, or transfer equity shares has been passed.
   b. Registration of new shares/shareholders.
4. Shareholders' meeting notice
5. The resolution of shareholders meetings
6. Make external investment (including entrusting)
7. Provide guarantees for others
   a. General information.
   b. Information about the guaranteed company.
   c. Content of the guarantee.

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[52] This regulation applies to both stock exchanges.

d. Comments from the board of directors, reason for such guarantee, etc.

8. Change the purpose of funds raised
9. Unusual share price movements
   a. Introduction – state that there is observed share price abnormal movements, the reason for such movement, or for the suspension of its listing.
   b. After conformation with major shareholders and management team, provide reasonable explanation for such observation. If no known cause to the company for such movements, issue standard statement.
10. Clarification
11. Major litigation and court order
12. Receiving permission to issue additional equity
13. Change share name abbreviation
14. Independent director nomination

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quality

Appendix 4 - Event calendar for Shandong Jintai

These 36 announcements were made by the company in compliance with the Stock Exchanges' official announcement requirements and were collected from the Stock Exchange's official websites: www.cninfo.com.cn and www.cnlist.com.cn. The events are grouped into four categories and are colour coded. Column 2 gives the date of the announcements, if there is a different date in brackets, then the share was not traded on the announcement day and calculations are done using the date presented in brackets (the next trading day); Column 3 shows the type of the announcements; Column 4 presents the details of the announcements; Column 5 presents the share's unadjusted day return (log return); Column 6 presents the market's day return (log return of Shanghai SE A Index); Column 7 presents the company's daily value gain/loss by using the absolute difference in opening and closing prices multiplied by the total number of tradable shares; Using market model in event study methodology, I calculate the abnormal return on day 0 (AR_0), cumulative abnormal return for different width of event windows, for the highlighted events. These results are presented in Columns 8-11.

	Column 2 - Dates	Column 3 – Type	Column 4 - Content	Column 5 – Firm day return	Column 6 - Market day return	Column 7 - Daily value gain/loss (RMB mn)	Column 8 – AR_0	Column 9 - CAR_{+1}	Column 10 – $CAR_{+/-2}$	Column 11 - $CAR_{+/-5}$
1	17/12/01	M&A announcement	Controlling shareholder (Shandong Medical Research Centre) selling its holding of 26.99% shares to Xin Hong Ji Group.	-3.12%	-0.61%	-29.17	-2.51%	-0.85%	+2.37%	-1.50%
2	20/12/01	Asset sales/ investment	The company was selling one product line for RMB0.33m (net book value 0.22m), (in the same announcement, the company was also using some fixed assets as investment to set up a joint venture with the buyer, with the fixed assets the company would hold 78% of the joint venture)	-4.17%	-2.53%	-37.99	-1.65%	+0.17%	+1.17%	+2.71%
3	25/12/01	M&A news follow-up	Further announcement about the controlling shareholder, Shandong Medical Research Centre's transfer of its 26.99% shares to Xin Hong Ji Group.	-0.08%	+0.30%	-0.68	-0.38%	-0.85%	+1.99%	-0.85%
4	07/01/02	Managerial restructuring	Three directors resigned and candidates elected. GM and CFO	-10.96%	-1.83%	-92.26	**-9.13%*** **	-5.58%	-5.94%	-3.12%

	Column 2 - Dates	Column 3 – Type	Column 4 - Content	Column 5 – Firm day return	Column 6 - Market day return	Column 7 - Daily value gain/loss (RMB mn)	Column 8 – AR_0	Column 9 - CAR_{+1}	Column 10 – $CAR_{+/-2}$	Column 11 - $CAR_{+/-5}$
			resigned and new persons appointed.							
5	01/02/02		Existing controlling shareholder Shandong Medical Research Centre re-registered to be a limited company.	+4.84%	-0. 42%	37.31				
6	02/02/02 (04/02/02)	M&A follow-up	Annual report (p6) mentioned that news were announced on this day about the M&A	+3.21%	+1.70%	25.78	+1.51%	+0.20%	+7.92%	+2.70%
7	08/02/02 (25/02/02)	Managerial restructuring	Shareholders' meeting approved the motion to add additional three directors to the board	+1.01%	+1.01%	8.14	Not trading, AR_{+1}= -0.56%	-0.83%	-1.41%	+2.06%
8	04/03/02	Managerial restructuring	Elected chairman for the board, secretary of board resigned, deputy GMs appointed etc.	+4.93%	+1.62%	39.34	+3.32%	+6.12%	+3.18%	+1.30%
9	01/04/02	Delay annual report announcement	Due to the change of ownership and the transition work, annual report release will be delayed from 05/04/02 to 29/04/02	+0.22%	+0.28%	2.04				
10	28/04/02 (29/04/02)	Annual report announcement	Announced its annual report for 2001.	+0.75%	+1.53%	6.78				
11	24/05/02	Investment/ operational restructuring	Board meeting approved two motions: 1. The company will use the fixed assets of one of its subsidiaries as 20% holding to form a new company with another company which will hold 80% of the new company. 2. Will split retail business from	-1.97%	-1.42%	-16.28	-0.2%	+0.5%	-0.5%	-7.8%

	Column 2 - Dates	Column 3 – Type	Column 4 - Content	Column 5 – Firm day return	Column 6 - Market day return	Column 7 - Daily value gain/loss (RMB mn)	Column 8 – AR_0	Column 9 - CAR_{+1}	Column 10 – $CAR_{+/-2}$	Column 11 - $CAR_{+/-5}$
			the company to form a new pharmacy retail company. Jin Tai will hold 80%, the rest 20% will be held by its partner which is also the partner of Jintai for the new company mentioned in Motion 1.							
12	11/06/02 (12/06/02)	Multiple news	Shareholders' meeting held on 07/06/02 approved the following: 1. No dividends, no new equity 2. renew contract with auditor firm 3. Appointed two new directors	+3.01%	+0.66%	-6.11				
13	19/06/02	Increase leverage (new bank loan)	Board meeting approved the motion to borrow additional loan (working capital loan, max 2 years) from its bank. This borrowing needs to be approved by shareholders' meeting.	-2.60%	-1.09%	-19.67	-1.51%	-1.43%	+1.73%	-0.21%
14	02/07/02	Investment	Board meeting approved the motions: 1. establish a modern self auditing procedure 2. Invest RMB14m as 70% holding of a new company.	+2.35%	+0.61%	+19.67	+1.73%	+0.23%	-2.40%	-2.29%
15	06/07/02 (08/07/02)	Major shareholder selling its holding (non-tradable shares)	Second and the 5th largest shareholders sold all of its shares. The buyer holds 10.25% of the company and become the 2nd largest shareholder.	+3.26%	+0.63%	+27.81				
16	27/07/02	M&A follow-up	Annual report (p6) mentioned that	+1.20%	+0.49%	9.50	+0.70%	-0.01%	+0.89%	-2.98%

	Column 2 - Dates	Column 3 – Type	Column 4 - Content	Column 5 – Firm day return	Column 6 - Market day return	Column 7 - Daily value gain/loss (RMB mn)	Column 8 – AR_0	Column 9 - CAR_{+1}	Column 10 – $CAR_{+/-2}$	Column 11 - $CAR_{+/-5}$
	(29/07/02)		news were announced on this day about the M&A							
17	26/08/02	Q2 report	Announcement of its semi-annual key accounting information	-1.82%	-0.75%	-14.25				
18	31/10/02	Q3 report	Announced its Q3 report	-0. 97%	-0.15%	-6.11				
19	13/12/02	Increase leverage (new bank loan)	The company took a loan of RMB20m, on 11/12/02, from Jiao Tong Bank, payable in one year. External guarantee was provided by Wu Han Dao Bo Company.	+2.31%	+0.92%	+14.25	+1.39%	+1.44%	+1.97%	-1.58%
20	14/12/02 (16/12/02)	Debt related (providing guarantee)	The company provides guarantee for Wu Han Dao Bo Company for RMB24m loan (15 months loan). The aggregate guarantee the company has provided thus far amount to RMB57.66m.	+0.87%	+0.82%	+5.43	Same as above			
21	07/01/03	Announcement about transactions with related company	Announcement about transactions with related companies[53] which took place in 2001 and 2002.	-1.70%	-0.20%	-9.50				
22	10/02/03	Multiple news	Change management: one director and the GM resigned. New GM appointed. The M&A initiated in Dec 02 is completed.	+3.22%	-1.30%	20.35				
23	18/02/03	Warning of	Because of restructuring that took	-2.94%	-0.01%	-18.99				

[53] See 2nd point in Appendix 2 on the definition of 'related companies'.

	Column 2 - Dates	Column 3 – Type	Column 4 - Content	Column 5 – Firm day return	Column 6 - Market day return	Column 7 - Daily value gain/loss (RMB mn)	Column 8 – AR_0	Column 9 - CAR_{+1}	Column 10 – $CAR_{+/-2}$	Column 11 - $CAR_{+/-5}$
		loss	place in the second half of 2002, the company will incur a loss in its 2002 annual report.							
24	08/04/03 (09/04/03)	Multiple news	Deputy GM, CFO resigned. No appointment of new CFO but the post will be assumed by current GM. Also announced its 2002 annual report. Because of the loss, as agreed by the stock exchange, the company's share will be suspended on 8th April 03 and resume on 9th April 03. Starting on the 9th, the company is officially a ST firm and its share prices will be subject to a daily +/- 5% movements cap.	-5.13%	1.90%	-27.81				
25	25/04/03	Q1 report	Q1 report announcement	1.39%	-1.10%	6.78				
26	30/05/03	Multiple news (board meeting)	1. Changes to board 2. No dividend or new equity 3. renew contract with auditor 4. Shareholders' meeting will be held on 30/06/03 to discuss the above	+0.16%	+0.52%	0.68				
27	01/07/03 (02/07/03)	Shareholders meeting	Approved the content of the Board meeting	-2.93%	-0.83%	-1.36				
28	31/07/03	Q2 report	Announced Q2 report	1.67%	-0.19%	6.11				
29	14/08/03	Increase leverage	The RMB20m loan was due on 08/08/03. Two new loans were taken from the same bank to pay back the existing loan. 1st loan is	-1.13%	-0.68%	-4.07	-0.45%	-1.40%	-1.45%	-1.89%

	Column 2 - Dates	Column 3 – Type	Column 4 - Content	Column 5 – Firm day return	Column 6 - Market day return	Column 7 - Daily value gain/loss (RMB mn)	Column 8 – AR_0	Column 9 - CAR_{+1}	Column 10 – $CAR_{+/-2}$	Column 11 - $CAR_{+/-5}$
			RMB10m for two years, 2nd loan is RMB10m for three years. Guarantee provided by its 3rd largest shareholder (Xin Heng Ji Co).							
30	22/08/03	Additional info about Q2 report	Following the auditing by Shanghai Stock Exchange, the company provided additional information regarding its Q2 report.	-0. 58%	-0.17%	-2.04				
31	27/08/03	Illegal deed (investigation)	The China Securities Commission is investigating alleged illegal deed by the company starting 26th August 03.	+1.76%	+0.01%	+6.11				
32	08/09/03	Illegal deed (board meeting)	Board meeting discussed its action plan in reply to the criticism imposed by the Shanghai Stock Exchange.	-0.77%	-0.40%	-2.71				
33	10/10/03	Court order for repayment	Court order that the company must repay its loan of RMB4.5m to Jinan Runbo within 10 days. The company will appeal.	0.19%	2.47%	0.68				
34	24/10/03	Q3 report		-1.58%	-0.35%	-5.43				
35	07/11/03	Multiple news	The company's loan of RMB3.33m was due on 12/10/03. The company was unable to renew the loan. Also, the company received a court order to pay RMB4.6m to a supplier. The company will appeal.	-3.45%	-1.60%	-9.50				
36	24/12/03	Follow-up on	Further details about the above two	-5.24%	0.85%	-13.57				

	Column 2 - Dates	Column 3 – Type	Column 4 - Content	Column 5 – Firm day return	Column 6 - Market day return	Column 7 - Daily value gain/loss (RMB mn)	Column 8 – AR_0	Column 9 - CAR_{+1}	Column 10 – $CAR_{+/-2}$	Column 11 - $CAR_{+/-5}$
		lawsuits	lawsuits. The company could lose the lawsuit and incur negative impact to its operations.							

* Significant at the 10% level
** Significant at the 5% level
***Significant at the 1% level

Appendix 5 - Event calendar for Sichuan Joint-WIT

These 21 announcements were made by the company in compliance with the Stock Exchanges' official announcement requirements and were collected from the Stock Exchange's official websites: www.cninfo.com.cn and www.cnlist.com.cn. The events are grouped into four categories and are colour coded. Column 2 gives the date of the announcements, if there is a different date in brackets, then the share was not traded on the announcement day and calculations are done using the date presented in brackets (the next trading day); Column 3 shows the type of the announcements; Column 4 presents the details of the announcements; Column 5 presents the share's unadjusted day return (log return); Column 6 presents the market's day return (log return of Shanghai SE A Index); Column 7 presents the company's daily value gain/loss by using the absolute difference in opening and closing prices multiplied by the total number of tradable shares; Using market model in event study methodology, I calculate the abnormal return on day 0 (AR_0), cumulative abnormal return for different width of event windows, for the highlighted events. These results are presented in Columns 8-11..

	Column 2 - Dates	Column 3 - Type	Column 4 – Content	Column 5 - Firm day return	Column 6 - Market day return	Column 7 - Daily value gain/loss (RMB mn)	Column 8 - AR_0	Column 9 - CAR_{+1}	Column 10 – $CAR_{+/-2}$	Column 11 – $CAR_{+/-5}$
1	11/01/2000	M&A without payment	The controlling shareholder Chendu Asset Management Co intends to sell 1.53% and 6.76% holding to two Haikou companies at RMB2.2 per share. In addition, it intended to transfer its holding of 43.7% State shares to a textile group (transaction not completed)	-6.49%	-4.17%	-21.7	-2.32%	-0.60%	0.98%	-6.52%

	Column 2 - Dates	Column 3 - Type	Column 4 – Content	Column 5 - Firm day return	Column 6 - Market day return	Column 7 - Daily value gain/loss (RMB mn)	Column 8 - AR_0	Column 9 - CAR_{+1}	Column 10 – $CAR_{+/-2}$	Column 11 – $CAR_{+/-5}$
2	30/12/2000	Operations restructuring (asset restructuring)	Restructuring two subsidiaries, using both subsidiaries' operating assets as investment in the new JV, holding 70.56% and 82.63%, respectively (163.cm)	1.60%	1.40%	9.1	0.20%	-0.03%	0.49%	3.22%
3	03/07/2001	Purchasing material	The company purchased raw material from a related company, the transaction amount to RMB46.2mn.							
4	18/09/2001	M&A without payment	Controlling shareholder Chendu Asset Management Co transferred its holding of 47.7% to another SOE company (in textile) and this was approved by the Sichuan Municiple Government	1.16%	0.80%	5.6	0.36%	-1.04%	1.04%	-9.24%
5	18/10/2001	M&A without payment (follow up)	Controlling shareholder Chendu Asset Management Co transferred its holding of 47.7% to another SOE company (in textile) and this was approved by the Finance Ministry	-0.71%	-1.76%	-2.8	1.05%	0.21%	-1.62%	3.94%
6	29/05/2002	Purchasing material	The company purchased raw material from two related companies, the transactions amount to RMB30.33mn and RMB37.35mn.							
7	06/07/2002	M&A without payment (follow up)	Controlling shareholder Chendu Asset Management Co transferred its holding of 47.7% to another SOE company (in textile) and this was approved by the Finance Ministry.	0.46%	0.88%	1.75	-0.42%	-0.78%	1.31%	-1.09%

	Column 2 - Dates	Column 3 - Type	Column 4 – Content	Column 5 - Firm day return	Column 6 - Market day return	Column 7 - Daily value gain/loss (RMB mn)	Column 8 - AR_0	Column 9 - CAR_{+1}	Column 10 – $CAR_{+/-2}$	Column 11 – $CAR_{+/-5}$
8	11/07/2002	Q2 loss	Q2 continue loss, no improvement from Q1.							
9	31/10/2002	Q3 report	Announced Q3 performance (loss)							
10	28/12/2002	Warning of loss and ST status	Due to cash flow problem unable to organise normal operating activities, the company will incur loss this year and as a result will be 'ST'ed.							
11	28/01/2003	Restructuring/employee redundancy	Informed by the controlling shareholder, the municaple government will lead the company's restructuring, relocation and employee redundancy.	5.50%	0.24%	16.8				
12	21/02/2003	2002 performance report	Report performance in 2002 (loss), announce its 'ST' status and the 5% share price movement cap.							
13	30/04/2003	*ST announcement	Warning that the company may be delisted							
14	23/05/2003	M&A with payment	Company was informed that the controlling State shareholder signed agreement on 22/05/03 to sell 43.07% of its holding to a pharmaceutical company for RMB167mn. After the transaction the buyer would become the controlling shareholder.	4.83%	1.07%	13.3	**3.76%**	**4.21%**	**10.90%**	**10.73%**

	Column 2 - Dates	Column 3 - Type	Column 4 – Content	Column 5 - Firm day return	Column 6 - Market day return	Column 7 - Daily value gain/loss (RMB mn)	Column 8 - AR_0	Column 9 - CAR_{+1}	Column 10 – $CAR_{+/-2}$	Column 11 – $CAR_{+/-5}$
15	28/06/2003	Managerial restructuring	New Chairman of the board, CEO, CFO and GM etc has been elected. The previous ones left the position due to the M&A.	-1.36%	-0.77%	-3.5	-0.60%	-0.28%	-0.90%	-4.54%
16	10/07/2003	Controlling shareholder default	Controlling shareholder (wholly owned SOE)'s holding of 50.07mn shares (43.7%) was frozen by the court because of its overdue debts owed to Chendu Industrial Investment Ltd. The court order was given on 23-06-2003 for a period of one year.							
17	21/08/2003	Asset sales	Company intends to sell all its assets relating to textile business and buy controlling shareholding of a pharmaceutical company (same news about selling on 27/08/03). This transaction was cancelled on 19/08/03. Also the company announced its Q2 report (loss)							

Share price capped since 20-Aug-2002

	Column 2 - Dates	Column 3 - Type	Column 4 – Content	Column 5 - Firm day return	Column 6 - Market day return	Column 7 - Daily value gain/loss (RMB mn)	Column 8 - AR_0	Column 9 - CAR_{+1}	Column 10 – $CAR_{+/-2}$	Column 11 – $CAR_{+/-5}$
18	27/08/2003	Asset sales /operations restructuring	Company sold its total assets and debts relating to textile business valued at RMB26.8bn, deducting redundancy fee of RMB13.2bn, and therefore transaction price at RMB13.6bn. Buyer pay cash. The company then bought 81% holding of a pharmaceutical company at the price of RMB0.12bn from a related company. The transactions were completed on 31st December 2003.							
				Share price capped since 20-Aug-2003						
19	15/09/2003	M&A cancellation	Agreement reached to cancel the M&A transaction announced on 23/05/03.			Share suspended				
20	30/09/2003	Debt restructuring	The company's accounts payable to another textile company amounting to RMB43mn was transferred to another company.							
21	22/12/2003	Asset restructuring follow-up	announced the relisting, company's major asset sales and purchase report and auditing on these transactions,							

	Column 2 - Dates	Column 3 - Type	Column 4 – Content	Column 5 - Firm day return	Column 6 - Market day return	Column 7 - Daily value gain/loss (RMB mn)	Column 8 - AR_0	Column 9 - CAR_{+1}	Column 10 – $CAR_{+/-2}$	Column 11 – $CAR_{+/-5}$
22	24/12/2003	Change of major shareholder (2nd largest)	Second and third largest State shareholders signed cancellation of an agreement to sell their holdings to two Haikou companies (the selling agreement was signed on 05/07/99). Also these two major shareholders sold their holdings totaling 21.82%, to New World (Hong Kong). After this transaction, New World would become the second largest shareholder.	-3.97%	0.75%	-8.4	-4.71%***	-7.00%***	-14.74%***	

* Significant at the 10% level
** Significant at the 5% level
***Significant at the 1% level

Appendix 6 – A list of 479 restructuring announcements

For the purpose of chapter 6, a list of restructuring related announcements made by the 100 distressed companies between 1999 and 2003. (between t=-2 and t=+3). Column 1 & 2 show the listing code and name of the Stock Exchange where the stock is listed; Column 3 gives the dates of the announcements; Column 4 categorises the type of restructuring strategies into the four categories discussed in section 7.2; Column 5 shows if the news is related to an announcement (+) or is it a cancellation of a previous announcement (-); Column 6 shows the codes I adopted for the purpose of computing event study results.

Listing code	Stock exchange	Date	Type	Sign	code
100505	Shenzhen	21/09/2000	Asset sales announcement	+	411
100505	Shenzhen	23/10/2000	Asset sales update	+	412
100505	Shenzhen	30/12/2000	Asset sales announcement	+	411
100505	Shenzhen	28/06/2002	Asset swaps	+	421
600784	shanghai	29/04/2000	Asset sales announcement	+	411
600784	shanghai	05/07/2000	M&A with payment proposal	+	11
600784	shanghai	28/12/2000	M&A with payment update	+	12
600784	shanghai	14/03/2001	M&A with payment proposal	+	11
600784	shanghai	04/01/2002	Asset swaps	+	421
600784	shanghai	04/06/2002	Asset swaps	+	421
600784	shanghai	26/09/2002	Resignation and appointment	+	31
600784	shanghai	10/01/2003	Asset sales announcement	+	411
600603	shanghai	19/11/2001	Forced asset sales	+	441
600603	shanghai	21/03/2002	Forced asset sales confirmation	+	442
600603	shanghai	23/04/2003	Appointment	+	33
600758	shanghai	02/07/2001	Auctioned M&A cancellation	-	154
600758	shanghai	28/11/2002	Appointment	+	33
600758	shanghai	19/07/2003	Auctioned M&A	+	151
600758	shanghai	29/07/2003	Auctioned M&A follow-up	+	152
600758	shanghai	23/09/2003	Auctioned M&A completion	+	153
600758	shanghai	10/10/2003	Forced asset sales	+	441
600844	shanghai	21/11/2001	M&A with payment	+	11
600844	shanghai	28/12/2001	Termination and appointment	+	32
600844	shanghai	16/01/2002	M&A with payment follow-up	+	12
600844	shanghai	06/07/2002	Asset sales announcement	+	411
600752	shanghai	29/05/2002	Resignation and appointment	+	31
100048	shenzhen	27/10/2000	Asset swaps	+	421
100048	shenzhen	13/06/2001	Asset sales announcement	+	411
100048	shenzhen	27/11/2001	Asset sales announcement	+	411
100799	shenzhen	04/04/2002	Resignation and appointment	+	31
100799	shenzhen	05/09/2002	M&A with payment	+	11
100799	shenzhen	03/04/2003	Asset swaps	+	421
100799	shenzhen	12/07/2003	M&A with payment approval	+	14
100799	shenzhen	26/09/2003	Asset swaps	+	421
600159	shanghai	13/11/2001	Increasing leverage	+	51
600159	shanghai	01/03/2002	Resignation and appointment	+	31
600159	shanghai	17/07/2002	M&A with payment proposal	+	11
600159	shanghai	16/11/2002	M&A with payment update	+	12
600159	shanghai	15/11/2003	M&A with payment update	-	13
600735	shanghai	03/07/2001	M&A (with payment)	+	11
600735	shanghai	09/09/2003	M&A with payment update	-	16
600781	shanghai	28/12/2001	Resignation and appointment	+	31
600781	shanghai	23/11/2002	Renew debts	+	52
600781	shanghai	22/11/2003	M&A with payment	+	11

100529	shenzhen	24/09/2003	M&A with payment	+	11
100529	shenzhen	22/10/2003	M&A with payment	+	11
100809	shenzhen	30/12/2000	Operations restructuring	+	431
100809	shenzhen	18/09/2001	M&A without payment	+	21
100809	shenzhen	06/07/2002	M&A without payment approval	+	24
100809	shenzhen	23/05/2003	M&A with payment	+	11
100809	shenzhen	28/06/2003	change management	+	32
100809	shenzhen	21/08/2003	Asset sales announcement	+	411
100809	shenzhen	15/09/2003	M&A with payment cancellation	-	13
100809	shenzhen	30/09/2003	Debt restructuring	+	53
100809	shenzhen	22/12/2003	Operations restructuring follow-up	+	432
600878	shanghai	28/12/2001	Resignation and appointment	+	31
600878	shanghai	27/11/2002	M&A with payment	+	11
600681	shanghai	13/05/2002	M&A with payment	+	11
600681	shanghai	18/02/2003	M&A with payment	+	11
600681	shanghai	15/03/2003	M&A with payment update	+	12
100699	shenzhen	28/11/2000	M&A without payment proposal	+	21
100699	shenzhen	25/10/2002	M&A without payment	+	21
100699	shenzhen	08/11/2002	Asset swaps	+	421
600053	shanghai	29/06/2002	Asset swaps	+	421
600053	shanghai	11/07/2002	Resignation and appointment	+	31
600053	shanghai	09/10/2002	Resignation and appointment	+	31
600053	shanghai	25/01/2003	Resignation and appointment	+	31
600053	shanghai	08/07/2003	Auctioned M&A	+	151
600053	shanghai	18/12/2003	Auctioned M&A failed	+	154
100718	shenzhen	04/10/2001	Asset sales announcement	+	411
100718	shenzhen	07/08/2002	Resignation and appointment	+	31
100718	shenzhen	22/11/2002	M&A with payment	+	11
100718	shenzhen	16/01/2003	Increasing leverage	+	51
100718	shenzhen	04/03/2003	Operation temporary discontinuation	+	431
100718	shenzhen	23/05/2003	Operation temporary discontinuation follow-up	+	432
600137	shanghai	24/06/2000	M&A with payment	+	11
600137	shanghai	25/07/2001	Asset swaps	+	421
600137	shanghai	31/01/2002	Asset sales announcement	+	411
600137	shanghai	29/03/2002	Asset swaps	+	421
600137	shanghai	18/04/2002	Discontinue operation	+	431
600137	shanghai	04/06/2002	Discontinue operation up-date	+	432
600137	shanghai	11/10/2002	Resignation and appointment	+	31
600137	shanghai	23/11/2002	Operation restarted	-	432
600137	shanghai	04/03/2003	Forced asset sales	+	441
100950	shenzhen	27/06/2002	Appointment	+	33
100950	shenzhen	14/08/2002	M&A without payment	+	21
100950	shenzhen	30/11/2002	M&A without payment approval	+	24
100950	shenzhen	27/09/2003	Resignation and appointment	+	31
100618	shenzhen	08/11/1999	M&A without payment	+	21
100618	shenzhen	17/01/2002	Resignation and appointment	+	31
100635	shenzhen	12/12/2001	Resignation	+	31
100635	shenzhen	31/12/2001	Discontinue operation	+	431

100635	shenzhen	03/08/2002	M&A with payment	+	11
100635	shenzhen	15/11/2002	Forced asset sales	+	441
100635	shenzhen	19/12/2002	M&A with payment follow-up	+	12
100635	shenzhen	01/07/2003	Appointment	+	33
100635	shenzhen	09/10/2003	Asset swaps	+	421
100635	shenzhen	13/11/2003	Asset sales announcement	+	411
100498	shenzhen	29/11/2001	Asset sales announcement	+	411
100498	shenzhen	17/12/2001	M&A with payment	+	11
100498	shenzhen	10/04/2002	M&A with payment cancellation	-	13
100498	shenzhen	28/10/2003	Asset sales announcement	+	411
600617	shanghai	25/12/2001	Resignation and appointment	+	31
100159	shenzhen	22/04/2002	M&A without payment	+	21
100159	shenzhen	28/12/2002	Asset sales announcement	+	411
100159	shenzhen	29/07/2003	Increasing leverage	+	51
600669	shanghai	01/07/2002	Discontinue operations	+	431
600669	shanghai	19/12/2002	Leasing operating facilities	+	431
600669	shanghai	21/10/2003	Appointments	+	33
100567	shenzhen	21/04/2001	M&A with payment	+	11
100567	shenzhen	03/08/2002	Leasing subsidiary out	+	431
100567	shenzhen	14/12/2002	Forced asset sales	+	441
100567	shenzhen	24/12/2002	Forced asset sales	+	441
100567	shenzhen	11/01/2003	Forced asset sales	+	441
100567	shenzhen	15/03/2003	Forced asset sales	+	441
600869	shanghai	26/11/2001	Increasing leverage	+	51
600869	shanghai	22/11/2002	M&A with payment	+	11
600869	shanghai	02/01/2003	Appointment	+	33
600385	shanghai	17/12/2001	M&A with payment announcement	+	11
600385	shanghai	07/01/2002	Resignation and appointment	+	31
600385	shanghai	02/02/2002	M&A with payment follow-up	+	12
600385	shanghai	04/03/2002	Resignation and appointment	+	31
600385	shanghai	24/05/2002	Operational restructuring	+	431
600385	shanghai	19/06/2002	Increasing leverage	+	51
600385	shanghai	27/07/2002	M&A with payment follow-up	+	12
600385	shanghai	13/12/2002	Increasing leverage	+	51
600385	shanghai	14/08/2003	Increasing leverage	+	51
600842	shanghai	20/03/2001	M&A with payment	+	11
600842	shanghai	16/07/2001	Resignation and appointment	+	31
600842	shanghai	19/12/2001	Forced asset sales	+	441
600842	shanghai	31/12/2001	Forced asset sales failed	+	441
600842	shanghai	28/01/2002	Resignation and appointment	+	31
600842	shanghai	27/02/2002	Asset sales announcement	+	411
600842	shanghai	17/10/2002	Resignation and appointment	+	31
600792	shanghai	07/12/1999	Asset sales announcement	+	411
600792	shanghai	28/04/2000	M&A with payment	+	11
600792	shanghai	31/12/2001	M&A with payment proposal	+	11
600792	shanghai	27/06/2002	Negotiation with creditor	+	53
600769	shanghai	14/07/2000	M&A with payment	+	11
600769	shanghai	03/07/2001	Asset swaps	+	421
600769	shanghai	23/05/2002	M&A with payment	+	11
600769	shanghai	12/10/2002	M&A with payment approval	+	14
100670	shenzhen	06/11/2000	Renew debts	+	52
100670	shenzhen	05/12/2001	Increasing leverage	+	51

100670	shenzhen	26/06/2002	Termination and appointment	+	32
100670	shenzhen	27/07/2002	Resignation and appointment	+	31
100670	shenzhen	23/05/2003	Termination and appointment	+	32
100670	shenzhen	11/09/2003	Increasing leverage	+	51
100670	shenzhen	14/11/2003	Asset sales announcement	+	411
600182	shanghai	21/11/2001	Resignation and appointment	+	31
600182	shanghai	10/06/2003	Auctioned M&A	+	151
600182	shanghai	15/07/2003	Auctioned M&A completion	+	153
600182	shanghai	31/07/2003	Termination and appointment	+	32
600182	shanghai	14/10/2003	Negotiation with creditor	+	53
100885	shenzhen	13/11/2001	Resignation and appointment	+	31
100885	shenzhen	18/02/2003	M&A with payment	+	11
600876	shanghai	20/07/2002	Resignation and appointment	+	31
100638	shenzhen	11/09/2000	M&A without payment	+	21
100638	shenzhen	08/12/2000	Asset sales announcement	+	411
100638	shenzhen	09/11/2001	Asset swaps	+	421
100638	shenzhen	07/12/2002	Resignation and appointment	+	31
100638	shenzhen	07/08/2003	Auctioned M&A	+	151
100638	shenzhen	20/09/2003	M&A without payment	+	21
600899	shanghai	21/08/2002	Asset sales announcement	+	411
600899	shanghai	07/11/2002	Operational restructuring	+	431
600899	shanghai	08/03/2003	Termination and appointment	+	32
600892	shanghai	07/09/2002	Resignation and appointment	+	31
600892	shanghai	17/12/2002	Forced asset sales	+	441
600892	shanghai	03/01/2003	Debt re-negotiation with creditor	+	53
600892	shanghai	24/04/2003	M&A with payment	+	11
600892	shanghai	07/06/2003	M&A with payment update	+	12
600892	shanghai	01/08/2003	Appointment	+	33
600892	shanghai	30/12/2003	Redundancy	+	61
600786	shanghai	21/06/2000	Asset sales announcement	+	411
100816	shenzhen	14/05/2003	Asset swaps	+	421
100409	shenzhen	29/06/2001	Resignation and appointment	+	31
100409	shenzhen	20/11/2001	M&A with payment	+	11
100921	shenzhen	26/06/2000	Resignation and appointment	+	31
100921	shenzhen	31/10/2001	M&A with payment	+	11
100921	shenzhen	13/03/2002	M&A with payment update	+	12
100893	shenzhen	27/09/2002	M&A with payment	+	11
100893	shenzhen	04/01/2003	M&A with payment completion	+	14
100570	shenzhen	24/12/2001	Renew debts	+	52
100570	shenzhen	26/02/2003	Renew debts	+	52
100533	shenzhen	07/06/2001	Auctioned M&A	+	151
100533	shenzhen	19/11/2002	Re-negotiation with creditor	+	53
100533	shenzhen	30/09/2003	Asset sales announcement	+	411
100533	shenzhen	01/11/2003	Asset sales announcement	+	411
100660	shenzhen	06/05/2003	Renegotiation with creditor	+	53
100660	shenzhen	01/11/2003	Resignation and appointment	+	31
100723	shenzhen	30/06/2000	Resignation and appointment	+	31
100723	shenzhen	12/09/2001	M&A with payment	+	11
100723	shenzhen	20/12/2001	Asset sales announcement	+	411
100723	shenzhen	06/06/2002	M&A with payment update	+	12
100723	shenzhen	28/11/2002	M&A with payment approval	+	14
100723	shenzhen	17/05/2003	Increasing leverage	+	51
100723	shenzhen	13/06/2003	Resignation and appointment	+	31

100723	shenzhen	01/08/2003	Increasing leverage	+	31
100723	shenzhen	05/11/2003	Increasing leverage	+	51
600691	shanghai	25/11/1999	Asset sales announcement	+	411
600691	shanghai	11/12/1999	M&A with payment	+	11
600691	shanghai	21/11/2001	M&A with payment update	+	12
600691	shanghai	18/01/2002	M&A with payment update	+	12
600691	shanghai	07/03/2003	M&A with payment approval	+	14
600691	shanghai	22/03/2003	Resignation and appointment	+	31
100561	shenzhen	23/11/2000	Asset swaps	+	421
100951	shenzhen	29/09/2000	Resignation and appointment	+	31
100951	shenzhen	22/05/2003	M&A with payment	+	11
100951	shenzhen	24/09/2003	M&A with payment	+	11
100951	shenzhen	29/11/2003	Equity restructuring	+	71
100552	shenzhen	08/09/2000	Asset swaps	+	421
100552	shenzhen	07/12/2000	Operations restructuring	+	431
100552	shenzhen	26/07/2002	M&A without payment	+	21
100552	shenzhen	07/01/2003	M&A without payment approval	+	24
600622	shanghai	29/09/2000	M&A with payment	+	11
600622	shanghai	10/10/2002	Asset sales announcement	+	411
100801	shenzhen	31/05/2000	Asset sales announcement	+	411
100801	shenzhen	03/06/2003	M&A with payment	+	11
600234	shanghai	28/01/2001	M&A with payment	+	11
600234	shanghai	28/01/2002	M&A with payment update	+	12
600234	shanghai	08/02/2002	Resignation and appointment	+	31
600234	shanghai	04/03/2003	Resignation and appointment	+	31
600234	shanghai	14/10/2003	M&A with payment approval	+	24
600870	shanghai	20/06/2002	Asset sales announcement	+	411
600870	shanghai	02/04/2003	Increasing leverage	+	51
600057	shanghai	24/01/2002	Asset sales announcement	+	411
600057	shanghai	30/05/2002	Asset swaps	+	421
100555	shenzhen	10/11/2000	Asset swaps	+	421
100555	shenzhen	20/11/2000	M&A with payment cancellation	+	13
100555	shenzhen	27/07/2000	Increasing leverage	+	51
100555	shenzhen	10/12/2001	Resignation and appointment	+	31
100555	shenzhen	31/05/2002	Renew debts	+	52
100555	shenzhen	12/07/2002	M&A with payment proposal	+	11
100621	shenzhen	19/06/2001	Asset sales announcement	+	411
100621	shenzhen	30/11/2002	Resignation and appointment	+	31
100621	shenzhen	29/01/2003	Asset sales announcement	+	411
600847	shanghai	04/07/2001	M&A with payment	+	11
600847	shanghai	07/09/2001	Resignation and appointment	+	31
600847	shanghai	22/06/2002	Resignation and appointment	+	31
600852	shanghai	28/09/2001	Debt renegotiation	+	53
600852	shanghai	26/11/2001	forced asset sales	+	441
600852	shanghai	17/07/2002	Asset sales announcement	+	411
600852	shanghai	22/10/2002	Appointment	+	33
600852	shanghai	22/02/2003	Resignation and appointment	+	31
100535	shenzhen	07/12/2000	M&A without payment	+	21
100535	shenzhen	20/04/2001	Asset swaps	+	421
100535	shenzhen	03/09/2001	M&A with payment	+	11
100535	shenzhen	13/10/2001	Debt re-negotiation	+	53
100535	shenzhen	27/11/2001	Asset sales announcement	+	411

100535	shenzhen	13/12/2001	Debt renegotiation	+	53
100535	shenzhen	25/12/2001	Debt re-negotiation	+	53
100535	shenzhen	31/01/2002	Asset swaps	+	421
100535	shenzhen	21/03/2002	Debt re-negotiation	+	53
100535	shenzhen	20/07/2002	Auctioned M&A	+	151
100535	shenzhen	06/09/2002	M&A with payment approval	+	14
100535	shenzhen	03/12/2002	M&A with payment completion	+	14
100536	shenzhen	20/04/1999	M&A with payment	+	11
100536	shenzhen	16/01/2002	Asset sales announcement	+	411
100536	shenzhen	08/02/2002	Asset sales update	+	412
100536	shenzhen	18/06/2002	Asset sales announcement	+	411
100536	shenzhen	03/08/2002	M&A without payment	+	21
100536	shenzhen	30/11/2002	Asset sales announcement	+	411
100536	shenzhen	04/01/2003	Renegotiation with creditor	+	53
100536	shenzhen	26/07/2003	Asset sales announcement	+	411
100536	shenzhen	25/12/2003	Asset sales update	+	412
600760	shanghai	10/07/2002	Renew debts	+	52
600760	shanghai	02/07/2003	Renew debts	+	52
100710	shenzhen	10/10/2002	Increasing leverage	+	51
100710	shenzhen	20/11/2002	Asset swaps	+	421
100710	shenzhen	16/01/2003	Renew debts	+	52
100710	shenzhen	26/03/2003	Asset swaps	+	421
100710	shenzhen	23/10/2003	Renew debts	+	52
100678	shenzhen	19/10/2000	M&A with payment	+	11
100678	shenzhen	27/06/2002	M&A with payment cancellation	-	13
100678	shenzhen	24/07/2002	Appointment	+	33
100678	shenzhen	24/08/2002	Resignation and appointment	+	31
100678	shenzhen	07/06/2003	Asset sales announcement	+	411
100678	shenzhen	27/11/2003	Asset sales announcement	+	411
100678	shenzhen	30/12/2003	Asset sales announcement	+	411
100571	shenzhen	28/12/1999	Asset swaps	+	421
100571	shenzhen	21/09/2002	Asset sales announcement	+	411
600698	shanghai	30/12/2000	Asset swaps	+	421
600698	shanghai	24/05/2003	Appointment	+	33
600698	shanghai	26/06/2003	Appointment	+	33
600698	shanghai	29/08/2003	Forced asset sales	+	441
600698	shanghai	27/09/2003	Supplier apply for the co's bankruptcy	+	541
600698	shanghai	30/12/2003	Bankruptcy follow-up	+	542
100738	shenzhen	30/05/2002	Asset swaps	+	421
100738	shenzhen	20/05/2003	Appointment	+	33
100738	shenzhen	26/06/2003	Asset swaps	+	421
100017	shenzhen	30/12/1999	Debt restructuring	+	53
100017	shenzhen	14/07/2000	Debt restructuring	+	53
100017	shenzhen	30/08/2001	Debt restructuring	+	53
100017	shenzhen	12/12/2001	Forced asset sales	+	441
100017	shenzhen	31/12/2001	Auctioned M&A	+	151
100017	shenzhen	13/03/2002	Termination and appointment	+	32
100017	shenzhen	11/10/2002	Auctioned M&A follow-up	+	152
100017	shenzhen	16/11/2002	Forced asset sales (auction)	+	441
100017	shenzhen	12/12/2002	Auction M&A completion	+	153
100017	shenzhen	29/08/2003	Change of management	+	33
600338	shanghai	01/03/2001	Increasing leverage	+	51

600338	shanghai	31/10/2001	Asset sales announcement	+	411
600338	shanghai	27/05/2002	Asset sales update	+	412
600338	shanghai	26/03/2003	Renegotiation with creditor	+	53
600338	shanghai	31/05/2003	Appointment of management	+	33
100040	shenzhen	29/12/2000	Asset sales announcement	+	411
100040	shenzhen	11/12/2002	Increasing leverage	+	51
100040	shenzhen	05/04/2003	Asset sales announcement	+	411
100040	shenzhen	30/09/2003	Asset sales announcement	+	411
100040	shenzhen	30/12/2003	Asset sales announcement	+	411
600776	shanghai	18/01/2002	Termination and appointment of management	+	32
600776	shanghai	30/03/2002	Operational restructuring	+	431
600776	shanghai	10/09/2002	change of management	+	31
600886	shanghai	12/01/2002	Asset sales announcement	+	411
600886	shanghai	28/04/2002	M&A with payment	+	11
600886	shanghai	08/05/2002	Asset swaps	+	421
600886	shanghai	24/08/2002	Resignation	+	31
600886	shanghai	10/10/2002	M&A with payment approval	+	14
600700	shanghai	12/03/2002	Asset sales announcement	+	411
600700	shanghai	14/06/2002	Resignation and appointment	+	31
600700	shanghai	09/07/2002	Forced asset sales	+	441
600700	shanghai	11/03/2003	Asset sales announcement	+	411
100013	shenzhen	12/04/2002	Forced asset sales	+	441
100013	shenzhen	05/11/2002	Resignation and appointment	+	31
100013	shenzhen	11/01/2003	Forced asset sales	+	441
100013	shenzhen	19/02/2003	Resignation and appointment follow-up	+	31
100013	shenzhen	05/03/2003	Forced asset sales	+	441
100013	shenzhen	09/08/2003	Forced asset sales	+	441
100013	shenzhen	17/10/2003	M&A with payment (auction)	+	151
100013	shenzhen	06/11/2003	M&A with payment follow-up	+	152
100013	shenzhen	17/12/2003	M&A completion (auction)	+	153
100030	shenzhen	27/09/2000	Debt renegotiation	+	53
100030	shenzhen	07/04/2001	Asset sales announcement	+	411
100030	shenzhen	20/07/2001	Forced asset sales	+	441
100030	shenzhen	31/08/2001	Debt restructuring	+	53
100030	shenzhen	20/12/2001	Forced asset sales confirmation	+	442
100030	shenzhen	31/12/2001	Forced asset sales	+	441
100030	shenzhen	18/06/2002	Forced asset sales	+	441
100030	shenzhen	18/09/2002	Forced asset sales	+	441
100030	shenzhen	11/10/2002	Auctioned M&A	+	151
100030	shenzhen	04/12/2002	Forced asset sales confirmation	+	442
100030	shenzhen	15/02/2003	Asset restructuring (one production discontinue)	+	431
100030	shenzhen	06/03/2003	Change of management	+	32
100030	shenzhen	24/10/2003	M&A without payment	+	21
100030	shenzhen	25/11/2003	M&A without payment approval	+	24
600891	shanghai	20/12/2000	Asset sales announcement	+	411
100560	shenzhen	13/11/2001	M&A with payment	+	11
100560	shenzhen	18/12/2001	M&A with payment update	+	12
100560	shenzhen	23/11/2002	Forced asset sales to pay debts	+	441

100560	shenzhen	24/12/2001	Forced asset sales to pay debt due	+	441
100560	shenzhen	29/01/2003	Increasing leverage	+	51
100560	shenzhen	26/03/2003	Borrow to pay old debts	+	52
100560	shenzhen	14/05/2003	Asset sales	+	411
600807	shanghai	29/04/2001	M&A with payment	+	11
600807	shanghai	04/07/2001	Discontinuation of operating	+	431
600807	shanghai	26/09/2001	Termination and appointment	+	32
600807	shanghai	09/11/2001	Termination of management and appointment of new management	+	32
600807	shanghai	11/04/2002	Termination and appointment	+	32
600807	shanghai	27/05/2002	M&A with payment cancellation	+	13
600807	shanghai	02/07/2002	M&A with payment proposal (later cancelled)	+	11
600807	shanghai	03/08/2002	Appointment of new chairman and supervisory board chairman	+	33
600807	shanghai	07/12/2002	Increasing leverage (unsigned agreement)	+	51
600807	shanghai	24/06/2003	Increasing leverage approval by board	+	51
600807	shanghai	21/11/2003	Asset sales announcement	+	411
600807	shanghai	16/12/2003	Asset sales update	+	412
600807	shanghai	27/12/2003	M&A with payment cancelled	-	13
600670	shanghai	03/03/2000	Operational restructuring	+	431
600670	shanghai	20/03/2002	M&A with payment proposal	+	11
600670	shanghai	20/05/2002	Termination and appointment	+	32
600670	shanghai	25/06/2002	Debt related (renewal)	+	52
600670	shanghai	30/05/2003	Change of management announcement	+	32
600670	shanghai	13/06/2003	Forced asset sales to pay debts due to its bank	+	441
600670	shanghai	12/07/2003	Forced asset sales confirmation	+	442
600738	shanghai	22/09/2000	M&A without payment	+	21
600738	shanghai	21/04/2001	Asset swaps	+	421
600738	shanghai	04/09/2001	M&A proposal	+	11
600738	shanghai	21/12/2002	Operation restructuring	+	431
600738	shanghai	07/01/2003	Operation restructuring follow-up	+	432
600738	shanghai	23/05/2003	M&A proposal follow-up	+	12
600738	shanghai	06/09/2003	M&A with payment announcement	+	11
600738	shanghai	09/10/2003	M&A with payment approval	+	14
600738	shanghai	17/12/2003	Asset sales announcement	+	411
100586	shenzhen	03/12/2001	M&A with payment announcement	+	11
100586	shenzhen	08/04/2002	M&A with payment update	+	12
100586	shenzhen	17/09/2002	Asset swaps	+	421
100586	shenzhen	29/10/2002	Asset swap follow-up	+	422
100586	shenzhen	24/12/2002	M&A with payment approval	+	14
100586	shenzhen	30/04/2003	M&A with payment approval	+	14
100586	shenzhen	25/11/2003	Appointment of new board members	+	33
600082	shanghai	10/10/2001	M&A without payment	+	21

600082	shanghai	26/11/2001	M&A without payment announcement	+	21
600082	shanghai	31/12/2001	Asset sales announcement	+	411
600082	shanghai	13/05/2002	Asset swap completion	+	422
600082	shanghai	23/11/2002	Increasing leverage	+	51
100765	shenzhen	29/04/2001	Asset swaps	+	421
100765	shenzhen	12/06/2001	Asset swaps	+	421
100765	shenzhen	20/11/2001	Asset swaps	+	421
100765	shenzhen	21/05/2003	Resignation	+	31
100765	shenzhen	19/06/2003	Appointment of new directors	+	33
600766	shanghai	30/05/2001	M&A with payment	+	11
600766	shanghai	28/11/2002	M&A with payment update	+	12
600766	shanghai	19/11/2003	Asset swaps	+	421
600766	shanghai	05/12/2003	Asset sales announcement	+	411
600766	shanghai	23/12/2003	Asset swaps	+	421
600858	shanghai	24/05/2002	Forced asset sales to pay debts	+	441
600858	shanghai	18/04/2003	M&A with payment	+	11
600858	shanghai	05/07/2003	Asset sales announcement	+	411
600858	shanghai	23/08/2003	M&A with payment follow-up	+	12
600858	shanghai	13/11/2003	Asset sales announcement	+	411
600240	shanghai	27/11/2001	Asset sales announcement	+	411
600240	shanghai	28/12/2001	Resignation and appointment	+	31
600240	shanghai	26/12/2002	M&A with payment	+	11
600240	shanghai	28/01/2003	M&A with payment follow-up	+	12
600240	shanghai	09/09/2003	M&A with payment approval	+	14
900912	shanghai	04/01/2003	Asset sales announcement	+	411
100005	shenzhen	25/12/2000	Renegotiation with creditor	+	53
100802	shenzhen	24/01/2002	Increasing leverage	+	51
100802	shenzhen	13/04/2002	Asset sales announcement	+	411
100802	shenzhen	15/06/2002	Asset sales announcement	+	411
100802	shenzhen	31/08/2002	Increasing leverage	+	51
100802	shenzhen	30/11/2002	Asset sales update	+	412
100802	shenzhen	21/12/2002	Asset sales update	+	412
100802	shenzhen	09/10/2003	M&A with payment	+	11
100008	shenzhen	13/03/2002	M&A with payment	+	11
100008	shenzhen	14/09/2002	Forced asset sales to pay debt due	+	441
100008	shenzhen	08/11/2002	Asset sales announcement	+	411
100008	shenzhen	19/02/2003	Debt restructuring	+	53
100008	shenzhen	25/03/2003	Asset sales update	+	412
100008	shenzhen	20/06/2003	Asset sales announcement	+	411
100008	shenzhen	28/10/2003	Asset sales update	+	412
600873	shanghai	04/03/2000	M&A without payment announcement	+	21
600873	shanghai	04/07/2002	Increasing leverage	+	51
600873	shanghai	12/09/2002	Asset sales announcement	+	411
600873	shanghai	18/02/2003	M & A (with payment) announcement	+	11
600873	shanghai	12/06/2003	M&A with payment approval	+	14
600873	shanghai	08/07/2003	Asset swap	+	421
600873	shanghai	15/08/2003	Asset swap follow-up	+	422
600799	shanghai	27/03/2002	Operational restructuring	+	431
600799	shanghai	03/01/2003	Asset swaps	+	421
600799	shanghai	25/01/2003	Asset sales announcement	+	411

100931	shenzhen	21/01/2001	Increasing leverage	+	51
100931	shenzhen	27/10/2001	Increasing leverage	+	51
100931	shenzhen	28/05/2002	Renew debts	+	52
100931	shenzhen	10/10/2002	Increasing leverage	+	51
100931	shenzhen	29/03/2003	Increasing leverage	+	51
100931	shenzhen	11/06/2003	Increasing leverage	+	51
100931	shenzhen	10/12/2003	Debt restructuring	+	53
100769	shenzhen	08/02/2001	Asset sales announcement	+	411
100769	shenzhen	09/04/2001	Asset sales update	+	412
100769	shenzhen	28/10/2001	M&A with payment	+	11
100769	shenzhen	12/12/2001	Asset sales/swap	+	421
100769	shenzhen	29/06/2002	Change of management	+	31
100769	shenzhen	25/12/2002	Asset sales announcement	+	411
100769	shenzhen	17/04/2003	M&A with payment approval	+	14
100769	shenzhen	06/09/2003	Asset swaps	+	421
600613	shanghai	29/03/2002	M&A with payment announcement	+	11
600613	shanghai	22/04/2002	Asset swaps update	+	422
600613	shanghai	06/07/2002	M&A with payment update	-	12
600613	shanghai	18/09/2002	Debt restructuring	+	53
600613	shanghai	28/12/2002	M&A with payment cancellation	-	13
600613	shanghai	29/03/2003	M&A with payment announcement	+	11

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