The new capital accord and the Chinese banking industry.

Zhuang Cai[1]
Peter Wheale[2]

[1] Standard and Poor's, London
[2] Harrow Business School, University of Westminster

"This is a post-peer-review, pre-copyedit version of an article published in the Journal of Banking Regulation. The definitive publisher-authenticated version of Cai, Zhuang and Wheale, Peter (2007) *The new capital accord and the Chinese banking industry.* Journal of Banking Regulation, 8 (3). pp. 262-289 is available online at:

http://dx.doi.org/10.1057/palgrave.jbr.2350049

THE NEW CAPITAL ACCORD AND THE CHINESE BANKING INDUSTRY

By

Zhuang Cai *and Peter Wheale**

* **Zhuang Cai** is a former Senior Manager at China National International Trust and Investment Company Limited, Beijing, China, and is presently a credit risk analyst with Standard and Poor's, London. She has an MBA from the University of Surrey, and MSc in Investment Management from CASS, City University, London.

** **Dr. Peter Wheale** is a Senior Lecturer in Finance at Harrow Business School, University of Westminster, where he is a member of the Financial Services Research Unit. He has a BA (Econ) Hons., from Manchester University and a PhD in Applied Economics. He is a Fellow of the Institute of Chartered Accountants in England & Wales.

Contact address:

Dr. Peter Wheale, Harrow Business School, Watford Rd, Northwick Park, Harrow, Middlesex HA1 3TP, UK.
Tel: +44 (0)207 7911 5000 ext 4473.
E-mail address: whealep@wmin.ac.uk

Abstract

With the 1999 publication of the Basel Committee's proposal for a New Capital Accord, Basel II, to replace the 1988 agreement, Basel I, an attempt has been made to address the problem of correlating banks' risks and their management with capital requirements. The Basel II framework, finalised in June 2004, is designed to improve risk management by using models based on past performance to help set the amount of capital banks are required to hold by regulators, with the purpose of improving the efficiency of the global allocation of capital. The objectives of this study are to investigate the implications of the New Capital Accord for the banking community and, in particular, the response to these new international banking rules for the Chinese banking industry. The authors formulate three propositions, namely, Basel II will improve risk management; Basel II will improve capital allocation efficiency; and compliance with advanced risk management systems is predicated on Basel II and is biased in favour of the large banks. Following an extensive analysis of the New Capital Accord, evidence was assembled with which to evaluate these three propositions by gathering primary data from risk managers in the Chinese banking industry by means of a semi-structured tele-interview survey of twenty-four Chinese banks. The findings of the study strongly support the first two propositions and partly support the third proposition.

Key words: banking regulations; Basel I & II; Chinese banking; risk-management

1: Introduction

1.1 Background to the Study

Market economies, with their inevitable inefficiencies and market failures, pose a challenge for regulators in their desire to ensure the equitable treatment of corporate stakeholders and to promote a stable economic environment. Over the years legal and regulatory frameworks have been developed in the West for regulating public companies which consists of laws, for example, Companies Acts, financial reporting standards (FRS), statements of standard accounting practice (SSAP), listing rules for companies listed on the stock exchange and international reporting standards (IFRS), the international convergence of capital measurement, and capital standards. Recently, the Financial Instruments Directive (MiFID) was introduced for the purpose of opening up Europe's capital markets by improving price transparency of traded financial instruments while also making it easier to execute trade across borders.

Some key international regulatory groups have become central to the development of domestic regulatory regimes, such as the International Organisation of Securities Commission (IOSCO) for the securities' markets, the International Association of Insurance Supervisors (IAIS) for the insurance sector, and the Basel Committee for banking. The purpose of these institutions is to try to ensure that financial performance and the risk position of an entity is adequately reported to stakeholders who use financial information. Despite continuing attempts by the international regulatory bodies to harmonise international standards, differences in the treatment of asset valuation, differing calculations of regulatory capital and risk-based deduction methods exist in Europe and between Europe and the United Stated of America (USA) and countries of the far-East because of different national legal systems, financing methods and reporting systems.

A most important aspect of risk management is capital control: Rowe *et al* defined two major concepts which constitute the critical role of capital in the management of bank portfolios.[1] Firstly, to assess and manage risks, a bank must effectively determine the appropriate amount of capital that is necessary to absorb unexpected losses arising from

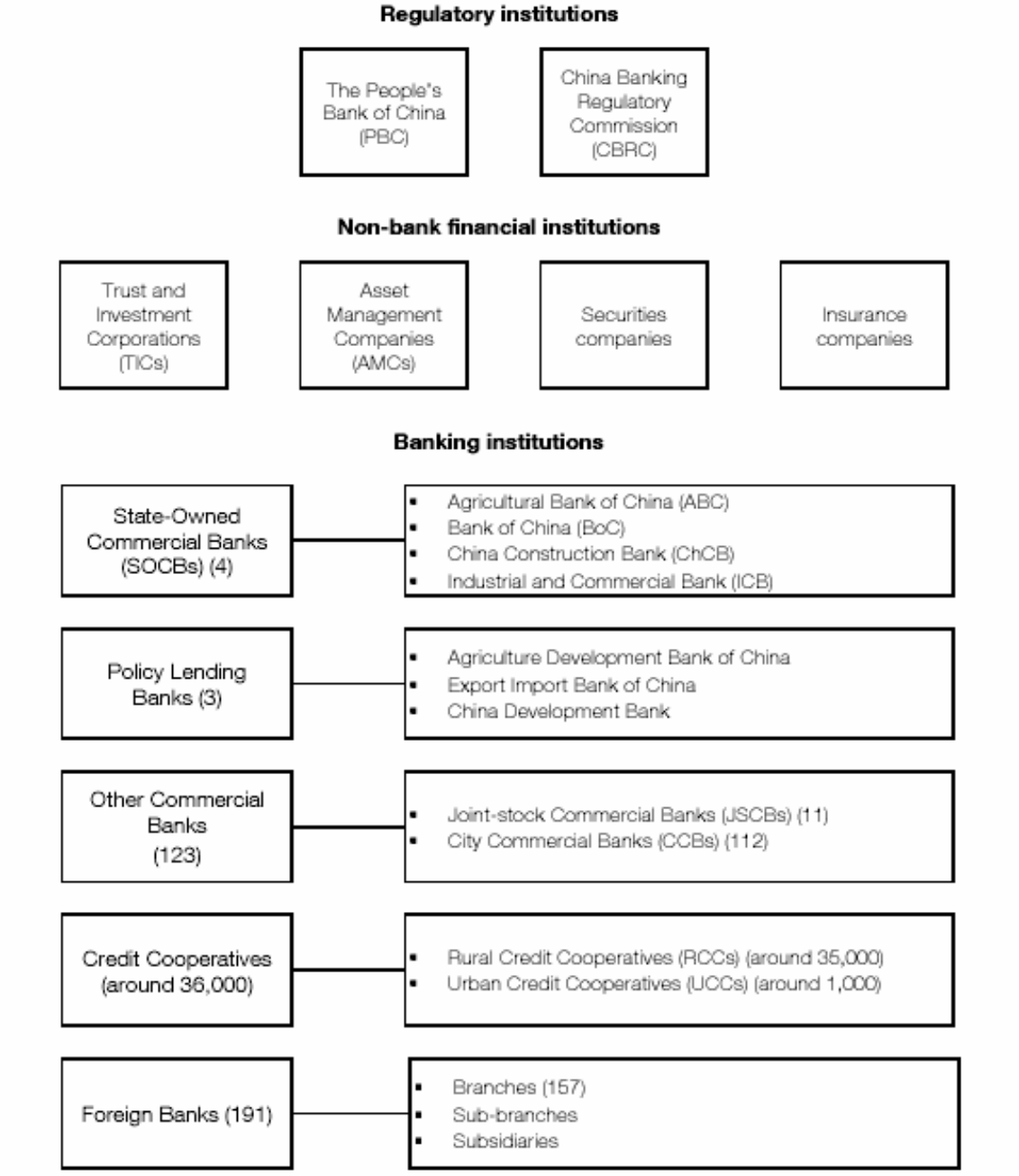
its market, credit and operational risk exposures. Secondly, profits that arise from various business activities need to be evaluated relative to the capital necessary to cover the associated risks. With the publication in 2004 of the finalised new framework for the New Basel Capital Accord, the so-called, Basel II banking regulations, the Basel Committee, which devises banking regulations, has attempted to address the problem of correlating banking risks and their management with capital requirements (Basel Committee on Banking Supervision.[2; 3] By redefining how banks worldwide calculate regulatory capital and report compliance to regulators and the public, Basel II is intended to improve safety and soundness in the financial system by placing increased emphasis on a banks' own internal control and risk-management processes and models, the supervisory review process and market discipline.[4; 5]

The complexity of the New Accord (it is over 600 pagers long) and its interdependencies with International Financial Reporting Standards and local regulations world-wide make implementation of Basel II a highly complicated undertaking. The international convergence of capital measurement and capital standards from Basel II presents the banking community with a risk management challenge which has extensive strategic business implications. In this study, we investigate the implications of the New Capital Accord for the banking community and, in particular, the response to these new international banking rules for the Chinese banking industry.

1.2 Overview of the Chinese Banking Industry

The opening up of China to financial services has already begun and will continue to expand. However, the local financial services sector is still relatively young, and policy and regulation continue to develop alongside state-owned enterprise reform, management of non-performing loans, stock market expansion, relaxation of currency controls, and other critical issues. At present, the banking system includes four large state-owned commercial banks (SOCBs), three policy leading banks and a large number of other commercial banks, credit cooperatives and financial institutions (see Figure 1.1) which dominate China's financial landscape as such indirect financing remains the main channel of financing for business enterprises.[6]

Figure 1.1: Structure of the Chinese Banking System



Source: Herrero and Santabarbara (see ref 7)

The main concerns for China's banks have centred on the high level of non-performing loans (NPLs), low level of associated loan loss reserves and inadequate capital. In recent years, there have been some very significant developments that address these issues, including moves to recapitalize and reform the state-owned banks and strengthen the country's regulatory framework.[8; 6; 9; 10] The key developments in China's banking industry include the following:

- The government recapitalises the Bank of China and Construction Bank of China with $45bn, accompanied by a one-time write-off of the two banks' accumulated NPLs

- These two banks were selected as pilot banks to convert the state-owned lenders into fully commercial companies with outside shareholders, modern corporate governance and stock market listings

- The regulator body, the China Bank Regulatory Commission (CBRC) is introducing new prudential regulations, for example, The Provisional Risk Assessment System for Joint Stock Banks aims to improve the regulator's ability to assess risk management and the Regulation Governing the Capital Adequacy of Commercial Banks aims to toughen up capital requirements

- Foreign banks have begun purchasing stakes in domestic banks and conducting banking business, for instance, HSBC $17.5 billion purchase of a 19.9% share of Bank of Communications in 2004 and Royal Bank of Scotland (RBS) consortia's purchase of 10% of the Bank of China (BoC) for £1.7bn in 2005.

Some of the major problems which presently face Chinese banks include the following:

- The reforms have not yet been applied to the largest bank, the Industrial Commercial Bank of China, or to the most troubled, the Agricultural Bank of China. If the economy begins to slow down, an extensive number of bad loans are likely to emerge

- NPLs are still being understated by Chinese banks. This may not necessarily be because of any attempt by management or regulators to hide problems, but

because of the challenges faced by risk managers and regulators in China.[8] Many bank officials like to report low and falling NPL ratios and make it likely that there is a bias towards over-generous classifications of credits

- Corruption poses another problem for China's banking system because loans are often made on the basis of political connections
- The attempts to improve corporate governance have not shown clear results yet- the shareholder boards are still a formality and substantial state-ownership biases the decisions taken by bank managers
- Operational risk is probably large for the majority of the financial institutions because of poor internal controls.

China has set out a five-year timetable for liberalising its financial services market, and it is hoped that by the end of 2006 foreign and domestic banks will be able to provide the same services throughout the country. According to Herrero and Santabarbara,[7] although it is still early to judge the success of the reforms, the available evidence does not offer a very optimistic outlook. The solvency of Chinese banks is still very weak, with a stubbornly high level of non-performing loans, and profitability is poor. Given the commitment of the Chinese authorities to fully open up its banking system to foreign competition, it seems crucial that financial reforms accelerate so that the Chinese banking system can compete internationally.

As part of these reforms, China has agreed to bring its national accounting standards, the Chinese Accounting Standards System, into line with International Financial Reporting Standards (IFRS). From January 2007, China will adopt IFRS principles, including 'fair value', although keeping an exemption for state enterprises from the "related party" disclosure provisions because of the dominance of government enterprises. The implementation of "fair value" provisions is complicated because of the government's control of the price of assets such as unlisted securities, and the inability to find independent parties to assess them. Another area in which China will maintain differences with IFRS is in the "impairment of assets" provisions, which allow companies to write down the value of businesses, physical assets and goodwill and to

value them upwards if conditions change - Chinese officials will follow the United States which also refuses to allow the revaluation upwards of assets already written down because of the fear that it leaves too much room for the manipulation of accounts.[11]

1.3 Aims and Objectives of the Study

Our objective is to investigate how the New Accord regulations, Basel II, are intended to improve risk management systems and what are the implications for Chinese banks. Following an extensive literature review of the field, three specific research questions framing the aims of this study were formulated as follows:

1. Would the adoption of the New Capital Accord banking rules enable the Chinese banking industry to strengthen its risk management?

2. In what ways could the Chinese banks improve the efficiency and quality of its capital allocations?

3. Would the adoption of the New Accord banking regulations give the Chinese banks an economic advantage over its rivals?

The structure of the paper is as follows: Section 2 describes the nature of the risks involved in the financial services and banking sector of the economy and discusses the link between capital and risk, in particular, the distinction between economic and regulatory risk is explained and the implications of the Basel II banking regulations are critically assessed. In Section 3, the three above research questions are transformed into propositions susceptible to empirical investigation and the reasons for adopting the methodology used in the study are explained. Section 4 reviews the results of the primary data collection, and in Section 5, the findings are summarised and discussed, and recommendations are suggested for future risk management improvements in the Chinese Banking industry.

2: Literature Review

2.1 Banking Risks Overview

According to Jorion,[12] risk can be defined in terms of unexpected losses. Risk measurement focuses on unexpected (profits) losses which lead to volatility in the earnings of a bank - ranging from lower profits to balance sheet losses, and potentially to insolvency. Generally speaking, banking risks are classified into the broad categories of market risk, credit risk, operational risk, liquidity risk, strategic risk and business risk.

Market risks arise from unexpected changes in market parameters, such as interest-rate variations, foreign-exchange, and share-price movements, and credit-spread risks as well as risks relating to metals, commodities, equity investment and property. *Credit risks* arise from the default or credit rating downgrades which including issuer, counter-party, settlement, default and country risk. *Operational risks* arise from the inadequate or failed internal processes, people, and systems or from external events. *Liquidity risks* arise from liability-side reasons, such as depositors seeking to cash in their financial claims immediately; or arise from the difficulty of selling an asset. *Strategic risks* arise from incorrect decisions taken by senior management, such as the incorrect assessment of certain market segments, the wrong market approach, or an inappropriate internal organisational structure. *Business risks* arise from unexpected changes in business volume or margins, which included the risk of shrinking business volumes, rising costs for staff and IT, and falling revenues due to competitions.[13; 14]

The standard measurement for risk is Value at Risk (VaR), referring to the amount of maximum possible loss for a given probability over a given time horizon. Risk-adjusted capital refers to the economic capital that is required to cover the unexpected losses up to a certain confidence level – the corresponding VaR figure. Even though the VaR enables comparison of various risk positions, VaR cannot express the complexity of a risk profile because VaR ignores infrequent events, for example, high loss potential, and some assumptions are not realistic, for example, market risk is not normally log-normally distributed. Therefore, stress scenario analysis was introduced as an important supplementary role in risk management using VaR. RARORAC is risk-adjusted return on

risk-adjusted capital which takes account of expected costs and losses as well as unexpected losses; and shareholder value-added (SVA) includes a measure for unexpected losses by adjusting expected or actual gross earnings with cost of capital. From an economic capital management point of view, RARORAC or SVA should be implemented for bank risk management. Figure 2.1 describes the formulas used.

Figure 2.1: RARORAC and SVA formulas

$$\text{RARORAC} = \frac{\text{expected gross earnings} - \text{expected unit costs} - \text{expected losses}}{\text{amount of the risk}}$$

SVA = expected gross earnings – expected unit costs – expected losses –cost of capital

Source: KPMG (2003) *Basel II – A Closer Look, Managing Economic Capital*. (see ref 15.)

Diversification, of course, has always been a key tool for risk management. A well-diversified portfolio is less risky than a less-diversified portfolio. The portfolio effect refers to a single asset or liability which could make a different contribution towards risk in different portfolios. It is argued that that there are two important implications of portfolio effects for bank management: firstly, the risks of a particular asset or liability might have varying attractions for different banks depending on the structure of the portfolio; and secondly, identifying portfolio effects and allocating them to the particular assets and liabilities and their risks is crucial to improving the overall performance on the risk that has been taken.[15]

2.2 Bank Capital Regulation and its Impact on Bank's Risk-taking

The Role of Bank Capital and Capital Regulation

According to Modigliani and Miller (M&M), a firm's weighted average cost of capital (WACC) is independent of its capital ratio.[16] M&M argue that the mix between equity and debt should not be able to generate further corporate value as any decision on the capital structure of non-financial firms should not affect the overall cost of financing. However, capital in banks is not only a way of funding the business but it also plays other important roles. According to Allen and Santomero,[17] banking capital, as a safety cushion, provides protections for banks' equity holders and debt holders against unexpected or

temporary losses. Also, as Jorion[12] argues, bank capital is a tool used by banks to signal to the public their profitability and it is considered by competitors, customers, and rating agencies as a proxy for soundness: it is an indication of shareholders' value.

Capital is associated with cost: pressures to increase or maintain return on equity (ROE) and profitability are always an important consideration for bank managers. Increased capital means less return on equity for banks unless it brings with it higher returns and excess capital may be under-utilized. Therefore, leverage has an important competitive effect. More highly-leveraged institutions can charge lower prices through less of a required spread, and earn the same return on capital as less highly-leveraged institutions. Therefore, the "right" capital level is a fundamental strategic decision. [18]

According to Kaufman,[19] the structure of the bank's balance sheet may be characterised by three features: low cash to assets (fractional reserve banking); low capital to assets (high leverage); maturity mismatch (combination of short-term liquid liabilities withdrawable on demand on a first-come-first-served basis and longer-term highly illiquid assets), and it is these three features which are also the source of financial fragility and the cause of regulatory concern. Capital regulation has become the principal regulatory response to deal with the problems of the bank's balance sheet structure. In fact, the ability of capital standards to successfully eliminate these problems has been at the heart of a theoretical debate for more than 20 years.

Some of the literature in this field focuses on utility-maximizing banks using the portfolio approach of Pyle[20] and Hart and Jaffee[21], and using this framework, Kim and Santomero,[22] for example, conclude that the higher leverage ratios will lead banks to shift their portfolio to riskier assets, and one way to eliminate the risk-shifting incentive is to require banks to meet risk-related capital ratios.[23] However, these conclusions have been questioned by several studies, for example, Furlong and Keeley[24] and Keeley and Furlong,[25] using an option model. They found that a utility-maximisation framework is inappropriate because it does not describe the bank's investment opportunity set by neglecting the option value of deposit insurance and the possibility of bank failure. Furthermore, Blum[26] finds that capital regulation may increase a bank's riskiness but in a dynamic framework and suggests that if banks find it too costly to raise additional equity

to meet new capital requirements tomorrow or are unable to do so, they will increase risk today.

We concluded from the above discussion, that although economic theory is unclear on whether imposing tighter capital requirements leads to an increase or a decrease in the risk structure of a bank's asset portfolio, many empirical findings, such as Shrieves and Dahl,[27] Jacques and Nigro,[28] and Roy[29] provide evidence for the importance of bank capital regulation for a "healthy" banking industry, including those in the emerging market economies. Many argue that risk-based capital requirements have become the *only* true internationally accepted standard of a bank's soundness. Furthermore, capital adequacy is not only a core part of modern banking regulations, it has become a major strategic theme for bank management: capital adequacy mirrors market and institutional developments, and increased risk sensitivity, use of internal models, and reliance on market discipline are among some of the recent trends in finance which have influenced capital rules.

Economic Capital and Regulatory Capital

Economic and regulatory capital are two terms frequently used in the analysis of the new framework for bank capital regulation on Banking Supervision.[3] In particular, many discussions preceding the publication of the new Basel II regulations have highlighted the objective of bringing regulatory capital closer to economic capital. The primary objective under the so-called, Pillar 1 of Basel II, is to better align regulatory capital requirements with economic capital demanded by investors and counterparties[31] (see Section 2.4 below).

Regulatory capital is the minimum capital required by the regulator, whilst economic capital is defined as the capital level that is required to cover the bank's losses with a given probability of risk.[31] It is implicitly assumed that shareholders' agents are choosing the risk strategy in order to maximise the market value of the bank. Therefore, the economic capital may be understood as the capital level that a bank's shareholders would choose in the absence of capital regulation. Also, there is a further divergence compounded by the difference between accounting standards and regulatory capital

standards since the accounting notion of capital as net worth does not coincide with the regulatory notion of capital.

According to Lastra,[32] in the absence of protective bank regulation, it could be argued that efficient markets would lead to an optimal capital ratio. Therefore, distortions in bank decision-making will occur when regulatory constraints determine a bank's choice of capital rather than market requirements. On the other hand, however, it may be argued that externally imposed capital requirements are needed, since banks may have an incentive to hold inadequate capital.

2.3 Basel I

Basel I and Key Elements

The 1988 Basel standards are almost entirely focussed on credit risk, the risk of loss due to borrower or counterparty default (see Figure 2.2). An amendment to incorporate market risk was issued in 1996 (see Figure 2.3), whilst the New Basel Accord, Basel II, allows banks and supervisors to evaluate additional types of risk, including operational risk and interest rate risk, thereby avoiding treating portfolio risk in isolation (see Figure 2.4).

Figure 2.2: 1988 Basel Capital Accord

$$\text{Capital Ratio} = \frac{\text{Total Capital}}{\text{Credit Risk (RWA of banking book)}}$$

Figure 2.3: 1996 Market Risk Amendment

$$\text{Capital Ratio} = \frac{\text{Total Capital}}{\text{Credit Risk} + \text{Market Risk (Market risk equivalent of trading)}}$$

In the denominator, Basel I uses a ratio of capital to risk-weighted assets (RWA) (see Figure 2.4). Where bucket 1 consists of assets with zero default risk (e.g. cash, government bonds securities), bucket 2 of assets with a low rate of default (e.g. loans to Economic Cooperation and Development (OECD) banks), bucket 3 of medium-risk

assets (essentially residential mortgage loans), and the remaining assets (in particular loans to non-banks) fall into bucket 4.[33] Therefore, the RWA represents the accounting value of banks' assets adjusted for their individual risk.

Figure 2.4: RWA Formula

RWA=0*(bucket 1) + 0.2*(bucket 2) + 0.5*(bucket 3) + 1.0*(bucket 4)

In the numerator of the Basel I formula, capital is divided into Tier 1 and Tier 2. Tier 1 is equity capital plus disclosed reserves, minus good-will; Tier 2 is asset revaluation reserves, undisclosed reserves, general loan loss reserves, hybrid capital instrument and subordinated term debt. Figure 2.5 summarises the inequalities which must hold.

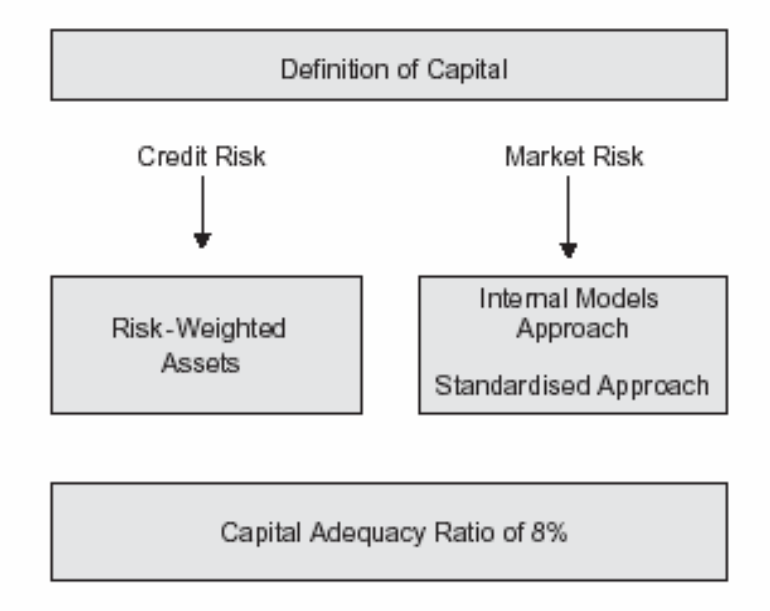
Figure 2.5: Inequalities Requirement of Basel I

Tier 1 ratio = Tier 1 capital / RWA $\geq$ 0.4
Total capital ratio = Total capital / RWA = (Tier 1 capital + Tier 2 capital) / RWA $\geq$ 0.08
Tier 1 capital $\geq$ Tier 2 capital

Basel I and its Impact on Risk Management

The 1988 Capital Accord (Basel I) guiding principle was devised to improve the safety of the financial system and requires banks to have an adequate 'capital cushion' to cover unexpected losses with 8% of capital to risk-weighted assets for banks (see Figure 2.6). As a simple and standard ratio, Basel I has been broadly accepted by the industry and by the authorities in both developed and developing countries.

Figure 2.6: Structure of the Basle Capital Accord 1988



Source: HM Treasury (2003) (see ref 34)

The Basel I Accord was criticised for not considering other relevent risks, such as interest rate risk, operational risk and liquidity risk. With regard to some of the elements included in Tier 2 capital, the problem of counting 'debt' as capital is that all debt has a maturity date, and there is a danger of relying on unrealised gains on long-term holdings of equity securities. Also, Basel I does not insist upon a risk differentiation, for example, zero percentage for Organisation for Economic Cooperation and Development (OECD) and same 100% risk weight for corporate claims. As pointed out by Jones,[35] banks may attempt to arbitrage between their economic assessment of risk and regulatory requirements, which can be done either by boosting capital ratios through "cosmetic arrangements" or by exploiting shortcomings in the measurement of risk through "regulatory capital arbitrage", both methods allowing banks to misreport their effective capital ratios and/or credit risk. Although the lack of data prevents measuring the extent to which these techniques were used by banks, it is likely that risk-weighted assets as defined by the 1988 Basel standards may not fully reflect the actual risk of a bank's portfolio.[36]

Despite its limitations, however, the Basel I Accord has led to a general improvement in the capital position of banks around the world. Banks have raised capital in different ways in order to meet the 8% target ratio of capital adequacy. According to Lastra,[18; 32] banks can increase the numerator of the Basel formula by selling shares (however, this might dilute the ownership of current shareholders) or increase retained earnings (by increasing profitability associated with increasing risk).[37] Banks also could decrease the denominator by selling assets, downsizing off-balance sheet exposures, and repositioning asset categories from higher to lower risk, through securitisation or other adjustment techniques. Bank mergers are another way of improving capital standards, for example, a lowly capitalised bank merging with a better capitalised one. Furthermore, in practice, the change in the asset portfolio through the repositioning of asset categories to lower risk, such as the market for securitisation, has been a solution favoured by many banks.

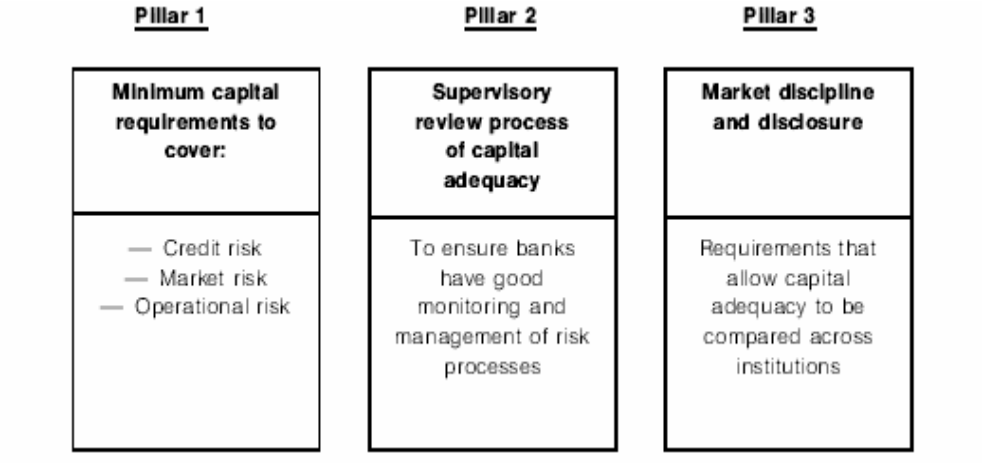
In conclusion, as Roy[29] points out, the evidence indicates that the 1988 Basel Accord provided banks with a higher capital buffer against insolvency and did not lead banks to engage in riskier activities. The policy implications for regulators are important as they suggest that the use of risk buckets to assess and limit credit risk-taking is likely to produce the desired effect. This approach to portfolio risk is currently being refined under the 'standardised approach' of the New Accord, Basel II, particularly for those banks which have the resources to use one of the more advanced 'internal ratings-based approaches'.

2.4 Basel II

Basel II and its Three Pillars

In July 2004, the finalised new framework for the New Basel Capital Accord, commonly referred to as Basel II, was published by the Basel Committee, with the intention to implement and standardise the foundation approaches by 2006, and the advanced approaches by the end of 2007. Basel II introduces a three-pillar concept that seeks to align regulatory requirements with economic principles of risk management (see Figure 2.7).

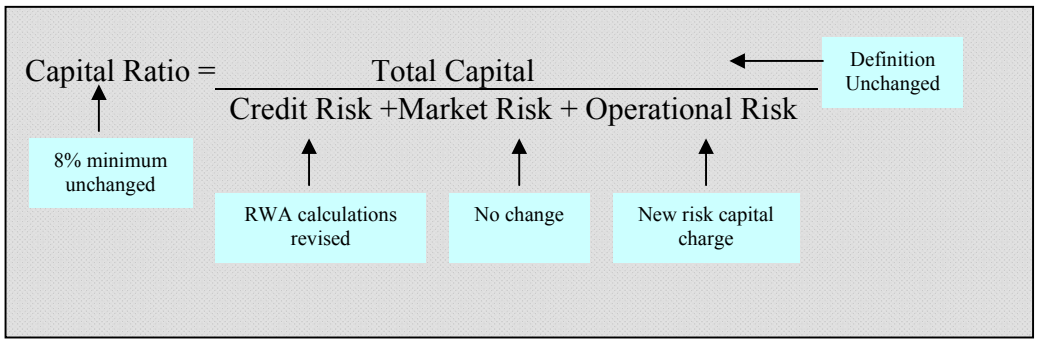
Figure 2.7: The Structure of the Proposed New Basel Accord



Source: Basel Committee on Banking Supervision (see refs 2; 36; 38).

Pillar I sets out minimum regulatory capital requirements – the amount of capital banks must hold against risks. It retains the Basel I minimum requirement of 8% target ratio of capital-to-risk-weighted-assets. The market risk has not been changed but credit risk has been changed and operational risk has been introduced for the first time (see Figure 2.8), and the risk-weights are used has become more risk sensitive.[3]

Figure 2.8: Revised Capital Accord (Basel II)



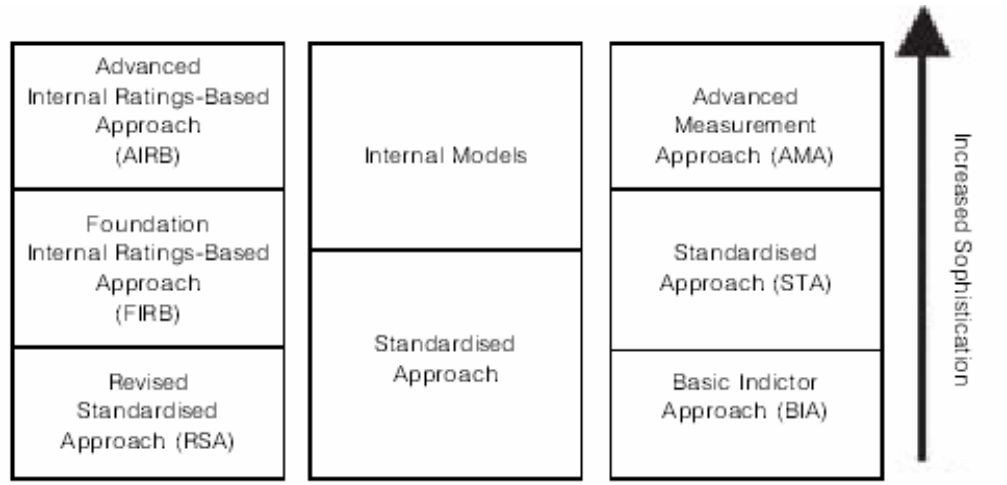
Pillar II defines the process for supervisory review of an institution's risk management framework and, ultimately, its capital adequacy. It sets out specific oversight responsibilities for the board and senior management, reinforcing principles of internal control and other corporate governance practices established by regulatory bodies in various countries worldwide.[32]

Pillar III aims to bolster market discipline through enhanced disclosure by banks. Enhanced comparability and transparency are the intended results. Calomiris and other members of the US Shadow Financial Regulatory Committee have advocated supplementing the Basel capital standards with an additional subordinated debt requirement to promote greater market discipline. This is because subordinated debt holders have an incentive to monitor the risks incurred by a bank, since they have a fixed income claim and, contrary to equity holders, are not entitled to share in upside gains by the bank.[32]

Basel II and the Three Approaches to calculating Minimum Capital Requirement

Basel II provides three approaches, of increasing sophistication, to calculate risk-based capital (see Figure 2.9).

Figure 2.9: Approaches to Minimum Capital Requirement under the New Accord



Source: Source: Basel Committee on Banking Supervision (see refs 2; 36; 38).

The first approach is the standardised approach, which relies on external ratings. The standardised approach refines the risk categories of the Basel I formula. For instance, risk weights for corporate credits (100% under Basel I) will range from 20% to 150% depending on their external rating. Sovereign debt risks-weights will no longer be

dependent upon whether a country is member or not of the OECD but rather on the external rating identified for the country. [3]

The second approach is the foundation internal rating-based approach, which allows banks to calculate their credit risk-based capital on the basis of their internal assessment of the probability of counterparty default. [3]

The third approach is the most sophisticated approach which is the advanced internal rating-based (AIRB) approach, which allows banks to use their own internal assessment, not only of the probability of default (PD), but also the percentage loss suffered if the counterparty defaults (LGD) and quantification of exposure to the counterparty, including event of default (EAD) and the facility's remaining maturity (M). [3]

2.5 Basle II Implications and Implementation

Basel II Implications

Basel II will have consequences on a whole range of stakeholders in the banking industry. As Hashagen[14] argues, implementing Basel II will be driven by the structure of a bank's business – beginning with its strategy and encompassing its risk- measurement and capital calculation methods, business processes, data requirements, and information technology systems. Basel II's capital requirements have wide-ranging implications for risk management and, thus, corporate governance. The main effects from Basel II in the debates surrounding its implementation have been focused on the following issues: banking business effects, economic capital and capital planning, new information and disclosure, reducing regulatory capital and implementation costs, global financial market stability, and bank consolidations. These issues are discussed in turn below. [4]

Banking Business Effects

Commercial lending will be affected by Basel II. Basel I only provides one 100% risk-weight category for ordinary corporate lending; whereas, Basel II will provide four categories: 20%, 50%, 100%, and 150%, with these risk-weights refined by reference to a rating provided by an external rating agency. High quality loans will attract a higher external rating and lower capital charge, which will result in more attractive pricing of

such loans. Furthermore, retail lending will benefit from the Basel II rules, in particular, mortgage lending will be reduced from 50% to 35% risk-weightings and credit card business and other consumer loans will also enjoy a drop in weightings from 100% to 75%. This reduction in risk-weightings will be an incentive for banks to push more capital into retail activities.[39]

Securitisation, however, is expected to be affected negatively by Basel II. The Basel Committee has developed a complex framework of capital charges for securitisation exposures both for banks using the standardised approaches and the internal-rating-based (IRB) approaches. This could discourage banks from actively managing their credit risk portfolios. In the USA the size of the securitisation market is an impressive $2.7 trillion. The Basel Committee recognises that asset securitisation can serve as an efficient way to redistribute credit risks of a bank to other banks or non-banking investors (risk diversification). The Committee, however, is concerned with the use of structured financing or asset securitisation to avoid minimum capital commensurate with their risk exposures (regulatory arbitrage). This may result in an overall risk-based capital ratio that is nominally high but which may obfuscate capital weakness in relation to the actual risks inherent in the bank's portfolio (difference between regulatory capital and economic capital, discussed above).[32; 39]

Economic Capital and Capital Planning

Basel II is not intended to raise or lower the overall level of regulatory capital currently held by banks, but to make it more risk-sensitive. The spirit of the new Accord is to encourage the use of internal systems for measuring risks and allocating capital, and to align regulatory capital more closely with economic capital. Basel II requires that banks implement an economic capital management framework that assesses the overall capital adequacy in relation to their risk profile and a strategy for maintaining their capital levels.[2]

Rowe *et al*[1] argue that the challenge of determining economic capital lies in the fact that various risks a bank faces have a very different nature, are measured by different methodologies and are difficult to encapsulate in one common metric. Building an

economic capital framework assumes that banks find conceptual solutions to risk measurement, the definition of appropriate shareholder value metrics and the allocation of capital based on individual risk measures and their correlations. KPMG research provide a comprehensive capital planning process: identifying and measuring all material risks; the risk metric has to be compared with a bank's capital; business-line and a bank's performance need to be measured on a risk-adjusted basis; finally, monitoring and reporting regarding the actual as well as the future risk-return profile to ensure the sustainability of risk-taking.[15] Therefore, economic capital frameworks imply key challenges in building comprehensive data structures and supporting technology as well as mastering significant cultural change. In practice, the cultural challenge and its implications for staff incentives and compensation is often one of the main causes for the failure of capital management projects.[1; 15]

New information and disclosure

Banks will need to collect and disclose new information and face the implications of increased transparency.

As the New Accord recognises, banks should measure their performance against risk factors other than market share or expected return. Using quantitative methods to manage risk requires high-quality data. Adequate and comprehensive information enable banks to attribute risk to a potential transaction; ascribe a portion of economic capital to it and define an expected return on it; and, thereby, decide whether to enter a transaction or whether to engage in a business. Also, better information will help enable banks to improve overall risk management, which in turn is expected to prompt improvements in corporate governance, transparency, and the value of disclosures.[40] Furthermore, banks will need to request better information from borrowers to perform the internal rating assessments and the collateral evaluation.[14] However, many argue that the new information requirements would add lengthy additional disclosures which are highly technical in nature and which will be of little benefit to investors and the public at large. Rather than requiring the disclosure of a pile of highly technical data, Pillar 3 (which is intended to enhance market discipline through increased public disclosure requirements) should establish a general set of principles.[41]

Reducing regulatory capital and implementation costs

Basel II is likely to be costly to implement, complex to understand and prescriptive in its numerous recommendations. Basel II favours active risk management and in preparation for its adoption many banks are improving their internal models. The costs of compliance with the IRB approach are significant, ranging from investments in data collection and IT systems to training and recruiting staff. Credit Suisse, for example, estimates the initial cost to be around $100m just to implement the system, plus substantial ongoing costs which could be as high as $125 million.[39]

The incentive for a bank to make these investments in risk management and new technologies is that banks hope to use models to reduce the overall amount of regulatory capital and increase their return on equity.[42] Suiter[43] suggests that for a large bank with risk weighted assets of €500 billion, cutting the amount of capital by just 0.5% could save €2.5 billion. Banks are ready to make investments in Basel II in the expectation that their overall amount of regulatory capital will be reduced, and hence resources can be freed-up to apply against new business. However, an overall reduction in the amount of capital is, would be contrary to the stated objective of the Basel process, which is intended to improve the stability of the banking system. [44; 45; 46]

Global financial market stability and bank consolidation

An improved risk management, enhanced information flows, and related disclosures in the banking industry could drive parallel improvements in the stability of global financial markets. New disclosure provide regulators with early warnings that banks or rating agencies could then pass on to the public and to investors, potentially enhancing trust in financial markets. Basel II will also affect financial institutions that do not have to comply with it! Such non-banks or near banks may not have to fulfill Basel II's potentially extensive disclosure requirements or make investments in managing operational risk, but as the standards are generally raised for risk management across the global market, such institutions are likely to seek to enhance their own risk management techniques by adopting those implied by the New Accord. The consequences of this convergence of standards should be improvement in global market stability.[15]

Critics[47; 48] suggest, however, that Basel II will be pro-cyclical (and thus exacerbate the swings in the economic cycle and increase volatility), since banks will require more capital when companies are downgraded, but the Basel Committee has taken some steps to reduce pro-cyclicality. It requires banks to carry out 'stress tests' under Pillar 2 by calculating how much capital would be needed in a crisis. Moreover, if emerging economies and developing countries, such as China and India, do not adopt Basel II, it raises the concern that Basel II will exacerbate the already high volatility of capital flows to emerging economics.

Regional Implementation

Given the range of implementation approaches, degrees of emphasis and flexible rollout plans, overall, the level of preparedness of banks for Basel II is widely diverse. Significant gaps remain in preparedness between large Western European and North American banks and a handful of Asia Pacific-based banks, and the smaller banks, particularly, in the emerging market economies. In China, for example, regulators are allowing longer periods for the implementation of Basel II. [6]

According to a survey conducted by Ernst and Young in 2005,[49] many banks are moving forward with details of their implementation programmes. The survey clearly indicates that awareness of and preparation for Basel II in the emerging markets and developing countries has increased significantly over the past two years. While smaller banks generally lag far behind, larger institutions in the region are well into their execution of implementation plans. Regional regulators are at varying stages in finalizing local implementation plans and many are adopting roll-out plans not in line with the international (G10) timeline. The large banks in Japan, Korea, Singapore and Australia are currently the most aggressive in pursuing advanced Basel II approaches to meet a 2007 implementation.

The European Commission (EU) has issued a draft of a revised directive – Capital Requirements Directive - on new capital adequacy rules based on the New Accord. Basel II will be received as a recommendation by the EU, which will convert it into EU

legislation applicable to all legislation to locally appropriate laws, subject to local regulator interpretation and ongoing supervision.[34]

In the USA, all US banking regulators have been supportive of Basel II. They have indicated that Basel II implementation will be required for a small number of internationally active banks (about eight banks representing about two-thirds of US banking assets and 99% of the foreign assets held by the top 50 domestic US banking organisations), In addition, the stated intention is to allow only the Advanced IRB approach to credit risk for those banks, and similarly, only the advanced measurement approaches to operational risk will be permitted.[50]

2.6 Implications for the Chinese Banking Industry

There is now growing pressure on all countries which wish to participate in global markets to meet global standards of regulation in banking, securities, and insurance. In principle, this pressure has always existed, but in the past many countries have only nominally complied with global standards. Some of the internationally active banks have not held anything approaching 8% capital as required by the Basel I & Basel II. That was partly because regulators themselves were not sufficiently stringent, but also because the accounting standards adopted in some countries left a lot to be desired and which makes the true position hard to assess. This became very clear in the analyses of the late 1990s Asian crisis. Some banks which had reported satisfactory capital ratios for some time were, in effect, bankrupt even before the crisis.[51]

Many studies[49; 50] suggest that extended timeframes for the implementation of the Basel II should not be viewed by banks as an excuse for inaction because the additional time will still be necessary given the significant preparatory work required in dealing with the particular deficiencies in the Chinese banking industry, including data gathering, risk management systems and processes. However, there is concern as to whether the efforts and significant investments to be made will provide the value and benefit beyond simply compliance.

Compliance with international regulatory standards is close to becoming a condition of access to IMF support. The IMF is carrying out a series of financial sector assessment

programmes which review the performance of an individual country against international standards of best practice in a highly detailed way.[51] Such pressure is reinforced by the efforts of regulators in the major financial centres. In the past, some of these regulators have been ready to accept financial institutions whose capital does not match international standards because financial centres tend to compete with each other on the volume of business. However, there is now much less willingness to accept undercapitalized or badly managed institutions because the risks seem too great, especially if there is a serious risk of default or of fraudulent trading. Therefore, countries with inadequate financial regulation find themselves under two sorts of pressure – first from the IMF, and secondly, from other countries which refuse to accept their institutional standards. Moreover, there is pressure due to extra-territorial legislation arising particularly from the US. For example, the US Sarbanes-Oxley Act allows the US regulators to take action against any firms which are offering investment opportunities to US residents, *wherever* those investments are located. Therefore, China, as the recipient of the largest inflows of foreign direct investment (FDI) from the USA and USA's biggest the trading partner, cannot ignore the reach of US regulators and international standards if they wish to have access to the global capital markets.[52; 53] Sarbanes-Oxley, IFRS, Basel II and MiFID, when seen as a collective, can trigger the pressure on all countries which wish to participate in global capital markets.[54]

3: Methodology

3.1 Research Design

We wish to examine the ways in which risk management in the Chinese banking industry could be improved and what the implications of Basel II and the new regulatory framework being introduced for Western banking industry might have for China. We considered that semi-structured tele-interviews were well-suited to explore our propositions because we needed to obtain responses from a sample that is geographically spread. As Sekaran[55] observes, semi-structured tele-interviews elicit an immediate response from interviewees and are thus an efficient way to collect data from individuals who are widely dispersed and at great distance.

Weaver *et al*[56] argue that social desirability bias is a risk in any ethics-related study and as a consequence of this, an attempt was made to minimise the socially desirable responses by ensuring that the interviews did not clearly focus on the effectiveness of the individual manager's initiatives. Respondents were informed that the questions concerned formal policies, procedures, and management characteristics and that the study was an attempt to assess overall company management and future expectations. Also, a main disadvantage of telephone interviewing is the respondent could unilaterally terminate the interview without warning or explanation by hanging up the phone. In order to efficiently collect data and get quick responses, the tele-interview was implemented in the following ways:

(1) The panel of interviewees was carefully selected from a list of banking executives provided by the China Banking Regulatory Commission (CBRC) and some of the foreign banks who have been operating in China.

(2) These individuals were then contacted by telephone and in some cases by email in order to illicit a response and thus complete the primary data gathering for the study.

(3) In order to eliminate the possibility of differences in cultural perceptions or knowledge misunderstanding of the technical language during discussions, it was decided that the interviewer would systematically describe key concepts associated with Basel II (see Appendix A), and to enhance the interest of respondents. Those who cooperated by providing an interview could request that an abstract of the findings of this study be sent to them, and their anonymity was guaranteed by specifying that no name or other identification would be used in the recording of the data supplied.

(4) Twenty-four banks agreed to participate in the survey (see Appendix A). The interviewees were initially given an approximate idea of the interview time and a mutually convenient interview time was set-up.

3.2 Propositions and Interview Questions

Three specific research questions framing the aims of this study were formulated as follows:

1. Would the adoption of Basel II regulations strengthen the risk management of the Chinese banking industry?
2. Would Basel II improve the efficiency and quality of the Chinese banking industry's capital allocations?
3. Would the adoption of the Basel II rules give the Chinese banks an economic advantage over rivals?

These three research questions were reformulated as three propositions, namely, that Basel II will improve risk management - reducing the risk of business failure, and strengthening the global financial system; that Basel II will improve capital allocation efficiency; and that compliance with advanced risk management systems favours the large banks only, which gain the greatest capital relief - regulators are concerned about falls of perhaps 20% for the large banks following implementation of Basel II if no standardised risk measure is used - and benefit from economies of scale. The questions devised for the semi-structured tele-interviews in order to evaluate the three propositions are summarised in Table 3.1 below.

Table 3.1: Tele-interview Questions

Proposition 1	Basel II will improve risk management: reducing the risk of business failure, and strengthening the global financial system.
Questions	1. Do you think the application of the New Accord – the Basel II banking regulations – will reduce the risk of business failure? 2. Will Basel II influence the way banks in China manage and measure risk? 3. Will Basel II affect corporate governance and strengthen the stability of the financial system?

Proposition 2	Basel II will improve capital allocation efficiency.
Questions	1. Will Basel II affect the capital structure of Chinese banks? 2. Are foreign banks investing in Chinese banking partnerships concerned that banks in China are not adopting the Basel II regulatory standards? 3. Do you think that even those financial service institutions that are not required to comply with the New Accord, will, nevertheless, tend to use its advanced requirements as risk management and economic capital benchmarks in order to remain internationally competitive?

Proposition 3	Compliance with advanced risk management systems favours the large banks only, which gain the greatest capital relief under Basel II, and benefit from economies of scale.
Questions	1. Will your bank use an advanced internal ratings based approach (AIRB)? 2. Will the advanced internal ratings based approach (AIRB) allow banks to hold lower levers of capital? 3. Do you think that non-compliance with the Basel II regulations will reduce banking competitiveness?

3.3 Methodological caveats

The reliability and validity of semi-structured interviews cannot be tested rigorously, although every effort was made to ensure that the questions were designed to gather primary data which specifically and validly addresses the stated propositions to be explored in this study. Clearly, semi-structured interviews as a research method have

their limitations and caution needs to be taken in any attempt to generalise the findings derived from such a qualitative approach. For example, response errors may occur when respondents intentionally or unintentionally give inaccurate answers to questions and feelings such as annoyance, boredom and misunderstanding, inability to answer and refusal to answer questions can influence the outcome of the interview. To avoid such bias in data collection, the interviews were very carefully designed and conducted with sensitivity to the respondent's role in their organisation. As stated above, senior executives from twenty-four major Chinese banks were interviewed and are listed in Appendix A). We believe this sample of respondents provided us with a reasonably representative cross-section of Chinese banking opinion.

4: Review of Results

Proposition 1: Basel II will improve risk management: reducing the risk of business failure and strengthening the global financial system.

The underlying rationale of Basel II is the Committee's conviction that safety and soundness in today's dynamic and complex financial system can be attained only by the combination of effective bank-level risk management, supervision, and market discipline (the model of the three pillars).[39]

There was a 96% agreement amongst the respondents to question 1, Proposition 1, that that Basel II banking regulation will reduce the risk of business failure (see Appendix B). The respondents recognised Basel II provides for a more risk-sensitive determination for capital underlying credit risk, and for the first time requires capital for operational risk. It also establishes supervisory review and calls for new disclosure rules, intended to increase market discipline. However, it is not intended to change the aggregate level of capital in the system. Rather, the proposal aims at reallocating capital requirements, and aligning regulatory capital more closely to economic risk, which means that more capital will be needed for the riskier activities and less for those where there is little risk. This increased risk sensitivity should provide an incentive for innovation, encouraging more

sophisticated risk management systems and practices, and reduce the risk of business failure.

In answer to question 2, Proposition 1, 75% of the respondents considered that Basel II rules will influence the way banks in China will manage and measure risk, although 17% of respondents disagreed that Basel II is compatible with Chinese banking system, and, therefore, will not have significant influence on risk management measurement (see Appendix B, P). According to the respondents, the most challenging issue for banks in China is credit risk. Basel II allows banks to choose from either the Standardised Approach which uses external ratings, or the IRB Approach which uses data from internal management systems to calculate credit risk. Banks in China are using an internationally accepted five-category loan classification system, and yet, external ratings have not been established and banks either lack or have inadequate historical data to adopt the IRB Approach. Furthermore, it became clear to the researchers that credit decisions in China tend to rely significantly on relationships rather than on objective assessment criteria including the use of credit ratings models (providing a comparative advantage to domestic banks against their foreign competitors). Hence, it was thought that many banks in the region will experience some degree of resistance as staff, preoccupied with meeting business targets, may not comply with the new rules. Implementing appropriate risk control policies and ensuring that business management adhere to them would require conscious change management programmes over a long period of time.

Respondents also noted that operational risk was a key issue which was not a focus of management. Some suggested that most of the operational risks were dealt with up-front in terms of documentation and that this is where the bulk of the risk lay. The CBRC suggested a weak ability to handle risk in bank operations has become increasingly prominent. There are numerous recent examples of mismanagement and fraud. For example, a former branch head Liu Guangyi of China Construction Bank was jailed in 2005 for embezzling $13.4m; a former Bank of China employee was arrested in 2005 in connection with the alleged embezzlement of $6m; the chairman of the China

Construction Bank, Zhang Enzhao, was sentenced in 2006 to life imprisonment for corruption.

In China, domestic banks have been preoccupied with addressing structural deficiencies such as NPLs and meeting minimum capital requirements under the current regulations. However, some respondents were concerned that where a bank disposes of NPLs to an Assets Management company at a great downgrade, that individuals could take advantage through these transactions. The corruption and in-sider trading make disposing of NPLs to meet minimum capital requirements more problematic. Of course, the introduction of Basel II would put further pressure on the authorities to embrace and implement market reforms. In this respect, the international standards are expected to accelerate the need for reform and the need for individual banks in China to prepare to compete effectively in the global environment.

In response to question 3, Proposition 1, 79% of the respondents believed that the adoption of Basel II would affect corporate governance and strengthen the stability of the financial system (see Appendix B). The CBRC regulators and major banks in China do recognise the importance of the new Basel II framework in improving financial stability and realise that there could be benefits beyond compliance and regulatory capital reduction. Regulators are concerned that in some banks there are inadequate rules, no proper supervision of the implementation of those rules, lenient punishment for violations, weak management and poor internal controls, all of which lead to major financial problems. CBRC has recognised that with foreign-invested banks conducting more business in China, a healthy risk management system could gain competitive advantage through improved market perception, use of risk-rating tools, improved operational efficiency and the ability to offer competitive and innovative products and services and open-up international capital markets.

Proposition 2: Basel II will improve capital allocation efficiency.

In answer to question 1, Proposition 2, 71% of the respondents considered that Basel II will significantly affect the capital structure of banks (see Appendix B). The revision of the capital adequacy regime along the lines of Basel II is of great significance for the

banking sector and affects all financial institutions, regardless of whether they will implement Basel II right away or not as it impacts banks' counterparties and competitors.[39]

Basel II will bring regulatory capital more in line with economic capital and is likely to affect the strategic decision-making at banks relating to which business lines to pursue. Under the Basel II rules, the economic capital is perceived as relevant primarily for internal management purposes as well as external pressures due to rating agencies demands and regulatory requirements. Basel II's risk-sensitive approach allows banks to determine capital adequacy based on the level of risk posed by each transaction. Banks will develop and use various models to allocate capital to transactions based on how much risk an individual transaction contributes to the bank's portfolio of risks. These models would help determine how much capital is required to support the various risks taken by the bank. It is expected that banks will streamline their business portfolios and focus their activities on where they have a competitive advantage. This is likely to have substantial consequences for the industry and will offer financial institutions opportunities to reposition themselves, for example, unsophisticated banks facing a potential increase in their capital charge could be bought by more sophisticated banks.

The New Accord's risk management requirements are likely to prompt big changes in the core business of an individual bank as well as its organisational structure. In response to question 3, Proposition 2, 75% of our respondents thought that even those financial service institutions that are not required to comply with the New Accord, will, nevertheless, tend to use its advanced requirements as risk management and economic capital benchmarks in order to remain internationally competitive (see Appendix B). Aside from new or altered methods that must be employed, the new capital requirements will also drive change in resource needs, processes, and IT system architecture. These changes could ultimately pose broad challenges for a bank's board of directors and its senior management, who are charged with new risk management and reporting responsibilities under the New Accord. They will need to consider how Basel II compliance could integrate with other efforts they are making to improve corporate governance. New disclosures would provide regulators will early warnings that banks or

rating agencies could pass on to the public and investors, potentially enhancing trust in the financial market. This is because implementation of Basel II is not just a data and information systems exercise, but involves focusing on risk measure, risk allocation and the return on risks. Basel II is intended to stimulate the evaluation of a bank's choice of core businesses and also the development of better corporate government practices.

Respondents in this study understood the importance for China of implementing the global Accord on Basel II, although they believe it is going to be difficult for Chinese banks to comply with the new capital requirements even in the medium term. Apart from technical problems, the lack of regulatory expertise is also a major concern: respondents confirmed in general discussions that about 85% of CBRC staff are transferred from the central bank's administration departments or monetary control departments. Given the complexity and specialisation required, it is difficulty to comply without properly trained staff.

Foreign companies have been positioning themselves to take advantage of the opening of China's banking sector to full competition, a precondition of China's admission to the WTO. In question 2, Proposition 2, 67% of our respondents considered that foreign banks investing in Chinese banking partnerships are concerned that banks in China are not adopting the Basel II regulatory standards (see Appendix B). However, corruption, fraud and the large burden of NPLs in Chinese banks are major concerns of foreign banks. For example, after the RBS consortia bought its 10% stake in the Bank of China, the RBS shares dropped 8% because of such investors' fears. Therefore, improving risk management systems and corporate governance can only help banks in China improve their international reputation and build-up investor confidence.

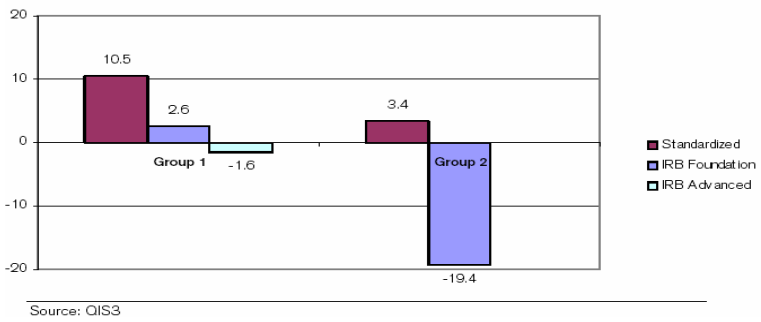
Proposition 3: Compliance with advanced risk management systems favours the large banks only, which gain the greatest capital relief under Basel II, and benefit from economies of scale.

The CBRC is now actively encouraging the nation's major lenders to intensify their efforts to build an IRB approach compatible with Basel II requirements and improve their risk management capabilities. However, in response to question 1, Proposition 3, less

than 10% of the respondents were considering using an advanced internal rating based approach (AIRB) in their own banks due to lack of historical data and lack of expertise required to develop advanced models (see Appendix B). Only two large banks expressed their intention to develop AIRB.

Basel II QIS3 report (BIS, 2003) on 260 banks from over 40 countries[2] suggests that, on average, large G10 banks, referred to as 'Group 1' banks, would face an overall increase of regulatory capital compared to the requirements under the current Accord when applying the Standardised and IRB Foundation Approach (+10.5% and +2.6%, respectively) and decrease of 1.6% when using the IRB Advanced Approach (AIRB). 'Group 2', the smaller banks, would see their regulatory capital increase by 3.4% under the Standardized Approach and decrease substantially by 19.4% when using the IRB Foundation Approach (see Figure 4.1) , although they may lack the necessary financial resources and technical skills to develop the internal systems they would need to follow the IRB Approach.[57]

Figure 4.1: Average Percentage Change in Minimum Regulatory Capital Required Relative to Current Accord for Large and Small G10 Banks



(see ref 2)

However, in response to question 2, Proposition 3, 42% of our respondents considered that AIRB would allow banks to hold lower levels of capital (see Appendix B). Thus these respondents agreed with many observers that Basel II would put the world's largest banks at an advantage because of the high costs of compliance with AIRB, which allows the greatest capital relief under Basel II, and of maintaining advanced risk management systems, which favours economies of scale.[62; 58] QIS 5 findings in 2006 further confirms

that the average single-digit minimum capital requirement declines for large diversified banks.[2]

The potential benefits from capital savings when compared to the cost of implementation are less clear in China. Some studies argue that capital savings in relation to credit risk will be offset by additional capital requirements for operational risks and costs to adopt the framework across operating units in the region.[54; 59; 65] Deloitte[50] suggests that aggregate costs for Chinese compliance with Basel II is estimated to be no less than US$50 million per bank. If the required planning and implementation are not properly executed then excessive building of new systems and delays may increase costs. However, most of the respondents of this study argue that Deloitte's[50] estimation is not based on the reality in China, and because implementation of Basel II is evolving the real cost will be far below this estimation.

In response to question 3, Proposition 3, two-thirds of the respondents believed that implementing Basel II requirements will be worthwhile in view of future benefits, implying that the cost is not a major concern, at least, for the big banks in China(see Appendix B). According to the interviewees from CBRC, no banks in China have officially adopted the IRB (or AIRB) approach so far. However, some banks are making great efforts to prepare for complying with Basel II rules. For example, the Industrial and Commercial Bank of China (ICBC), the nation's largest lender, started to study the implications of Basel II in 2004. The ICBC has already opened a Basel II office, an IRB report has been completed and it is constructing an integrated infrastructure in order to fully implement the Basel II rules. Given the banking industry regulators' willingness to get Basel II implemented in China, all of the nation's big banks have drawn up plans to put the new international standards into practice.

The Chinese government has encouraged limited foreign investment in banks (foreign companies can hold just 25% of a bank's shares with any individual bank is limited to owning a 19.9% stake). Given that most of Chinese domestic banks are poorly capitalised, poorly managed and poorly regulated, restrictions on foreign competitors' free access to Chinese markets can offer some protection to domestic banks being acquired or even prevent their collapse. Twenty-five of the respondents, however, argued that protecting

financial systems from all forms of international competition is counter-productive (see Appendix B). Also, according to China's WTO commitment, by 2007, foreign banks will enjoy full banking licenses. Also, major Chinese banks find it increasingly necessary to set-up overseas subsidiaries and comply with differing regulatory regimes (home/host country supervisor coordination). Under the Basel II rules, banks that class some of their overseas operations as subsidiaries will be required to hold additional capital to cover the potential risks of insolvency.[60]

Two-thirds of the respondents were of the opinion that non-compliance with the Basel II regulations would reduce banking competitiveness in the long-run (see Appendix B). They recognised that the only way domestic banks will be able to weather the storm of increased competition, especially with the opening-up of the sector to foreign lenders in line with China's WTO commitments, is to establish a sound risk management system based on the new Basel Accord requirements. Once Chinese banks' services are on a par with those of their foreign rivals, the next step in competition would be to improve how well they manage risks and find business opportunities.

5: Conclusions

5.1 Review of the findings

China has made some reforms of its banking system in recent years including, changing supervision from the central bank (PBOC) to CBRC (established in April 2003 to act as an independent banking supervisory authority under the State Council of the government); restructuring state-owned banks; issuing subordinated debt; and passing the Law on Commercial banks (1995) and its amendment (2003) as well as the Law of Banking Supervision (2003) which incorporates the Basel II's pillars 2 and 3, however, Basel II, is still perceived as challenging for China.[64] In the first place, the Chinese banks have been undercapitalized for some time. This is because of a history of economic and financial volatility, and the institutions in question were previously used by politicians and policy markers to promote economic development. For some years, the state-owned banks, acting as funding mechanisms, did not make independent credit decisions, and directed funds to state owned enterprises without adequate consideration of the likelihood of

earning an appropriate return. Also, until recently, there has been little tradition of stock market financing whether through equities or bonds: investors are put-off by poor regulatory controls, the lack of transparency, and the absence of adequate protection for minority shareholders.[61; 62]

A shortage of people in China with financial regulatory expertise is a great handicap. Experts are highly sought after by financial firms which can usually afford to pay considerably higher salaries than can the national regulators. Also, the growing complexity of the international environment makes it more difficult and more costly to train people to operate within it and there are cultural aspects to the training of regulators which are equally important.[51; 63] In China, the distinction between the government sector and the financial sector has not been clear in the past because most of the financial institutions were owned by the government, which makes it difficult to establish a relationship which is one of questioning and challenging.[64]

Furthermore, meeting Basel II requirements is very complex and requires sound change and programme management capabilities: the implementation challenges range from strategy and operations, organisation structure and design to technology and market specific issues. Also, as some critics have pointed out, most of the international regulatory standards have been developed without reference to the particular needs of developing countries, therefore, it will be more difficult to implement in these less sophisticated markets, including China.[47; 51; 65]

The ability of capital standards to successfully eliminate the problems of bank's balance sheet structure has been debated for the last 20 years, as Kaufman[19] observes. Following an extensive review of the literature in the field, three propositions were formulated, namely, Basel II will improve risk management: reducing the risk of business failure, and strengthening the global financial system; Basel II will improve capital allocation efficiency; and compliance with advanced risk management systems favours the large banks only, which gain the greatest capital relief under Basel II, and benefit from economies of scale. Data were obtained from a series of semi-structured tele-interviews conducted with a carefully selected panel of Chinese banking executives knowledgeable in the field in order to evaluate the three propositions.

Proposition 1 was strongly supported by 83% of all the respondents, based upon their positive response to the three questions that were formulated to express proposition 3 (see Appendix B). These risk managers considered that the improvements in risk management proposed by Basel II would help to enhance risk management culture, reduce volatility, lower provision for bad debts, reduce operational losses, improve institutions' external ratings, help ensure access to capital markets, and enhance organisational efficiency. There appears to be a convergence of opinion that risk-based capital requirements have became the only true internationally accepted standards of a bank's soundness, [27; 28; 31; 29; 12] and, as Lastra[18] argues, the "right" capital level is a foundation strategic decision. The New Accord is expected to accelerate the need for reform and the need for Chinese banks to build up a healthy risk management system: credit risk and operational risk were considered to be the most challenging issues.

Proposition 2 was also strongly supported by 71% of the respondents, again, based upon their positive responses to the three questions formulated to express proposition 2 (see Appendix B) – these risk managers considered that the Basel II rules would improve capital allocation efficiency, bringing regulatory capital more in line with economic capital, and would be likely to affect the strategic decision-making for banks, allowing them to manage their portfolios more efficiently and focus their activities on where they have a competitive advantage. Identifying portfolio effects and their risks, and allocating them to the particular assets and liabilities tends to improve the risk-adjusted return.[1; 15]

These findings reinforce the idea of a strong consensus for the primary objective under Pillar 1 of Basel II which is to enable banks to achieve better alignment of regulatory capital with economic capital.[30; 28; 35] Basel II's risk-sensitive approach allows banks to efficiently determine capital adequacy based on the level of risk posed by each transaction. The New Accord's risk management requirements would prompt big changes in both the core business and organisational structure; and improve corporate governance and enhance trust in the financial markets, as argued by Hashagen.[14] Given the corruption, fraud, and Chinese banks' large burden of bad debts that have been a major concern of foreign banks, improving risk management systems and strengthening banks' corporate governance could only help banks in China increase their reputation and build up investor

confidence. (For a more extensive discussion of corporate governance and codes of conducts in China, see for example, Cai and Wheale.[40])

Proposition 3 posits the idea that compliance with advanced risk management systems favours the large banks only (that the large banks gain the greatest capital relief under Basel II and benefit from economies of scale) but it was not fully supported by the evidence gathered from the risk managers interviewed. Only around 39% of our respondents were in agreement with Proposition 3, based upon the three questions that were formulated to express proposition 3 (see Appendix B).

The Basel II QIS3 report,[2] however, asserts that the small 'Group 2' banks would significantly benefit from using the IRB Foundation Approach in contrast to the large banks which would appear to require a higher regulatory capital requirement when using IRB, although the small banks may lack the necessary financial resources and technical skills to develop the internal systems they would need to follow the IRB Approach.[57]

The leading banks would benefit from a reduction of regulatory capital by implementing AIRB, and in general discussion with our respondents, the majority considered that the estimated costs of implementation are overstated for Chinese banks, and that in any event these costs are not major concern, at least for the leading banks which have already draw up plans to put the new international standards into practice. The CBRC actively encourages the nation's major lenders to intensify their efforts to build an internal-rating-based (IRB) approach, but lack of data and poor data quality are major challenges as they limit meaningful analysis (see, for example, Liu).[6] Nevertheless, the 'Big Four' state-owned banks have now agreed to make investment in the infrastructure to meet the requirements of Basel II, but that local banks are unlikely to comply in the short-term, thus lending some support for proposition 3.

China does not yet participate actively in international financial markets, and their financial system has been shielded from external influences. With the increasing numbers of foreign banks entering into Chinese market, especially under the WTO commitment to fully open up its financial markets, the banking sectors' problems, including, low capitalisation, large amounts of non-performing loans, corruption and fraud, are major

concerns of both the Chinese authorities and foreign investors. However, China's agreement to adopt international national accounting standards will give foreign investors more confidence in the quality of financial information provided by Chinese companies.

5.2 Managerial Implications

Developing international banking standards

In the long-run, there is a tendency for international banking regulations to converge in order to increase trade in financial services and open-up international capital markets. Implementation of Basel II rules is not just about data and information systems, but involves focusing on risk measurement, risk allocation and the return on risks. The most prominent and well recognised gap for banks in China is insufficient consistent quality data for credit and operational risk assessments and risk estimate determination. Therefore, even though many banks in China may not adopt the Basel II regulations, leading banks in China should leverage Basel II as a good opportunity to conduct a detailed gap analysis – to review the existing data and collection process, develop a plan to collect missing data, and implement appropriate risk management systems and processes and supporting information technology infrastructures. By doing so, the leading banks in China should become more competitive in the long-run and more able to compete with foreign rivals.

The trade-off between business benefits and implementation costs

Calculating capital requirements under Basel II requires banks to implement a comprehensive risk management framework. Banks will have to carry more capital to cover unsecured loans than they do for secured loans but the risk management improvements may be rewarded by lower capital requirements – perhaps as high as 20% for the large banks.[2] Basel II also provides banks with an opportunity to gain competitive advantage by allocating capital efficiently. However, these large implementation projects will also need a huge investment in IT systems, processes, and personnel. It is recommended that leading banks in China should carry out a quantitative analysis and work out the trade-off between capital supporting specific business, customers and products and the cost of implementation in order to benefit from implementing Basel II.

Core deficiencies

A few leading banks in China, with the support of government, have improved risk management practices and are able to more easily meet the requirements of Basel II in the next few years. At the present time, most banks are still in the process of addressing some fundamental and core system issues, including NPLs and meeting minimum capital ratios to comply with the 8% requirement. However, as reported by the risk managers of the Chinese Banking Regulatory Commission (see Appendix A) many banks with material NPL-exposures are moving very quickly through a combination of NPL restructuring and disposals through Asset Management Companies and securitisation to relieve the pressure on regulatory capital.[8;9] It is essential that banks in China first address these structural deficiencies as priorities before progressing to Basel II implementation efforts. As banks estimate their risk by means of internal models and use these risk estimates to calculate minimum capital, an approach known as "internal rating based", Basel II gives banks considerable leeway in how they measure risk. As different jurisdictions will interpret the requirements of Basel II differently, it will be interesting to monitor how Chinese subsidiaries controlled by foreign banks adopt the new regulatory framework.

Building an independent regulatory structure

The CBRC regulates banks and their conduct of business in China and was established in April 2003 as an independent banking supervisory authority under the State Council of the government. The Central Bank has been imposing some quantitative controls on bank lending, banking supervision, and monetary policy for some time. However, as a very young supervisory committee, the power of CBRC has not been fully exercised. Also, the lack of political independence of the CBRC in China leads to regulatory biased decisions. International firms, in particular, worry that they may be discriminated against. That does not mean that foreign banks will not operate in China (they do), but, as Howard arges,[51] it does mean that their required rate of return is likely to be higher. The British and the American FSAs are particular example where the laws which were established gave government ministers no power to intervene in the regulatory decision-making process, nor power over its funding. It follows that establishing an independent institution which

has the authority and the capacity to make tough decisions where necessary is crucial. The overall regulatory policy should be integrated into a coherent financial whole, and the operational decisions made by regulators need to be as insulated as far as possible from the political process. This is difficult to achieve, but it is nonetheless essential.

Building an integrated regulatory system

It is as well to note that there is a growing international trend towards integrated regulation. The idea for integrated regulation has not been instituted in China because there are more restrictions on the types of businesses which financial firms can undertake. The three financial sectors, banks, securities houses, and insurance companies are still quite distinct from each other. But it is expected to change in 2006 when banks will be allowed to carry on financial business in multiple financial areas. London provides a good example of a single regulatory model. Some of the largest financial firms in the UK are a mixture of banks, securities firms and insurance companies, and have been relatively successful in operating that combination of functions. Establishing an integrated regulatory authority to face up to these 'financial supermarkets' works well. Another advantage of an integrated regulatory system, particularly relevant to China, is that it does allow scarce regulatory skills to be deployed to best advantage because it is easier to do that within a single authority.

Developing a robust training programme and maintaining the skilled staff

It is crucial to train and maintain skilled staff and create a more risk-aware culture. There is a great shortage of skilled people in China with financial regulatory knowledge. In the case of the CBRC, most staff are from administration departments or monetary control departments. The complexity of the new international regulations and fast growing financial service industry create a demand for specified regulatory expertise. Also, traditionally, banks in China have dramatically under-invested in training and this trend needs to be reversed if banks in China are to achieve effective risk management. It is recommended that both banks in China and the supervisory commission should develop a robust training programme which involves board and executive management leadership, pilot programmes with select branches to stage implementation, and on-going training

processes for improving supervisory efficiency and capability. Also, to create the incentives for people to do so, it is probably necessary to ensure that regulators are paid at reasonably competitive rates.

Planning and technology enhancement

Despite the criticality of data collection and management, banks in China are only at the very early stages of this process. Many planning processes stop at Pillar 1 data collection including transaction information and basic customer and ratings classification information. A well planned Basel II IT architecture should incorporate data warehouse, risk-weighted assets aggregation, reporting systems, counterparty identification, consistency of model ratings and so on, as recommended by Deloitte.[50] Therefore, it is recommended for banks in China that the planning process must take a much more holistic approach, addressing fundamental data-warehousing concerns and Basel II requirements. A starting point for credit architecture planning should be a data diagnostic process based on the bank's own portfolio structure and source systems. Moreover, it is recommended that replacing old systems rather than modernising existing ones should be considered as it is often more cost effective.

Upgrading corporate governance

Corruption, fraud and the Chinese banks' large burden of bad debts, have been the major concerns of the regulatory committee and of retail investors. There is a crucial need for a clear strategy to upgrade corporate governance and disclosure polices. A clear code of conduct and principles would strengthen shareholder protection, and guard against fraud and embezzlement, as recommended by the Ernst and Young report.[49] In particular, there is considerable value in ensuring that every company has an appropriate number of independent directors who are able to defend the interests of shareholders, particularly of minority shareholders. High standards of disclosure and transparency are crucial in developing capital markets. The CBRC has attached particular importance to upgrading corporate governance standards in China. It is not easy to implement, but in the long-run it is necessary because it will improve China's ability to respond to international competition, and to meet evolving good practice standards. Also, the government still

needs to strengthen laws against corruption, financial speculation, and misallocation of investment funds. Indeed, partial reforms have tended to transfer power to newly emerged elites perpetuating a state-centred system that allows the continuation of these abuses of power. As Pei[65] points out, 30% of gross domestic product has been lost by Chinese banks in loan write-offs and capital injections, foreign ownership of banks is still limited to a maximum of 25%, and the Communist party retains the power to appoint managers of its choosing.

References

(1) Rowe, D. and Jovic, D. and Reeves, R. (2004) 'Basel II and Economic Capital', *US Banker*, April, pp. 28-62.

(2) Basel Committee on Banking Supervision (2003; 2005; 2006) 'Quantitative Impact Study (QIS 3; 4; 5). *BIS*, available at http://bis.org/bcbs. (Accessed 12th November, 2006).

(3) Basel Committee on Banking Supervision (2006) 'International Convergence of Capital Measurement and Capital Standards: A Revised Framework Comprehensive Version', Basel Committee on Banking Supervision, available at http://bis.org/bcbs. (Accessed 12th November, 2006).

(4) Cornford, A. (2005) 'The global implementation of Basel II: prospects and outstanding problems', *Financial Markets Centre*, pp. 52-76.

(5) Currie, C. (2005) 'A test of the strategic effect of Basel II operational risk requirement on Banks', *Working Paper No. 141*, available on http://www.business.uts.edu.au/finance/.

(6) Liu, D. (2004) 'Chinese regulator revamps banking regime', *International Financial Law Review*, 2004 Banking Yearbook, p.35.

(7) Herrero, A.G.and Santabarbara, D. (2004) 'Where is the Chinese banking system going with the ongoing reform', *Asuntos Internacionales*, Bank of Spain, pp. 27-45.

(8) Marshall, D. and Lin, L. (2004) 'China's Banks: the recap and beyond', *Fitch Ratings*, Banks Special Report, April 15.

(9) Deutsche Bank Research (2004) 'China's financial sector: institutional framework and main challenges', *China Special*, available on www.dbresearch.com/PROD/DBR_INTERNET_EN-PROD/PROD0000000000072461.pdf (Accessed 7th November 2006).

(10) Morrison, W. M. (2005) China's Economic Conditions, *CRS Issue Brief for Congress*, Washington DC., USA.

(11) McGregor, R. (2006) 'China to adopt accounting code in line with international rules', *FT*, 16th February, p. 10.

(12) Jorion, P. (2000) *Value at Risk*, McGraw-Hill, USA.

(13) Saunders, A. and Cornett, M. M. (2003) *Financial Institutions Management: a Risk Management Approach*, McGraw-Hill, USA.

(14) Hashagen, Jorg (2004) 'Basel II: a worldwide challenge for banking', *International Financial Law Review*, 2004 Banking Yearbook, p. 25.

(15) KPMG (2003) *Basel II – A Closer Look, Managing Economic Capital*. http://www.us.kpmg.com/microsite/FSLibraryDotCom/docs/211-412%20Basel%20II%20-%20A%20Closer%20look%20-%20WEB%20VERSION.pdf (Accessed 10th November 2006)

(16) Modigliani, F. and Miller, M. H. (1958) 'The cost of capital, corporation finance and the theory of investment', *American Economic Review*, 48, pp 261-97.

(17) Allen, F. & Santomero, A. M. (1999) 'What Do Financial Intermediaries Do?', *Center for Financial Institutions Working Papers*, 99-30, Wharton School Center for Financial Institutions, University of Pennsylvania.

(18) Lastra, R. (1996) 'Central banking and banking regulation', *Financial Markets Study*, the London School of Economics.

(19) Kaufman, G. (2000) 'Banking and currency crises and systemic risk: a taxonomy', *Financial Markets*, Institutions and Instruments, 9, pp. 69-131.

(20) Pyle, D. H. (1971) 'On the theory of Financial Intermediation', *Journal of Finance*, 26(3), pp. 737-47.

(21) Hart, O.D. and Jaffee, D. M. (1974) 'On the application of portfolio theory to depository financial intermediaries', *Review of Economic Studies*, 41(1), pp.129-47.

(22) Jorion, P. (1997) The New Benchmark for Controlling Derivatives Risk, *Value At Risk*, McGraw-Hill, USA.

(23) Kim, D. and Santomero, A.M. (1988) 'Risk in banking capital regulation', *Journal of finance*, 43(5), pp.1219-23.

(24) Furlong, F.T. and Keeley, M. C. (1989) 'Capital regulation and bank risk-taking: a note', *Journal of Banking Finance*, 13(6), pp.883-91.

(25) Keeley, M. C. and Furlong, F.T. (1990) 'A re-examination of the mean-variance analysis of bank capital regulation', *Journal of Banking and Finance*, 14(1), pp. 69-84.

(26) Blum, J. (1999) 'Do capital adequacy requirements reduce risks in banking?', *Journal of Banking and Finance*, 23(5), pp.755-71.

(27) Shrieves, R. E. and Dahl, D. (1992) 'The relationship between risk and capital in commercial banks', *Journal of Banking and Finance*, 16, pp. 439-57.

(28) Jones, D. and Mingo, J. (1998) 'Industry Practices in Credit Risk Modeling and Internal Capital Allocations: implications for a models-based regulatory capital standard', *RBNY Economic Policy Review*, October, pp.53-60.

(29) Roy, R.V. (2003) 'The impact of the 1988 Basel Accord on bank's capital ratios and credit-risk taking: an international study', *Working Paper European Centre for Advanced Research in Economics and Statistics (ECARES)*, Universite Libre de Bruxelles.

(30) Basel Committee on Banking Supervision (1988) 'International convergence of capital measurement and capital standards', *BIS*, July, available at http://www.bis.org/bcbs. (Accessed 10th August 2006).

(31) Jacques, K. and Nigo, P. (1997) 'Risk-based capital, portfolio risk and bank capital, A simultaneous equations approach', *Journal of Economics and Business*, 49, pp. 533-47.

(32) Lastra, R. M. (2004) 'Risk-based capital requirements and their impact upon the banking industry: Basel II and CAD III', *Journal of Financial Regulation and Compliance*, 12(3), pp. 225-32.

(33) Dewatripont, M. and Tirole, J. (1994) *The Prudential Regulation of Banks*, MIT press, Boston: Mass: USA.

(34) HM Treasury (UK) (2003) 'The New Capital Adequacy Directive, CAD 3: The transposition of the New Basel Accord into EU legislation', *Consultation Document*, December, available at www.hm-treasury.gov.uk. (Accessed 4TH November, 2006).

(35) Jones, D. (2000) 'Emerging problems with the Basel Capital Accord: regulatory capital arbitrage and related issues', *Journal of Banking and Finance*, 24(1-2), pp. 35-58.

(36) Basel Committee on Banking Supervision (1999) 'Capital requirements and bank behavior: the impact of the Basel Accord', *BIS working paper No.1*, available at http://bis.org/bcbs. (Accessed 6th January, 2006.)

(37) Reeves, R. (2004) 'Basel II and Economic Capital', *US Banker*, April, pp. 42- 51.

(38) Basel Committee on Banking Supervision (2001) 'The New Basel Capital Accord', *BIS Consultative Documents*, available at http://bis.org/bcbs. (Accessed 14th January, 2006).

(39) Bischofberger, A. and Rybach, M. (2003) 'Basel II implications for banks and banking markets', *Credit Suisse Economic and Policy Consulting*, Zurich, p 11.

(40) Cai, Z. and Wheale, P.R. (2005) "Creating Sustainable Corporate Value: A Case Study of Stakeholder Relationship Management in China" in the *Journal of Business and Society Review*, 109 (4), pp. 507-47.

(41) Bloom, L. (2003) 'Implications of transparency issues in Pillar III for Financial Institutions', Presentation, *Institute of International Finance (IIF) Basel Sessions*, New York, June 17.

(42) Rodriguez, J. L. (2002) 'International banking regulation: where is the market discipline in Basel II?', *Cato Institute Policy Analysis*, No.455, pp. 1-27, 15th October.

(43) Suiter, J. (2003) 'Overhaul of banking rules could cost up to euro 200m', *Financial Times*, 11th May, p. 17.

(44) Stordel, H. and Cross, A. (2002) 'A cost/benefit approach to Basel II', *Risk*, June, pp. 38-44.

(45) Gordy, M. and Howells, B. (2004) 'Procyclicality in Basel II: can we treat the disease without killing the patient?', *Federal Reserve Board*, Washington DC, USA.

(46) Sidler, C. and David, G. (2003) 'Impact of the New Basel Accord', *White Paper: Basel II*, EDS, January, p. 45.

(47) Ward, J. (2002), "The New Basel Accord and Developing Countries: Problems and Alternatives", *Cambridge Endowment of Research Finance*, Working Paper.

(48) Weder, B. and Wedow, M. (2002) 'Will Basel II affect international capital flows to emerging markets?' *OECD Technical Papers*, No.199, available at http://www.oecd.org/dataoecd/18/42/1837890.pdf (Accessed 12th November 2006).

(49) Ernst & Young (2002) 'Asia Pacific Financial Solutions Nonperforming Loan Report', *Ernst & Young Research*, Asia.

(50) Deloitte (2005) 'From framework to execution, Effective planning and implementation of the Basel II Accord in Asia Pacific', *Deloitte Research*.

(51) Howard, D. (2004) 'Globalization and Financial Reform', *China Centre for Economic Research*, Beijing.

(52) Carstens, A. (2004) "Opportunities for Emerging and Developing Countries in International Standard Setting: An IMF Perspective", *the Fourth Annual IMF/World*

Bank/Federal Reserve Seminar Basel II - The International Banking System, International Monetary Fund, Washington DC.

(53) Fischer, S. (2002), "Basel II: Risk Management and Implications for Banking in Emerging Market Countries", *Institute for International Economics*, available from http://www.iie.com/fischer/pdf/fischer091902.pdf (Accessed 15th October, 2006)

(54) Larsen, P. T. (2005) 'Doubts grow over Basel II benefits', *FT*, July 25, p. 18.

(55) Sekaran, U. (2003) *Research Method for Business, A Skill Building Approach*, 4ed, New York, JonhWiley and Sons, Inc, p. 57.

(56) Weaver, G.R. and Linda, K.T. and Phillip, C. (1999) 'Corporate Ethics Programs as Control Systems: Influences of Executives Commitments and Environmental Factors', *Academy of Management Journal*, 42(1), p. 41.

(57) Winton, W. D. (2003) 'Basel II: the final frontier', *Morgan Stanley Equity Research Europe-Industry European Banks*, June 4, p. 3.

(58) Larsen, P. T. (2005) 'New regulations signal challenging times ahead', *FT*, August 15, p. 7.

(59) National Bureau of Statistics of China, http://www.stats.gov.cn (Accessed 16th March, 2006).

(60) Croft, J. (2005) 'British banks face additional capital threat from Basel II', *FT*, June 28, p. 28.

(61) Green, S. (2003) 'China's stock market, eight myths and some reasons to be optimistic', *Asia Programme*, University of Cambridge.

(62) Eley, J. (2005) 'The Bull in the China shop', *Investors Chronicle*, 27May-2June, p. 21.

(63) Wang, R. (2005) 'China's Economic Growth: source of disorder?' *Foreign Service Journal*, May, pp. 43-57.

(64) Lardy, N. R. (2000) 'When will China's financial system meet China's needs?' *Center for Research on Economic Development and Policy Reform,* Working Paper, No. 54, Standford University, Standford, USA.

(65) Pei, M. (2006) *China's Trapped Transition*, Harvard University Press: Boston, Mass: USA.

Appendix A

Corporate Participants

Number	Chinese Bank	Number	China Bank
1	Agricultural Bank of China (ABC)	13	People's Bank of China
2	China Development Bank	14	ShenZhen Development Bank
3	China Construction Bank (C0CB)	15	Beijing City Commercial Bank
4	Industrial and Commercial Bank (ICB)	16	China Min Sheng Bank
5	China Everbright Bank	17	China Merchants Bank
6	ShangHai PuFa Bank	18	Export Import Bank of China
7	GuangDong Development Bank	19	HongKong Bank
8	Bank of China (Boc)	20	Ningbo International Bank
9	Hua Xia Bank	21	ShenZheng Commercial Bank
10	China Banking Regulatory Commission	22	PICC Life Insurance
11	Bank of Communication	23	Zhong Hong Life Insurance
12	China Pacific Insurance	24	China Life Insurance

Appendix B

Questions to test propositions

Questions to test propositions	Agree	%	Disagree	%	Don't Know	%
Proposition 1: **Basel II will improve risk management: reducing the risk of business failure, and strengthening the global financial system.**						
Questions:						
1.Do you think the application of the New Accord – the Basel II banking regulations – will reduce the risk of business failure?	23	95.83%	0	0.00%	1	4.17%
2. Will Basel II influence the way banks in China manage and measure risk?	18	75.00%	4	16.67%	2	8.33%
3. Will Basel II affect corporate governance and strengthen the stability of the financial system?	19	79.17%	2	8.33%	3	12.50%
Average Total	20	83.33%	2	8.33%	2	8.33%
Proposition 2: **Basel II will improve capital allocation efficiency.**						
Questions:						
1. Will Basel II affect the capital structure of Chinese banks?	17	70.83%	5	20.83%	2	8.33%
2. Are foreign banks investing in Chinese banking partnerships concerned that banks in China are not adopting the Basel II regulatory standards?	16	66.67%	7	29.17%	1	4.17%
3. Do you think that even those financial service institutions that are not required to comply with the New Accord, will, nevertheless, tend to use its advanced requirements as risk management and economic capital benchmarks in order to remain internationally competitive?	18	75.00%	5	20.83%	1	4.17%
Average Total	17	70.83%	6	23.61%	1	5.56%
Proposition 3: **Compliance with advanced risk management systems favours the large banks only, which gain the greatest capital relief under Basel II, and benefit from economies of scale.**						
Questions:						
1. Will your bank use an advanced internal ratings based approach (AIRB)?	2	8.33%	20	83.33%	2	8.33%
2. Will the advanced internal ratings based approach (AIRB) allow banks to hold lower levers of capital?	10	41.67%	3	12.50%	11	45.83%
3. Do you think that non-compliance with the Basel II regulations will reduce banking competitiveness?	16	66.67%	4	16.67%	4	16.67%
Average Total	9	38.89%	9	37.50%	6	23.61%
Note: Each of the 24 Chinese banks listed in the Appendix A has been treated as a single response to questions posed.						