



**CEPII**

**CENTRE  
D'ÉTUDES PROSPECTIVES  
ET D'INFORMATIONS  
INTERNATIONALES**

No 2006 – 04  
February

## Who Pays China's Bank Restructuring Bill?

---

Guonan Ma

## Who Pays China's Bank Restructuring Bill?

---

Guonan Ma

No 2006 – 04

February

**TABLE OF CONTENTS**

|   |           |
|---|-----------|
| <b>SUMMARY .....</b>  | <b>4</b>  |
| <b>ABSTRACT.....</b>  | <b>5</b>  |
| <b>RÉSUMÉ .....</b>   | <b>6</b>  |
| <b>RÉSUMÉ COURT .....</b>   | <b>7</b>  |
| <b>I. INTRODUCTION .....</b>  | <b>8</b>  |
| <b>II. FOOTING THE BANK RESTRUCTURING BILL.....</b>                             | <b>9</b>  |
| 1. Bank shareholders .....  | 10        |
| 2. Bank customers .....   | 10        |
| 3. Taxpayers .....  | 11        |
| 4. Towards an institutional framework.....                                      | 13        |
| <b>III. RECENT BANK RESTRUCTURING STEPS IN CHINA .....</b>                      | <b>14</b> |
| 1. Issuance of RMB 270 billion in special government bonds in 1998 .....        | 15        |
| 2. The first round of NPL transfers totalling RMB 1.4 trillion in 1999.....     | 15        |
| 3. USD 60 billion in capital injections out of foreign reserves since 2003..... | 16        |
| 4. Loss recognition by existing bank shareholders .....                         | 16        |
| 5. Additional NPL transfers totalling RMB 780 billion since 2004 .....          | 17        |
| 6. Recapitalising the fifth largest Chinese bank in 2005 .....                  | 17        |
| 7. Foreign equity participation.....  | 18        |
| 8. Cleaning up the rural credit cooperatives and city commercial banks.....     | 20        |
| 9. The changing role of Chinese bank customers .....                            | 20        |
| 10. Interbank swaps of subordinated debt .....                                  | 21        |
| <b>IV. IMPLICATIONS .....</b>   | <b>22</b> |
| 1. Balance sheet impact .....   | 23        |
| 2. Headline versus effective restructuring costs .....                          | 23        |
| 3. Longer-term implications .....   | 25        |
| <b>V. CONCLUDING REMARKS .....</b>  | <b>28</b> |
| <b>REFERENCES.....</b>  | <b>29</b> |
| <b>APPENDIX 1.....</b>  | <b>31</b> |
| <b>APPENDIX 2.....</b>  | <b>32</b> |
| <b>LIST OF WORKING PAPERS RELEASED BY CEPII .....</b>                           | <b>33</b> |

## WHO PAYS CHINA'S BANK RESTRUCTURING BILL?

### SUMMARY

This paper focuses on one important aspect of China's bank restructuring challenge: repairing the bank balance sheets. It tries to shed light on the following three questions. First, what may be the likely size of China's bank restructuring bill? Second, how has the restructuring bill been shared? Third, what might be the effects and implications of these restructuring efforts and financing arrangements?

The paper is structured as follows.

First, we propose a framework to analyse and understand the rules of loss allocation, suggesting that three groups of players can help pay the bill. They are old and new bank shareholders, bank customers and taxpayers. We also discuss the relevant international experience and explore various ways of injecting public funds into the banking system. We argue that while different ways of cost sharing have their own relative merits, ex ante and transparent rules of allocating loss help contain moral hazard over the long term.

Second, we review and examine the principal steps taken by the Chinese government since 1998 to repair the bank balance sheets and how they have been funded. We estimate that to date, the cost of repairing bank balance sheets may have reached 22 per cent of GDP and could eventually exceed 28 per cent. We find that bank shareholders, bank customers and taxpayers have all footed the bill of bank restructuring in China, with the Chinese fiscal authority and central bank splitting some 85 per cent of the total bill so far. The mix of financing arrangements has been complex and extensive.

Third, we explore the possible ramifications of China's sizable balance sheet restructuring exercise. The Chinese authorities have been determined to face up the challenges in the banking sector. Thus far, the impact on the banking sector has been marked, with a stronger capital base and lower levels of non-performing loans. The total cost of repairing bank balance sheets has not been completely paid up, and all the ramifications may not yet be evident. Already, however, one can say that the cost sharing has had mixed effects on capital market development, behaviour of key players and the institutional building of the Chinese central bank. The accelerated foreign equity participation in the Chinese banks may have important implications for the long-term outlook of the sector.

**ABSTRACT**

This paper addresses the questions related to the cost of China's bank restructuring and how it has been financed. We first propose a framework for recognising losses. Then, we examine the recent major moves by the Chinese government to repair the country's bank balance sheets. Finally, we explore the implications of the Chinese ways of funding the bank restructuring. We find that the Chinese government has been decisive in confronting the costly task of bank restructuring. Looking through the elaborate funding arrangements adopted so far, the Chinese taxpayers have paid most of the bill.

*JEL* Classification: G21, G28, O53, P34.

Keywords: bank restructuring, recapitalisation, non-performing loans, China.

## QUI PAYE LA FACTURE DE LA RESTRUCTURATION BANCAIRE EN CHINE ?

### RÉSUMÉ

Ce document est centré sur un aspect important du défi que représente la restructuration bancaire en Chine : l'assainissement du bilan des banques. Il essaye d'apporter un éclairage sur trois questions. Premièrement, quel est le montant estimé de la facture de la restructuration bancaire en Chine ? Deuxièmement, comment cette facture a-t-elle été répartie ? Troisièmement, quels pourraient être les effets et les implications de ces efforts de restructuration bancaire et de ses modes de financement ?

Le document est structuré de la manière suivante.

Tout d'abord, nous proposons un cadre pour analyser et comprendre les règles de répartition des pertes suggérant que trois groupes d'acteurs peuvent contribuer à payer la facture. Ce sont les anciens et les nouveaux actionnaires de la banque, les clients de la banque et les contribuables. Nous examinons également l'expérience internationale dans ce domaine et explorons les différentes manières d'injecter des fonds publics dans le système bancaire. Nous faisons valoir que si les différents modes de répartition des coûts ont chacun leur propre mérite, des règles *ex ante* et transparentes pour l'allocation des pertes permettent de réduire le risque sur le long terme.

En second lieu, nous passons en revue et analysons les principales mesures prises par le gouvernement chinois depuis 1998 pour assainir les bilans des banques et la manière dont ces mesures ont été financées. Nous estimons qu'à ce jour, le coût de l'assainissement des bilans bancaires a pu atteindre jusqu'à 22 pour cent du PIB et pourrait en définitive dépasser les 28 pour cent. Nous constatons que les actionnaires des banques, les clients des banques et les contribuables ont tous payé la note de la restructuration bancaire en Chine, et que les autorités budgétaires et la banque centrale se sont partagé jusqu'à présent environ 85 pour cent de la facture globale. Les montages financiers ont été multiples et complexes.

Troisièmement, nous explorons les implications possibles de ce vaste exercice de restructuration des bilans des banques chinoises. Les autorités chinoises ont fait preuve de détermination pour relever le défi que posait l'état du secteur bancaire. Jusqu'ici, l'impact sur le secteur bancaire a été sensible, le capital des banques a été renforcé et le niveau des prêts non performants réduit. Cependant, le coût total de l'assainissement des bilans bancaires n'a pas été intégralement payé, et toutes les conséquences n'en sont pas encore apparues. Néanmoins, on peut déjà dire que la répartition des coûts a eu des effets ambigus sur le développement des marchés de capitaux, sur le comportement des acteurs clés et sur le développement institutionnel de la banque centrale chinoise. L'accélération de l'entrée

d'investisseurs étrangers dans le capital des banques chinoises peut avoir des implications importantes pour les perspectives à long terme du secteur bancaire.

### **RÉSUMÉ COURT**

Ce document aborde les questions relatives au coût de la restructuration bancaire en Chine et à son mode de financement. Nous proposons d'abord un cadre pour évaluer les pertes. Ensuite, nous examinons les principales mesures récemment prises par le gouvernement chinois pour assainir les bilans des banques. Enfin, nous explorons les conséquences sur la manière dont les Chinois ont financé la restructuration bancaire. Nous constatons que le gouvernement chinois a fait preuve de beaucoup de détermination dans la gestion de cette lourde restructuration bancaire. Au vu des mécanismes de financement complexes adoptés jusqu'ici, les contribuables chinois ont payé la majorité de la note

Classification JEL : G21, G28, O53, P34.

Mots clés : restructuration bancaire, recapitalisation, prêts non-performants, Chine.

## WHO PAYS CHINA'S BANK RESTRUCTURING BILL?

Guonan Ma<sup>1</sup>

### I. INTRODUCTION

Bank restructuring, including resolution of non-performing loans (NPLs) and the associated recapitalisation of banks, is often costly – but is crucial for the stability and efficient functioning of banking systems.<sup>2</sup> While effectively stemming the flow of new NPLs is necessary for a sustained improvement in the banking system, the importance of dealing with the stock of legacy NPLs still on the books of banks or within the system should not be understated: in no small measure, it may reveal the political willingness of authorities to confront serious problems in the banking sector. Moreover, NPL resolution is often inextricably linked with bank recapitalisation and is a major component of the broader financial safety net. Therefore, the questions of how bank restructuring should be financed and how the associated potential loss should be allocated among parties involved must not be swept under the carpet.

The bill for bank restructuring in China may eventually approach 30 per cent of GDP. Losses of this magnitude should not be surprising, given that NPLs are believed to have accounted for as much as 40 to 50 per cent of loans outstanding at their peak in the late 1990s (Lardy, 1998; BIS, 1999). Since then, the Chinese government has taken several major steps to recapitalise its banks and reduce NPLs. First and foremost, it has focused on repairing banks' balance sheets, but has also recognised the importance of strengthening corporate governance, fostering a credit culture and liberalising markets. The question of how bank restructuring efforts on this scale will be funded is obviously of great interest.

This paper aims to shed light on the potential cost of bank restructuring in China, how it will be funded – and who will foot the bill. There has been little research so far to understand these issues systematically. This paper attempts to fill this gap and is organised as follows. In Section II, we lay out a framework to suggest that there are three possible groups of players who may foot the bill: bank shareholders, bank customers and taxpayers. We also discuss relevant experiences from elsewhere in the world, and argue that pre-determined and transparent institutional arrangements for apportioning the cost of financial restructuring work best over the long term. Section III reviews some of the recent measures

---

<sup>1</sup> Senior economist, the Representative Office for Asia and the Pacific of Bank for International Settlements (BIS). The views expressed in this working paper are those of the author only and do not necessarily reflect the views of the BIS. I am grateful to many BIS colleagues, as well as to participants in the CEPII seminar “China’s financial system: the links between openness and banking crisis” in September 2005, Paris.

<sup>2</sup> See, among others, Sheng (1996), Dziobek and Pazarbasioglu (1997), and Hawkins and Turner (1999).

taken by the Chinese government to repair bank balance sheets, including how they were funded and the probable amounts involved. In Section IV, we discuss some of the short- and long-term implications of how Chinese authorities have apportioned losses among the parties involved. Finally, Section V concludes the paper with a few brief remarks.

We have arrived at three main conclusions in this paper.

First, since the late 1990s the Chinese government has made determined efforts to face up to the costly and politically difficult challenges of cleaning up bank balance sheets – which, in our view, has enhanced the credibility of the overall economic restructuring process in China.

Second, the funding arrangements for China's bank restructuring have been quite elaborate. Taxpayers, shareholders and bank customers have all paid for the restructuring bill, with the Ministry of Finance (MoF) and the People's Bank of China (PBC) splitting some 85 per cent between them. Foreign banks and other foreign investors also have helped foot the bill – and in so doing have become an emerging force in the Chinese banking sector.

Third, the ways in which the restructuring task has been funded and losses apportioned may have implications for the long-term prospects for the Chinese banking sector. We believe that, as the restructuring process deepens, a more transparent and rule-based framework for assigning financing responsibilities will be necessary in order to contain moral hazard, improve corporate governance, strengthen central bank credibility and further develop bond markets.

## **II. FOOTING THE BANK RESTRUCTURING BILL**

How will the expected large financial losses in the Chinese banking system ultimately have to be recognised and shared? Experiences from elsewhere in the world suggest that in general, three possible groups of players can end up paying the bill for bank restructuring: existing and new bank shareholders, bank customers and taxpayers.

Existing bank shareholders should normally absorb the first loss. In China, the largest banks are state-owned, so that the government may end up absorbing a portion of the losses. Sometimes, outside investors or new shareholders are willing to pay for a portion of restructuring costs because of a troubled bank's franchise value. Bank customers, meaning borrowers and depositors, also share the costs through a relatively wide net interest margin. The government, and ultimately the taxpayer, contribute their share when public funds are injected into the banking sector. This can take a number of forms: 1) direct budget outlays funded by government debt as well as bank operating earnings and tax credits; 2) debt issued by public agencies with full state backing (contingent liabilities); and 3) financing by quasi-public agencies without explicit government guarantee.

## 1. Bank shareholders

It is useful to distinguish between existing and new bank shareholders. Ideally, existing shareholders' capital should be extinguished first to cover losses. In principle, existing equity shareholders should absorb the loss until their capital is fully written off, before any funding from deposit insurance schemes or the treasury is deployed. If bank losses exceed shareholders' equity, but shareholders are allowed to retain a non-trivial claim on the insolvent bank, moral hazard may become an issue.

Sometimes, investors or new shareholders will pay part of a troubled bank's recapitalisation bill. They are willing to invest in an insolvent bank, either through a merger or acquisition or simply by taking an equity stake, at a price above the under-capitalised bank's net asset value. These parties are willing to invest in a troubled bank because they recognise its franchise value, possibly because regulatory and other costs associated with market entry are prohibitive. New shareholders can be domestic or foreign banks, non-bank investors or government agencies (Hawkins and Turner, 1999). These investors tend to increase diversification of ownership and strengthen corporate governance of the restructuring banks. However, when the government itself becomes the only shareholder of a rescued non-state-owned bank (nationalisation), the issues of future exit and (re)privatisation must be addressed.

International experience varies, and the outcomes have been mixed on this score. Equity of existing shareholders was fully wiped out in the early 1990s during the banking crises in the US and Norway, and in the late 1990s in Indonesia in the wake of the Asian crisis. In the US, the Federal Deposit Insurance Corporation adopted the purchase-and-assumption approach, whereby the purchaser bank took over the assets and liabilities of the failed bank through a bidding process, after shareholder equity was eliminated. However, in Japan, Korea and Sweden equity of existing shareholders of insolvent banks were, in some cases, partially written down but not eliminated, even as public capital was injected into the failed banks. In both Korea and Thailand, foreign and local banks or non-bank investors were allowed to buy equity in some troubled domestic financial institutions, as in the aftermath of the Asian crisis.

## 2. Bank customers

The second group of agents who may, directly or indirectly, help pay the bill for financial restructuring are bank customers, meaning borrowers and depositors.<sup>3</sup> Bank customers usually bear a portion of bank restructuring costs through interest margins earned by banks:

---

<sup>3</sup> Depending on the seniority, bank customers could include other bank creditors generally. In a broader sense, fellow banks can also be bank customers contributing to the bill, say, via some deposit insurance scheme.

specifically, by paying interest spreads above competitively determined market levels, both borrowers and depositors contribute to bank operating profits that over time help rebuild bank balance sheets. In addition, captive or underdeveloped capital markets hamper competition to banks by limiting disintermediation, in which borrowers can bypass banks and directly tap the capital and money markets for financing. This is a flow approach to recapitalising troubled banks and often requires regulatory forbearance and tax incentives.

If, however, the initial capital deficiency is large, it may take years before banks can be properly recapitalised through this flow approach. Following the Asian crisis, the Thai authorities granted regulatory forbearance to qualified Thai banks so that they could continue operating and generate net cash flows. In China, under-capitalised banks have been earning a spread between the official one-year time deposit rate and one-year working capital loan rate as much as 300 basis points, above the levels likely to be seen in a more deregulated market environment. Alternatively, the Chinese government was concerned about possible "adverse selection" risk, opting to regulate bank deposit and loan rates before banks return to health. However, if a bank's negative equity is equal to 20 per cent of assets, it could take many years to fill the hole in its balance sheet through the accumulation of net earnings – even assuming a relatively wide interest margin, no new NPLs and no dividends paid.

More worryingly, moral hazard can emerge because of forbearance. For example, the Federal Savings and Loan Bank Board in the US allowed many under-capitalised savings and loans to continue operating for quite some time and meanwhile excessive risk-taking by some weak thrifts aggravated their problems further (White, 1991). Also, the US Federal Reserve was thought to have pursued expansionary monetary policy in the early 1990s in order to steepen the yield curve, thereby widening net interest margins for banks. Some observers felt this policy sent the signal that big banks making common lending errors such as excessively risky lending would be made whole by macroeconomic policy.

### **3. Taxpayers**

Three arguments have been put forward to support the use of public funds to bail out troubled banks. First, if the troubled banks are state-owned, the government has an obligation to repair their balance sheets or at least fund their exit from the market. In China, the big four commercial banks had been solely state-owned until the recent foreign equity participation in them and their subsequent listing on stock markets.<sup>4</sup> Note that these four account for more than half of the total assets of the Chinese banking sector (Table 1).

---

<sup>4</sup> After the recent foreign equity participation and stock market listings, the big four banks may no longer be appropriately called "state-owned banks". Perhaps, a more precise name for them would be "state-controlled banks". This paper uses "state-owned banks" and "state-controlled banks" interchangeably.

Second, if bank losses are substantially related to past policy lending, the government is directly implicated and needs to take the responsibility for cleaning up the banking sector. The government's role in this regard has been cited as a key contributor to China's high level of NPLs in the 1990s (Zhou, 2004).

Third, with or without a deposit insurance scheme, imposing big losses on a large number of small depositors can lead to even more costly systemic risks and even political crises. Given that bank deposits represent some 80 per cent of Chinese households' financial wealth, it is understandable that the government would be willing to intervene by injecting public money into the banking system.

Indeed, on all three grounds, the Chinese government may find it both necessary and desirable to use taxpayers' money to fund bank restructuring. These considerations might have outweighed the concerns of the Chinese policymakers over moral hazard, which can be dealt with through complementary reforms and more transparent loss allocation.

Typically, there are three general modes of public funding to restore the health of the banking system. Their relative merits depend on the underlying condition of the banking system, as well as local institutional arrangements and the market environment.

- One is direct budgetary outlays financed by taxes or government debt. Such outlays allow for transparency and accountability and are consistent with best practice in both corporate governance and capital market development. However, approval for these outlays usually has to take place through a formal legislative process, often with the result that the restructuring process can be substantially delayed – especially when consensus cannot be reached.
- Another mode of public funding is NPL resolution and bank recapitalisation through debt issued by quasi-government agencies but with full-faith government guarantees. Such guarantees are explicit contingent liabilities of the government. This approach is transparent and flexible, but it keeps the true costs of cleaning up the banking sector off the government's balance sheet for a period of time. It may impede bond market development by splitting the domestic government debt market (McCauley, 2003).
- Finally, financing of bank restructuring can be provided by the central bank or other quasi-government agencies without explicit government guarantee. This approach is fast and expedient but does not always lend itself to accountability or contribute to capital market development. Often, it delays a clear-cut loss allocation, which sometimes may facilitate a desired early start of bank restructuring but may risk creating moral hazard. At limit, in central banks' case, it can constrain monetary policy in undesirable ways.

Experiences elsewhere in Asia illustrate the various ways taxpayers' money can be used in bank restructuring. In Japan, the Bank of Japan (BoJ) provided liquidity support, secured lending to the stretched deposit insurance scheme, and even injected some risk capital into

failed banks in the late 1990s (Nakaso, 2001). However, except for some unresolved minor losses associated with the BoJ's risk capital provision, Japanese government bonds and guarantees mainly financed the injection of public funds into the banking system. During the Asian crisis, the Bank of Korea (BoK) provided significant liquidity support to the financial system, as well as some limited financing to the Korea Asset Management Corporation (Fung, et al, 2004). However, such BoK exposures were usually covered with full-faith government guarantees. Also, the Korean government directly injected much of the public resources into the financial system through funds raised by treasury bonds or officially guaranteed debt issued by other quasi-public agencies.

In the same crisis, Bank Indonesia (BI) suffered heavy losses because of its massive liquidity support to many local banks, most of which subsequently failed. BI underwent prolonged negotiations with the finance ministry over partial settlement of such losses. The Bank of Thailand (BoT) also incurred significant losses in the Asian crisis from guaranteeing creditors and protecting depositors of failed financial institutions through its wholly owned subsidiary Financial Institutions Development Fund (Fung, et al, 2004). Eight years later, protracted and complicated discussions between the BoT and the Thai fiscal authorities – and the partial funding by the government – still have not fully resolved the central bank loss.

#### **4. Towards an institutional framework**

A policy question therefore arises as to how the costs of financial restructuring should be apportioned. The major challenge here is striking the delicate balance between 1) safeguarding systemic financial stability; 2) expediting the much-needed restructuring process; and 3) preventing or containing future moral hazard (Hawkins and Turner, 1999; White, 2004). In our view, a well-defined institutional framework for the cost-sharing process tends to work best for strengthening the banking system over the longer term, for at least the following three reasons (Crockett, 1998).

- a) *Transparency.* A well-defined institutional framework for cost-sharing enhances transparency and disclosure, and promotes good corporate governance. In particular, transparency ensures the accountability of all players in the banking system, including regulatory authorities, bank shareholders, customers, and the banks themselves. Moreover, sufficient and upfront financial commitments can help to minimise costs of bank restructuring by instilling confidence in the process.
- b) *Accountability.* Pre-determined rules define the obligations of all parties involved and discourage shirking of responsibility, thereby reducing the potential for moral hazard such as the expectation of bailouts in the future. Indeed, ambiguity of rules regarding apportionment of losses often may encourage moral hazard.
- c) *Efficiency.* Clear and ex ante loss-sharing frameworks are more efficient, since they reduce the need for repeated and often protracted ad hoc negotiations, avoid

inefficient case-by-case legislative processes and enhance cooperation among different agencies and players in the banking system. Moreover, rule-based financing arrangements tend to be more compatible with and conducive to the development of capital markets.<sup>5</sup>

### III. RECENT BANK RESTRUCTURING STEPS IN CHINA

In practice, how the costs associated with China's financial restructuring are to be apportioned among bank shareholders, customers and taxpayers depends in part on the country's institutional realities, and the underlying condition of its financial system. Since the late 1990s, the Chinese government has taken a number of significant measures to repair bank balance sheets, with a cumulative headline restructuring cost possibly as high as 22 per cent of the newly revised 2005 GDP.<sup>6</sup> Its restructuring efforts were initially concentrated on the big four banks, which account for more than half of China's banking sector (Table 1), but now extend to the rest of the sector and even the securities firms industry. This section summarises the principle measures taken by Chinese authorities since 1998 to strengthen bank balance sheets.

**Table 1**  
**The big four Chinese banks**

|   | <b>2002</b> | <b>2003</b> | <b>2004</b> | <b>2Q2005</b> |
|---|-------------|-------------|-------------|---------------|
| Asset share in the Chinese banking system | 60.1%       | 58.0%       | 53.6%       | 53.1%         |
| Average NPL ratio                         | 26.2%       | 20.4%       | 15.6%       | 10.1%         |

Note: end of period. The big four banks are China Construction Bank (CCB), Bank of China (BoC), Industrial and Commercial Bank of China (ICBC) and Agricultural Bank of China (ABC).

Sources: China Banking Regulatory Commission; Moody's (2005a and 2005b).

<sup>5</sup> Ex ante and rule-based frameworks for loss allocation are not necessarily inconsistent with flexible practical strategies to bank restructuring.

<sup>6</sup> The latest census indicates that the size of the Chinese economy might have been underestimated by some 17 per cent in 2004 GDP figures. This paper uses only the census-based 2005 GDP throughout.

## **1. Issuance of RMB 270 billion in special government bonds in 1998**

In August 1998, the Chinese government issued bonds to recapitalize the big four banks. The PBC first lowered the statutory reserve requirement ratio for the banking sector as a whole from 13 per cent to 9 per cent, the MoF then issued RMB 270 billion (USD 33 billion)<sup>7</sup> in special government bonds. The big four state-owned banks used the liquidity freed up by the lowering of the reserve ratio to purchase the bonds. The government then injected all the bond proceeds as equity into the big four banks (Mo, 1999), with the consequence that the capital base of the big four banks more than doubled. As the initial sole owner of the big four banks, the MoF thus met the capital call from these banks and explicitly burdened future taxpayers to fund a capital injection.

## **2. The first round of NPL transfers totalling RMB 1.4 trillion in 1999**

In 1999, the Chinese government carved out RMB 1.4 trillion (USD 173 billion, or 20 per cent of the total loan balance at that time) in NPLs from the big four banks at par value and transferred them over to four state-owned asset management companies (AMCs). In return, the AMCs issued bonds to the four banks and assumed some of their liabilities to the PBC. Effectively, this batch of NPL acquisition was financed 55 per cent by AMC bonds and 45 per cent by PBC credit. This move was a double act of NPL removal and bank recapitalisation (Ma and Fung, 2002).

However, because of the “constructive ambiguity” of the MoF towards its backing of these bonds, the value of the bonds issued by the AMCs was initially called into question. Indeed, there may still be the risk that the big four banks swapped their own NPLs for AMC bonds with uncertain prospects of timely debt service. Disclosure is such that it is not clear if the AMCs have made regular interest payments to the big four banks on their bonds, or to the PBC on the liabilities assumed by the purchasing AMCs. So far, the four AMCs have resolved about half of the acquired NPLs, with a 20 per cent cash recovery rate. This would not suffice to collectively cover the interest payments on their bonds and PBC loans assumed so far.

Therefore, at least for a period, the effective recapitalisation of the big four banks might not be as large as the headline NPL removal would suggest, while the PBC's balance sheet has clearly suffered. This is a case of recapitalising banks via injections by the central bank and other public agencies (AMCs) without an explicit government guarantee.<sup>8</sup>

---

<sup>7</sup> In this paper, the exchange rate of the Chinese renminbi is RMB 8.1/USD 1, unless otherwise specified.

<sup>8</sup> The MoF became more forthcoming about its willingness to support the bonds issued by one AMC (Cinda), ahead of the initial public offering of CCB on the Hong Kong Stock Exchange in November 2005. It says “in the event that Cinda is unable to pay any interest on the bond in full, the MoF will provide financial support, ... when necessary, the MoF will provide support with respect to Cinda's repayment of the principal of the bond” (CCB, 2005). Even here, there was no mention of the status of the bonds issued by the other three AMCs.

### **3. USD 60 billion in capital injections out of foreign reserves since 2003**

In exchange for equity, the PBC has injected USD 60 billion capital out of its foreign reserves into three of the big four banks since late 2003. To bypass the Chinese central bank law that prohibits the PBC from owning any commercial banks, a state-owned investment vehicle called the Central Huijin Investment Corporation Limited (Huijin) was set up in 2003 to receive funding from the PBC, and invest the money into the three commercial banks' equity. Thus far, Huijin has injected USD 22.5 billion each into China Construction Bank (CCB) and Bank of China (BoC) and USD 15 billion into Industrial and Commercial Bank of China (ICBC). Presumably, such equity investments form the risk capital of the restructured banks – which would mean that Huijin, as the equity investment arm of the PBC, has become the largest financial holding company in China. Since funding at the margin can be taken to be interest-bearing PBC bills, this is a case of financing through debts issued by public agencies without full-faith state backing.<sup>9</sup>

### **4. Loss recognition by existing bank shareholders**

Until recently, most Chinese banks were wholly state-owned. As the initial sole owner of the big four banks, the MoF opted to recognise loss of all of its equity in CCB and BoC (some RMB 320 billion) as the counterpart of the loan loss write-offs and increases in provisions. Thus, through Huijin, the PBC took over these two recapitalised banks and became their controlling shareholder. In this case, the original bank shareholders, that is, China's taxpayers, absorbed the loss.

In contrast, in the case of ICBC the MoF wrote down only one-third of its original RMB 170 billion equity stake, and retained the rest of its equity claims in order to share a 50/50 control of the restructured ICBC with Huijin. However, a massive RMB 246 billion of ICBC's remaining loan losses has been parked under a joint MoF/ICBC special purpose "receivable" account at ICBC that yields interest to ICBC and is funded by future dividends (supposedly accruing to the MoF as a 50 per cent equity owner) and possibly additional tax credits.<sup>10</sup> Therefore, this is a real mixed bag: shareholders and therefore taxpayers recognise some of the loss instantly and some in instalments. Moreover, the latter arrangement smacks of regulatory forbearance granted by authorities to themselves. Whether the

---

<sup>9</sup> There are reports in the press that Huijin has also made equity investments in some under-capitalised local securities houses. It is not apparent how such investment has been funded. One possibility is that the financial resources came from paid-out dividends accruing to Huijin's equity stakes in the three big state banks. Another possibility is that the investment was financed by capital gains realised by the sale of part of Huijin's equity stake in CCB to foreign investors. A third possibility is additional equity or debt financing from the PBC.

<sup>10</sup> One main motive for the MoF to give up future earnings rather than extinguish all of its equity could be to retain a say in the bank restructuring process.

restructuring takes the form of receivables or outright write-off and provision of risk capital, taxpayers will eventually have to pick up the tab.

### **5. Additional NPL transfers totalling RMB 780 billion since 2004**

Since 2004, the PBC's balance sheet has been tapped on two occasions to fund the transfers of the doubtful loans at the recapitalised CCB, BoC and ICBC onto the books of the AMCs. The total book value of loans transferred was some RMB 780 billion (USD 96 billion). In 2004, the PBC bought the first batch of RMB 320 billion in doubtful loans from CCB and BoC (as well as Bank of Communications: see below) for half their book value and then auctioned them to the AMCs for 30 to 40 cents on the dollar. In 2005, the PBC bought a second batch of RMB 460 billion in doubtful loans from ICBC at par value and auctioned them to the AMCs for an average of 26 cents on the dollar.

In these two transfers, the PBC appears to have made an outright loss from the differences between the acquisition and auction prices of the doubtful loans involved of nearly RMB 400 billion (USD 50 billion) – or some 20 times the PBC's own reported capital. Furthermore, the PBC balance sheet has additional exposure to the AMCs because it provided the credit to finance their two NPL acquisitions.<sup>11</sup> In essence, the PBC has been decapitalised to finance bank recapitalisation, all without a government guarantee, at least on the public record.

### **6. Recapitalising the fifth largest Chinese bank in 2005**

In June 2004, Bank of Communications, the fifth largest bank in China, was recapitalised to the tune of RMB 35 billion (USD 4 billion). The MoF and other existing bank shareholders contributed new capital of RMB 7 billion; Huijin invested RMB 3 billion (reportedly funded by PBC bills); the National Social Security Fund chipped in RMB 10 billion in return for an equity stake; and HSBC paid RMB 15 billion for a 19.9 per cent stake, a premium of some 40 per cent to the valuation for the MoF and Huijin equity investment (see Table 2). This recapitalisation exercise was a "hybrid" one financed by funds from the government and public agencies, existing shareholders, as well as domestic and foreign investors.

---

<sup>11</sup> The credit risk to the PBC loans in this case would be marginally smaller than in the 1999 case, given that this time, the AMCs purchased the NPLs at auctioned prices rather than book value.

## 7. Foreign equity participation

Foreign investors are footing China's bank restructuring bill to the extent that they are paying a premium for equity stakes in Chinese banks. The official policy has been to encourage foreign strategic investors to become shareholders of Chinese banks and subsequently to list those banks on stock markets. The purpose of this strategy is not just to attract capital, but also to diversify ownership, improve corporate governance, promote a credit culture, enhance disclosure and facilitate transfers of know-how.<sup>12</sup> Moreover, private or public foreign equity participation provides an exit strategy for the state to recoup its equity investment in recapitalised banks – through sales of equity stakes to foreign investors.

Foreign capital committed to the Chinese banking sector, in the form of either direct or portfolio investment, has been considerable, and the inflow has accelerated since 2002 (Table 2 and Appendix 2). By late 2005, the total declared foreign direct investment (FDI) in Chinese banks had reached USD 16.5 billion, representing some 15 per cent of the banking sector's core capital, according to some estimates.<sup>13</sup> Bank of Communications and CCB have been listed on the Hong Kong Stock Exchange. In June 2005, the former became the first Chinese bank listed overseas when it raised some HKD 2 billion (USD 250 million) globally through new share placements, while in November 2005 the latter issued primary shares in its initial public offering, raising a record HKD 71.6 billion (USD 9.2 billion).<sup>14</sup>

---

<sup>12</sup> Listing on overseas stock markets has also been intended as one way for the Chinese government to push through bank restructuring without being held hostage to the vagaries of local stock markets, which have been undergoing overhaul lately, with falling prices for more than three years.

<sup>13</sup> *Securities Times*, 17 December 2005.

<sup>14</sup> Foreign investors foot the bill only to the extent that they pay a premium for their equity stakes in Chinese banks. For instance, HSBC paid a 40 per cent premium to take a 19.9 per cent stake in Bank of Communications, which was listed at an IPO price of 1.54 times the book value. BoA paid 1.15 times book in its investment in CCB, which was later listed at an IPO price of 1.96 times book. RBS pays 1.18 times book value to take 10% of the BoC, while Goldman Sacks-led consortium paid 1.22 times book to buy 10 per cent of ICBC. Newbridge Capital paid a price of 2.38 times book to be the largest shareholder in Shenzhen Development Bank.

**Table 2**  
**Announced direct foreign investment in Chinese banks**

| Year         | Target name                  | Acquirer name                  | Equity investment             |
|--------------|------------------------------|--------------------------------|-------------------------------|
| 2006         | Ningbo City Commercial Bank  | OCBC                           | USD 70.6 m (12.2%)            |
| 2005         | ICBC                         | Goldman Sachs-led consortium   | USD 3,600 m (10%)             |
| 2005         | Tianjin City Commercial Bank | Australia and New Zealand Bank | USD 110 m (20%)               |
| 2005         | BoC                          | RBS/Temasek/UBS/ADB            | USD 5,220 m (16.84%)          |
| 2005         | CCB                          | BoA/Temasek                    | USD 3,966 m (14.1%)           |
| 2005         | Bank of Communications       | HSBC                           | USD 1,750 m (19.9%)           |
| 2005         | Bohai Bank                   | Standard Chartered Bank        | \$123 m (19.9%)               |
| 2005         | Huaxia Joint Stock Bank      | Deutsche Bank/Pangaea          | USD 454 m (20.9%)             |
| 2005         | Hangzhou City Bank           | Commonwealth Bank of Australia | USD 78 m (19.9%)              |
| 2005         | Bank of Beijing              | ING/IFC                        | USD 270 m (24.9%)             |
| 2004         | Bank of Jinan                | Commonwealth Bank of Australia | USD 17 m (11.0%)              |
| 2004         | Xian City Commercial Bank    | IFC/Bank of Nova Scotia        | USD 6 m (5.0%)                |
| 2004         | Shenzhen Development Bank    | Newbridge Capital              | USD 150 m (17.9%)             |
| 2004         | Minsheng Bank                | IFC/Temasek                    | USD 458 mn (6.2%)             |
| 2004         | Industrial Bank              | Hang Seng Bank/IFC/GIC         | USD 326 mn (24.9%)            |
| 2002         | Shanghai Pudong Dev Bank     | Citigroup                      | USD 73 mn (5.0%)              |
| 2002         | Nanjing City Commercial Bank | IFC                            | USD 27 mn (15.0%)             |
| 2002         | China Everbright Bank        | IFC                            | USD 19 mn (4.9%)              |
| 2002         | Bank of Shanghai             | IFC/HSBC/HK Shanghai Com Bank  | USD 133 mn (13.0%)            |
| <i>Total</i> |                              |                                | <i>About USD 16.8 billion</i> |

Note: The year is the announcement date of the investment. Some announced deals are still pending regulatory approval. The sizes of investment in Bank of Communications and CCB are those before the latter's recent IPOs. The Bohai Bank is a new bank with Standard Chartered as one of its founding shareholders.

Sources: *Caijing Magazine*, No. 123 (2004) and No. 136 (2005); *The Asian Wall Street Journal*, 20 June 2005 and 27 January 2006; *The 21st Century Economic Report*, 24 August 2005; *The Financial News*, 7 and 9 September 2005.

## **8. Cleaning up the rural credit cooperatives and city commercial banks**

As the pace of bank restructuring quickened, Chinese policymakers turned their attention to the other two segments of the banking sector: the second-tier city commercial banks and 34,000 rural credit cooperatives (RCCs). In both the RCC and city commercial bank sectors, local taxpayers, the PBC and shareholders (existing and new) have footed the bill. The total bill for restructuring the balance sheets of these two sectors could well have exceeded RMB 500 billion by late 2005.

To date, the PBC has issued and handed over at least RMB 168 billion of its special interest-bearing bills to the RCCs to cover half of their negative equity arising from the recognition of their loan losses – apparently without receiving equity stakes in return. The remainder of the clean-up bill has been made up by local governments (through their budgetary accounts or their investment arms) as well as existing and new shareholders. Financing from the PBC puts the total estimated restructuring cost of the RCCs at a minimum of RMB 336 billion (USD 42 billion) – and that just to keep the sector's net worth positive. In addition, to lift the capital adequacy of the RCC sector towards international standards, both existing and new RCC shareholders had reportedly injected capital of RMB 104 billion for the sector as a whole by mid-2005.<sup>15</sup>

Separately, the clean-up of the city commercial bank sector has been funded mainly by a mixture of equity dilutions of existing shareholdings and contributions from local fiscal authorities, who have coughed up RMB 36 billion (USD 5 billion) thus far.<sup>16</sup> Foreign investors may have also shared the bill by paying a premium to acquire equity stakes in a number of Chinese city commercial banks (Table 2).

## **9. The changing role of Chinese bank customers**

Bank customers have been in effect contributing to the restructuring bill as well. While liberalisation has led to greater interest rate flexibility in China, the authorities have continued setting benchmark deposit rate ceilings and minimum lending rates to maintain interest spreads of some 300 basis points. While such spreads may not be the widest in the world, they could shrink considerably if market forces played a more prominent role. In addition, the underdevelopment of China's money and capital markets means that larger depositors cannot seek higher returns on other instruments such as mutual funds, and that sound enterprises cannot lower funding costs by directly tapping the bond markets. In short, disintermediation has taken place on a much smaller scale than otherwise. Until 2004,

---

<sup>15</sup> *The Financial News*, 20 October 2005.

<sup>16</sup> *The 21st Century Economic Report*, 11 August 2005.

corporate debt securities represented no more than 2 per cent of the total outside funding of China's non-financial firms (Table 3).<sup>17</sup>

**Table 3: Outside funding sources of the non-financial corporate sector**  
(in billions of RMB)

|                                  | 1998  | 2000  | 2002  | 2003  | 2004  |
|----------------------------------|-------|-------|-------|-------|-------|
| Total sources of outside funding | 1,354 | 1,524 | 2,065 | 3,120 | 2,794 |
| <i>Bank loans</i>                | 1,015 | 932   | 1,449 | 2,374 | 1,771 |
| <i>Domestic corporate bonds</i>  | 4     | 10    | 24    | 37    | 33    |

Source: *The PBC Quarterly Statistical Bulletin*.

If Chinese banks have been able to charge their customers an conservatively estimated 50 basis point excess interest margin over the past five years, we estimate that bank customers would have paid RMB 270 billion (USD 33 billion) towards the bank restructuring bill. Related to this issue is the use of pre-provision net earnings and tax credits to strengthen a bank's capital base. The annual reports of the big four banks suggest that in 2003 and 2004 alone, roughly RMB 150 billion (USD 18.5 billion) was injected into these banks in the form of pre-provision net earnings and tax credits.<sup>18</sup>

## 10. Interbank swaps of subordinated debt

Finally, since 2004 subordinated bonds have been issued by Chinese banks as tier-2 capital to strengthen their balance sheets. So far, 12 banks have issued more than RMB 186 billion of subordinated debt, most of which has been taken up by fellow banks and insurance companies.<sup>19</sup> Banks have been allowed to buy each other's bonds, with holdings permitted

---

<sup>17</sup> The situation, however, has been changing since May 2005 when the short-term corporate commercial paper (CP) was first introduced in the interbank market. It has been priced at less than 3 per cent, compared to the prevailing official one-year best lending rate of 5 per cent. To partially compensate the commercial banks, the regulators have limited the principal CP underwriters mainly to these banks so that they can earn as much as 40 basis points of the CP underwriting fees and charge primary rates at 60 basis points above the prevailing yields in the secondary market.

<sup>18</sup> However, the operating profits taken to clean up the bank balance sheet may include the extra bank earnings due to captive bank customers.

<sup>19</sup> *Caijing Magazine*, 3 October 2005.

up to 20 per cent of their own stated core capital. Of course, interbank swaps of tier-2 capital do not strengthen the banking system as a whole against common adverse shocks. In addition, purchases of such bonds by insurers, as in Japan, pose a risk of contagion across the financial system. The yields on the subordinated bonds issued by some Chinese state banks are reportedly on a par with or even below those on MoF bonds of similar maturities, with little transparency about the pricing mechanism for the subordinated bonds placed publicly or privately, or the distribution of holdings. Taxpayers get little protection from such window dressing (Fukao, 2002).

#### IV. IMPLICATIONS

In order to gauge the total cost of bank restructuring in China, one must take into account the financial resources expended in recognising the past losses as well as those used for beefing up the banking sector's capital base to the required levels. Adding up in an ad hoc manner and crudely adjusting for possible double counting, the estimated partial payments towards China's bank restructuring bill to date have reached RMB 4 trillion (USD 500 billion) – or 22 per cent of the revised 2005 GDP (Appendix 1). Even this figure is likely to be an underestimate. Indeed, the headline cost could eventually exceed RMB 5 trillion (USD 620 billion), or more than 28 per cent of GDP, given that the most troubled of the big four banks has yet to be restructured, the three policy banks will have to be recapitalised, and more RCCs and city commercial banks still need to be cleaned up.<sup>20</sup>

The financing arrangements for China's bank restructuring have been complex and wide-ranging. They have included outright MoF bonds; tapping the PBC balance sheet; recent and promised future flows of tax credits and operating earnings; excessive interest margins shouldered by bank customers; capital call on existing shareholders; and premiums associated with equity investment by domestic and foreign investors. Thus, taxpayers, shareholders and bank customers have all shared the restructuring bill. The MoF and PBC together have taken care of 85 per cent of the bill, with the rest of the tab being picked up by bank shareholders, investors and customers. Therefore, the consolidated public sector (ultimately the taxpayers) is bearing the lion's share of the overall bill.

While one may debate the relative merits of various ways of funding and apportioning bank losses and the probable size of the restructuring bill, there is little doubt that the Chinese authorities have move expeditiously in meeting the challenges to the banking system. Nevertheless, the Chinese experience raises a number of important questions. First, what is

---

<sup>20</sup> Reportedly, Agriculture Bank of China may require some RMB 800 billion to fully restore its balance sheet to health, while the tab for Guangdong Development Bank could run as high as RMB 50 billion. The author estimates that the city commercial bank sector may need additional injections of some RMB 150 billion to clean up the balance sheets or fund their exit, while the restructuring bill for the three policy banks may reach RMB 250 billion.

the likely effect of such restructuring efforts on bank balance sheets? Second, how might the headline and effective costs of bank restructuring differ? Third, what are the long-term implications of these funding approaches?

## 1. Balance sheet impact

The short-term impact of these restructuring exercises on the balance sheet of the Chinese banking sector has been marked (Table 1). Following injections of public and private funds, the balance sheets of most Chinese banks are now in far better shape, as evidenced by lower NPL levels, enhanced provisions and a stronger capital base across the sector (Moody's, 2005a and 2005b). For instance, the recorded aggregate equity capital of China's RCC sector swung from a sickly minus 10 per cent at end-2002 to almost positive 6 per cent by June 2005.<sup>21</sup> The recent credit rating upgrades by several international rating agencies of several Chinese banks and the success of their recent IPOs have been an endorsement of such restructuring efforts.

Nevertheless, it is far from clear to what degree recapitalisation measures have strengthened the banking system. Particularly troubling is the ambiguous status of the AMC bonds and the incestuous interbank swaps of subordinated debt. Moreover, some in the media claim that public capital taken from foreign reserves should be principal-guaranteed. Such media opinions would raise doubts about whether such equity should be treated as core risk capital absorbing real shocks, or simply as a vase borrowed for decoration only. If such equity capital investments by the state are counted as forming genuine core risk capital at all, they should, by definition, be subject to downside as well as upside risks.

There have also been some concerns that, absent other complementary reforms, such injections of public financial resources into the banking sector might give rise to moral hazard, which, in turn, would lead to new NPLs in the system and repeated state bailouts. While the risk of moral hazard clearly exists and needs to be taken seriously, our view is that the best approach is not to play down but to face up to the potential size of the bank restructuring bill. In fact, by not fully recognising past loan losses, the risk of moral hazard is likely accentuated, not mitigated.

## 2. Headline versus effective restructuring costs

The final *effective* bank restructuring bill may differ from the simple headline number, in part because of the following three factors: 1) the ongoing use of tax credits and bank earnings flows to strengthen bank balance sheets; 2) exchange-rate risks; and 3) possible gains/losses on new equity investment by the government in the restructured banks. Therefore, the size of eventual total bill could remain uncertain for an extended period of

---

<sup>21</sup> *China Securities News*, 7 September 2005.

time, even if one ignores the fact that the segments of the banking sector have not been fully restructured. For example, in the case of future financial flows to fund bank restructuring, the state reportedly has promised ICBC and city commercial banks additional tax credits and the use of future retained earnings to rebuild its balance sheet over the next several years.

The exchange-rate risks to bank capital may add to or subtract from the final effective restructuring bill. This factor is more relevant in China today, due mainly to large foreign exchange capital injections, greater RMB flexibility and the different currency compositions of the three recapitalised banks' equity. In particular, the recapitalised banks are not allowed to convert the injected foreign currency-denominated capital into RMB for a "vesting period" of about three years. Therefore, the new bank capital might fluctuate in RMB terms along with the exchange rate. And the foreign exchange rate risks were initially transferred from the PBC to Huijin and eventually to the recapitalised banks.

Two particular questions arise in relation to exchange-rate risks. First, what might the currency composition of bank capital look like? It differs from one bank to another. Whereas the core equity capital of ICBC is likely to be denominated half in local currency and half in USD, almost the entire tier-1 capital of BoC and CCB might be denominated in a currency other than RMB. Indeed, BoC's core capital might be a mix of USD, other foreign currencies and even gold,<sup>22</sup> and CCB's would most likely be almost completely USD-denominated. This in turn gives rise to a more general issue of the optimal relation between the currency compositions of a bank's equity and asset (Fukao, 1991).

Second, with a three-year vesting period preventing conversion of USD into RMB, how can these recapitalised banks hedge their exchange-rate risks? It has been reported that in early 2005, Huijin issued currency options to the three recapitalised big banks to hedge, fully or partially, the USD portions of their respective capital injections. The banks paid premiums to buy the European style options to sell USD for RMB at strike prices around the prevailing rate of RMB8.277 per USD before the recent currency regime shift for a period of up to three years.<sup>23</sup> It is not quite clear how Huijin would itself hedge against such exchange-rate exposure. Most likely, the foreign exchange risks may have been passed back to either Huijin or the PBC.

The realised gains or losses from Huijin's equity investment and the premium paid by new shareholders may influence not only the headline bill, but also how it is apportioned. It is

---

<sup>22</sup> Bank of China 2004 Annual Report.

<sup>23</sup> CCB bought put options to sell dollars to fully cover the USD 22.5 foreign exchange capital injection from Huijin. The BoC bought options to cover only USD 18 billion out of the USD 22.5 billion capital injection received from Huijin. The ICBC's option agreement with Huijin covers USD 12 billion out of the USD 15 billion capital injection received from Huijin. The *Southern Weekend Magazine*, 19 April 2005; *China Money*, August 2005, No. 46.

therefore interesting to consider the valuation effects of subsequent private and public equity transactions. For instance, Bank of America (BoA) and Royal Bank of Scotland (RBS) bought 14.1 per cent and 16.84 per cent, respectively, of Huijin's stakes in CCB and BoC. We estimate that relative to the original valuation of the initial investment in 2003, Huijin realised gains of nearly RMB 10 billion (USD 1.2 billion) from selling down its CCB and BoC stakes in these two private equity deals (Table 2 and Appendix 2).

However, if mark-to-market accounting applies, this headline realised capital gain for Huijin could be mostly offset by its currency loss due to the appreciation of the RMB over the latter part of 2005. Moreover, one needs to take into account the rest of the deal packages – including options, lock-ups, or promises of net asset values above the acquisition prices. In the case of the CCB private equity deal, BoA received a call option to increase its CCB stake up to 19.9 per cent, with an expiration date in 2011 and an elaborate strike price structure. The value of such a call option could significantly outweigh the premium of 1.15 times the net asset value paid by BoA. By contrast, in the still-pending BoC private equity transaction, RBS might not receive any call options, but will reportedly have some downside protection for a limited period of time. Therefore, the gains or losses related to Huijin's recent partial divestments of CCB and BoC may not be known until these options expire or are eliminated/exercised.

### **3. Longer-term implications**

There are at least four longer-term issues arising from the recent funding practices of China's bank restructuring. First, until the well-defined rules governing loss apportionment emerge and Huijin becomes more transparent, Chinese taxpayers may find the financing arrangements a bit murky. Lack of both *ex ante* and *ex post* transparency about the financing of bank restructuring is not conducive to good corporate governance and could lead to moral hazard. To address both the "stock" and "flow" problems in the Chinese banking sector, accountability is key – and that needs to start with a set of well-defined rules stipulating financing responsibilities.

Second, some of the ways of funding bank restructuring in China may not be conducive to debt market development. Until recently, the goal of keeping bank interest margins artificially high could have been one reason for the underdevelopment of China's corporate bond and money markets. More developed debt markets, while possibly compressing bank interest margins for a while, would benefit the banking sector and economy as a whole over the long term. This is because a deeper and broader capital market would encourage banks to rely less on balance sheet expansion and more on fee-income producing activities, and thereby increase the resilience of the financial system to shocks (Gyntelberg et al, 2005). In addition, fragmented and often non-tradable debt issued by multiple agencies in financing the bank restructuring process tends to depress debt market liquidity generally (McCauley, 2003). Unifying different issues by various agencies would help improve secondary market liquidity and promote bond market development.

Third, specific concerns have also arisen about the heavy use of the central bank balance sheet to fund bank restructuring in China (Ma and Fung, 2002). Although taxpayers have footed some 85 per cent of China's huge restructuring bill, many conventional measures of government debt levels in China have not risen as much. This is possible, in our view, mainly because of the unusual expansion of the central bank balance sheet. Between end-2001 and end-2005, the size of the PBC's balance sheet more than doubled – with the estimated central bank financing of the country's bank restructuring now representing at least 15 per cent of the entire balance sheet.

In essence, the PBC is being decapitalised to the benefit of the banks. Excessive use of the central bank to fund such quasi-fiscal burdens could damage its balance sheet. This could be the result of either a mismatch between liquid liabilities and illiquid assets or the loss of budgetary autonomy (in the event that the central bank's cash flows become negative), or both. And such problems could hinder the long-term institutional development of the central bank in several respects.

- Given the potential conflict of interest between financing needs and monetary objectives, the credibility of a central bank's monetary policy could be compromised.
- Market confidence in the capacity of a central bank to act as a lender of last resort could be eroded over time.
- A large overhang of illiquid and often non-negotiable assets on the balance sheet of the central bank may retard the development of money and bond markets, limit the choices of monetary policy instruments and weaken transmission of monetary policy.

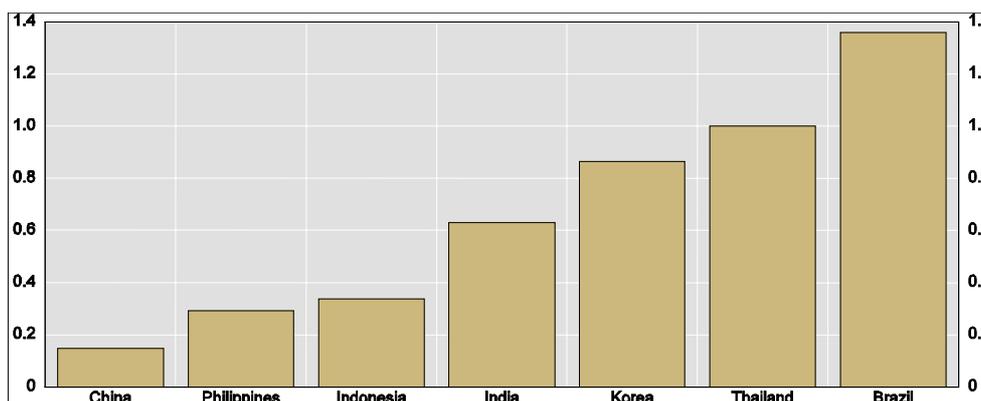
Fourth and finally, the recent pickup in foreign equity participation in the Chinese banking sector begs the question of how open its domestic banking market is and how this will affect the outlook for the banking sector. Even though the process of WTO-agreed access for foreign banks to the domestic market is proceeding apace, the shift to domestic currency lending in China by major international banks has hardly altered their China positions to date. BIS-reporting banks show that by mid-2005 only USD 13 billion of RMB claims in their local operations, compared with a RMB bank loan market of some USD 3.4 trillion. Graph 1 suggests that access by foreign banks to local RMB banking business has been quite limited relative to international cross-border USD business. Graph 2 shows that the overall share of foreign banks in China's banking market (broadly defined) has been low. In this light, the Chinese domestic banking market arguably remains one of the most closed major emerging banking markets in the world.

On the other hand, despite the official ceilings on foreign bank ownership, substantial FDI and foreign portfolio investment in domestic banks suggest that the Chinese banking sector is opening up. To date, FDI has reportedly reached some 15 per cent of the domestic banking sector's capital base. While the prevailing official ceilings on foreign bank ownership in a Chinese bank are 20 per cent for a single foreign investor and 25 per cent

for all foreign investors combined, these restrictions appear to apply only to non-listed banks. For instance, according to the author's own estimates, after the IPOs the effective foreign ownership of Bank of Communications might have exceeded 30 per cent, while that of CCB could already have reached 25.8 per cent.<sup>24</sup> This trend of increased foreign equity participation is also consistent with the China's long-held policy of welcoming FDI in its domestic economic development. This could have an important bearing on the landscape of China's banking market over the longer term. To say the least, the Chinese banking sector might not be as closed as some other measures have suggested.

**Graph 1**

**Domestic currency claims on local residents by BIS-reporting banks**



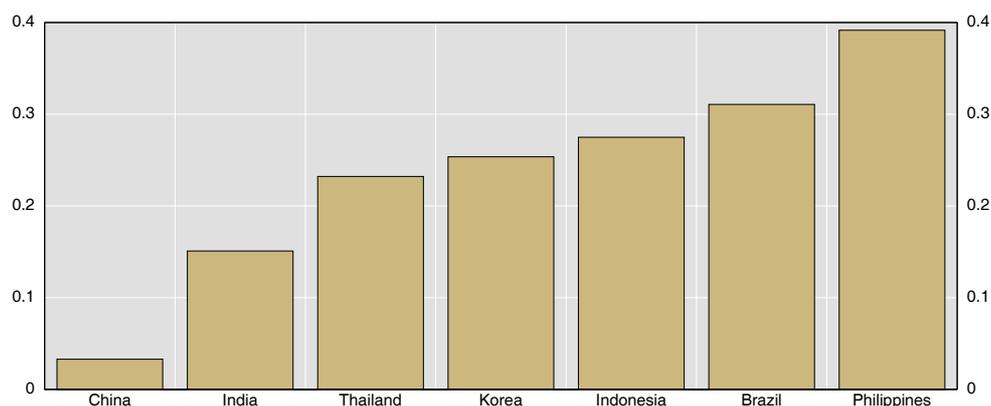
<sup>1</sup> At end-June 2005; as a ratio of international claims by BIS-reporting banks.

Source: BIS.

---

<sup>24</sup> There have been recent reports in the press that foreign equity stakes of up to 40 per cent may be entertained, if foreign investors are willing to pay large enough premiums for some technically insolvent banks. A case in point is the troubled Guangdong Development Bank with significant negative net worth.

**Graph 2**  
**Market share of BIS-reporting banks in mid-2005<sup>1</sup>**



<sup>1</sup> International plus local currency claims as a ratio of domestic bank credit, plus international claims.

Sources: IMF; BIS.

## V. CONCLUDING REMARKS

Since the late 1990s, the Chinese government has stepped up the pace of cleaning up the banking sector, confronting the sizable restructuring task that may have cost as much as 22 per cent of GDP to date. Funding arrangements have been elaborate, with bank shareholders, bank customers and taxpayers all having shared China's overall financial restructuring cost. Taxpayers have footed most of it, often with little explicit recognition of this fact in official government debt totals. A significant portion of the funding burden could have fallen on the PBC, as seigniorage has been capitalised through the rising amounts of interest-bearing PBC bills and other liabilities.

While efforts to rebuild banks' balance sheets are not a panacea for all the challenges faced by the Chinese banking sector, lingering concerns over moral hazard are no excuse to shun these very important measures. We argue, therefore, for a more transparent framework to apportion financing responsibilities among the parties concerned, since well-defined rules of loss allocation restrain moral hazard and promote both accountability and market development. The recent increased FDI in the Chinese banking sector has not only helped fund the restructuring task, but may also alter the sector's landscape over the longer term – if the Chinese manufacturing sector over the past three decades is anything to go by.

## REFERENCES

- Bank for International Settlements (1999): *Strengthening the banking system in China: issues and experiences*, *BIS Policy Papers*, no 7, October, Basel.
- China Construction Bank (2005): *Global Offering Prospectus*, October, Hong Kong.
- Crockett, Andrew (1998): "From banking crisis to solid macroeconomic growth: lessons for Japan from other industrial countries", speech at the IMF-Kobe University symposium, 14 July, Kobe.
- Dziobek, Claudia and Ceyla Pazarbasioglu (1997): "Lessons and elements of best practice", in William Alexander and others ed. *Systemic Bank Restructuring and Macroeconomic Policy*, Washington DC.
- Fukao, Mitsuhiro (1991): "Exchange rate movements and capital-asset ratios of banks: on the concept of structural position", *The Bank of Japan Monetary and Economic Studies*, Vol. 9, No. 2, September, Tokyo.
- Fukao, Mitsuhiro (2002): "Financial sector profitability and double-gearing", *NBER Working Paper* No. 9368.
- Fung, Ben, Jason George, Stefan Hohl and Guonan Ma (2004): "Public asset management companies in East Asia", *Financial Stability Institute Occasional Paper*, no 3, February, Basel.
- Gyntelberg, J, G Ma and E Remolona (2005): "Corporate bond markets in Asia", *BIS Quarterly Review*, December, pp 83-93, Basel.
- Hawkins, John and Philip Turner (1999): "Banking restructuring in practice: an overview", in *Bank restructuring in practice*, *BIS Policy Paper*, no 6, August, pp 6-105, Basel.
- Lardy, Nicholas (1998): *China's unfinished economic revolution*, Brookings Institution Press, Washington DC.
- Ma, Guonan and Ben Fung (2002): "China's asset management corporations", *BIS Working Paper*, no 115, August, Basel.
- McCauley, Robert N (2003): "Unifying government bond markets in East Asia", *BIS Quarterly Review*, December, pp 90-98, Basel.
- Mo, Y K (1999): "A review of recent banking reforms in China", in *BIS Policy Papers*, no 7, *Strengthening the banking system in China: issues and experiences*, October, pp 90-109, Basel.

Moody's Investors Service (2005a): "Bank system outlook for China: reform on track, but more needed", June 2005, Hong Kong.

Moody's Investors Service (2005b): "Reform of China's state banks: moving beyond IPOs; positive rating actions likely", November 2005, Hong Kong.

Nakaso, Hiroshi (2001): "The financial crisis in Japan during the 1990s: how the Bank of Japan responded and the lessons learnt", *BIS Papers* no 6, October, Basel.

Sheng, Andrew (1999): *Bank restructuring: lessons from the 1980s*, World Bank, Washington DC.

White, Lawrence (1991): *The S&L debacle: public policy lessons for bank and thrift regulation*, Oxford University Press, New York.

White, William (2004): "Are changes in financial structure extending safety net?", *BIS Working Paper*, no 145, January, Basel.

Zhou, Xiaochuan (2004): "Some issues concerning the reform of the state-owned commercial banks", speech at the IIF Spring Membership Conference, 16 April, Shanghai ([www.pbc.gov.cn](http://www.pbc.gov.cn)).

**APPENDIX 1**

**Estimating the cost of China's bank restructuring**

(by late 2005)

| No.          | Estimation  | Billions of RMB |
|--------------|---|-----------------|
| 1            | The RMB 270 billion of special government bonds is straightforward.   | 270             |
| 2            | A 20 per cent net cash recovery ratio of the RMB 1.4 trillion NPL transfer in 1999 should result in a loss of 80 per cent, or RMB 1.12 trillion.  | 1,200           |
| 3            | USD 60 billion foreign exchange capital injection is worth RMB 496 billion at the strike price of RMB 8.27/USD 1.   | 496             |
| 4            | The MoF wrote off its equity of RMB 320 billion in CCB and BoC, and RMB 50 billion in ICBC. A loan loss of RMB 246 is shelved under an ICBC receivable account to be funded by the MoF in instalments.                                | 616             |
| 5            | The PBC bore the RMB 400 billion loss related to the carving out of the doubtful loans at CCB, BoC and ICBC in 2004 and 2005.   | 400             |
| 6            | RMB 35 billion recapitalisation of Bank of Communications in 2004.  | 35              |
| 7            | Foreign investors took equity stakes or purchased new shares at a premium. The premium is conservatively estimated at RMB 30 billion.   | 30              |
| 8            | RMB 440 billion for RCCs and RMB 36 billion for city commercial banks.  | 500             |
| 9            | RMB 270 billion spent by bank customers over the past five years, and RMB 150 billion in pre-provision net earnings based on forbearance in 2003 and 2004. It is assumed that there is an overlap of RMB 100 billion between the two. | 350             |
| 10           | Low-yielding bank subordinated debt (assuming free lunch).  | 0               |
| <i>Total</i> |   | 4,047           |

Source: author's own estimates.

## APPENDIX 2

### **The private equity transactions involving BoC and CCB**

This appendix analyses the realised capital gains of the two recent high-profile private equity transactions in the Chinese banking sector: 1) the CCB deal between Huijin and BoA/Temasek; and 2) the BoC deal between Huijin and BoC on the one hand and RBS and three other investors on the other. The realised capital gains to Huijin in these two transactions are computed on the assumed equity structures soon after the 2003 foreign exchange capital injections into BoC and CCB by Huijin. The benchmarks for the calculation of realised capital gains accruing to Huijin are the original valuations of the initial Huijin equity investments. These estimates are likely to be the upper limits because during 2004, both BoC and CCB may have continued receiving flow injections in the form of tax credits and retained earnings into the two banks. These new injections of financial resources should be regarded as additional equity investment on top of the Huijin capital injections. On these assumptions, the realised gain to the initial Huijin investment from the two private equity deals is estimated at USD 1.2 billion, or nearly RMB 10 billion.

The initial equity structure for BoC is quite simple, but the private equity transactions are currently still pending regulatory approval. Huijin gained 100 per cent control of BoC by investing USD 22.5 billion in the bank at end-2003. The private equity transaction announced in October 2005 was that RBS and three other investors would take a total 16.84 per cent stake in the enlarged capital for a consideration of USD 5.22 billion: half old BoC shares owned by Huijin and half newly issued BoC shares. Effectively, Huijin disposed of 9.194 per cent of its old BoC shares for a price tag of USD 2.61 billion, realising a capital gain of up to USD 541 million from partial divestment, since 9.194 per cent of USD 22.5 billion would be USD 2.07 billion. This implies a 26 per cent realised return on Huijin's original investment. The other USD 2.61 billion would accrue directly to BoC from RBS and the three other investors in return for the newly issued BoC shares amounting to 8.42 per cent of the enlarged capital.

The initial CCB equity arrangement is somewhat more complicated, but the private equity deal has been finalised and executed. To keep it simple, before the private equity deal was announced in mid-2005, Huijin directly controlled 85.23 per cent of CCB for an initial investment of USD 20 billion (Huijin also has equity stakes in CCB indirectly through another vehicle; and CCB has three other minority corporate shareholders). The transaction involved the 14.1 per cent old CCB shares sold by Huijin to BoA and Temasek for a price tag of USD 3.966 billion (BoA paid a price of 1.15 times book value while Temasek paid 1.19 times book). A 14.1 per cent equity stake in CCB would be worth USD 3.306 billion at the original valuation of the Huijin investment, but sold for USD 3.966 billion, with a realised capital gain of USD 660 million, or a 20 per cent return on the initial investment through Huijin's sale of its own direct CCB stake from 85.3 per cent to 71.2 per cent.

**LIST OF WORKING PAPERS RELEASED BY CEPII<sup>25</sup>**

| <i>No</i>      | <i>Title</i>  | <i>Authors</i>                            |
|----------------|---|---|
| <b>2006-01</b> | Je t'aime, moi non plus : Bilateral Opinions and International Trade                                      | A.C. Disdier<br>& T. Mayer                |
| <b>2005-22</b> | Chômage et réformes du marché du travail au Japon   | E. Dourille-Feer                          |
| <b>2005-21</b> | Profitability of Foreign and Domestic Banks in Central and Eastern Europe: Does the Mode of Entry Matter? | O. Havrylchyk &<br>E. Jurzyk              |
| <b>2005-20</b> | ECB Governance in an Enlarged Eurozone  | A. Bénassy-Quéré &<br>E. Turkisch         |
| <b>2005-19</b> | What Are EU Trade Preferences Worth for Sub-Saharan Africa and Other Developing Countries?                | F. Candau & S. Jean                       |
| <b>2005-18</b> | Binding Overhang and Tariff-Cutting Formulas  | M.H. Bchir, S. Jean &<br>D. Laborde       |
| <b>2005-17</b> | International Trade and Income Distribution: Reconsidering the Evidence                                   | I. Bensidoun, S. Jean &<br>A. Sztulman    |
| <b>2005-16</b> | China and the Relationship between the Oil Price and the Dollar   | A. Bénassy-Quéré,<br>V. Mignon & A. Penot |
| <b>2005-15</b> | Consequences of Alternative Formulas for Agricultural Tariff Cuts   | S. Jean, D. Laborde &<br>W. Martin        |

---

<sup>25</sup> Working papers are circulated free of charge as far as stocks are available; thank you to send your request to CEPII, Sylvie Hurion, 9, rue Georges-Pitard, 75015 Paris, or by fax : (33) 01 53 68 55 04 or by e-mail [sylvie.hurion@cepii.fr](mailto:sylvie.hurion@cepii.fr). Also available on: [www.cepii.fr](http://www.cepii.fr). Working papers with \* are out of print. They can nevertheless be consulted and downloaded from this website.

<sup>25</sup> Les documents de travail sont diffusés gratuitement sur demande dans la mesure des stocks disponibles. Merci d'adresser votre demande au CEPII, Sylvie Hurion, 9, rue Georges-Pitard, 75015 Paris, ou par fax : (33) 01 53 68 55 04 ou par e-mail [sylvie.hurion@cepii.fr](mailto:sylvie.hurion@cepii.fr). Egalement disponibles sur : [www.cepii.fr](http://www.cepii.fr). Les documents de travail comportant \* sont épuisés. Ils sont toutefois consultable sur le web CEPII.

|                |   |  |
|----------------|---|--|
| <b>2005-14</b> | Is Erosion of Tariff Preferences a Serious Concern?   | A. Bouët, L. Fontagné & S. Jean                |
| <b>2005-13</b> | The Consequences of Agricultural Trade Liberalization for Developing Countries: Distinguishing Between Genuine Benefits and False Hopes | J.C. Bureau, S. Jean & A. Matthews             |
| <b>2005-12</b> | From Bound Duties to Actual Protection: Industrial Liberalisation in the Doha Round   | M.H. Bchir, L. Fontagné & S. Jean              |
| <b>2005-11</b> | Impact de l'ouverture financière sur les inégalités internes dans les pays émergents  | A. Bénassy-Quéré & V. Salins                   |
| <b>2005-10</b> | Disentangling Horizontal and Vertical Intra-Industry Trade  | L. Fontagné, M. Freudenberg & G. Gaulier       |
| <b>2005-09</b> | China's Integration in East Asia: Production Sharing, FDI & High-Tech Trade   | G. Gaulier, F. Lemoine & D. Ünal-Kesenci       |
| <b>2005-08</b> | Tax Competition and Public Input  | A. Bénassy-Quéré, N. Gobalraja & A. Trannoy    |
| <b>2005-07</b> | Trade Liberalisation, Growth and Poverty in Senegal: A Dynamic Microsimulation CGE Model Analysis                                       | N. Annabi, F. Cissé, J. Cockburn & B. Decaluwé |
| <b>2005-06</b> | Migration, Trade and Wages  | A. Hijzen & P. Wright                          |
| <b>2005-05</b> | Institutional Determinants of Foreign Investment  | A. Bénassy-Quéré, M. Coupet & T. Mayer         |
| <b>2005-04</b> | L'économie indienne : changements structurels et perspectives à long terme  | S. Chauvin & F. Lemoine                        |
| <b>2005-03</b> | Programme de travail du CEPII pour 2005   |  |
| <b>2005-02</b> | Market Access in Global and Regional Trade  | T. Mayer & S. Zignago                          |
| <b>2005-01</b> | Real Equilibrium Exchange Rate in China   | V. Coudert &                                   |

|                |  |  |
|----------------|--|--|
|                |  | C. Couharde  |
| <b>2004-22</b> | A Consistent, <i>ad-valorem</i> Equivalent Measure of Applied Protection Across the World: The MAcMap-HS6 Database   | A. Bouët, Y. Decreux, L. Fontagné, S. Jean & D. Laborde            |
| <b>2004-21</b> | IMF in Theory: Sovereign Debts, Judicialisation and Multilateralism  | J. Sgard   |
| <b>2004-20</b> | The Impact of Multilateral Liberalisation on European Regions: a CGE Assessment  | S. Jean & D. Laborde   |
| <b>2004-19</b> | La compétitivité de l'agriculture et des industries agroalimentaires dans le Mercosur et l'Union européenne dans une perspective de libéralisation commerciale | N. Mulder, A. Vialou, B. David, M. Rodriguez & M. Castilho         |
| <b>2004-18</b> | Multilateral Agricultural Trade Liberalization: The Contrasting Fortunes of Developing Countries in the Doha Round   | A. Bouët, J.C. Bureau, Y. Decreux & S. Jean                        |
| <b>2004-17</b> | UK in or UK out? A Common Cycle Analysis between the UK and the Euro Zone  | J. Garnier   |
| <b>2004-16</b> | Regionalism and the Regionalisation of International Trade   | G. Gaulier, S. Jean & D. Ünal-Kesenci                              |
| <b>2004-15</b> | The Stock-Flow Approach to the Real Exchange Rate of CEE Transition Economies  | B. Egert, A. Lahrière-Révil & K. Lommatzsch                        |
| <b>2004-14</b> | Vieillesse démographique, épargne et retraite : une analyse à l'aide d'un modèle d'équilibre général à agents hétérogènes                                      | C. Bac & J. Chateau  |
| <b>2004-13</b> | Burden Sharing and Exchange-Rate Misalignments within the Group of Twenty  | A. Bénassy-Quéré, P. Duran-Vigneron, A. Lahrière-Révil & V. Mignon |
| <b>2004-12</b> | Regulation and Wage Premia   | S. Jean & G. Nicoletti   |
| <b>2004-11</b> | The Efficiency of Fiscal Policies: a Survey of the Literature  | S. Capet   |

|                |   |   |
|----------------|---|---|
| <b>2004-10</b> | La réforme du marché du travail en Allemagne : les enseignements d'une maquette                   | S. Capet  |
| <b>2004-09</b> | Typologie et équivalence des systèmes de retraites  | P. Villa  |
| <b>2004-08</b> | South – South Trade: Geography Matters  | S. Coulibaly &<br>L. Fontagné                     |
| <b>2004-07</b> | Current Accounts Dynamics in New EU Members: Sustainability and Policy Issues                     | P. Zanghieri                                      |
| <b>2004-06</b> | Incertitude radicale et choix du modèle   | P. Villa  |
| <b>2004-05</b> | Does Exchange Rate Regime Explain Differences in Economic Results for Asian Countries?            | V. Coudert &<br>M. Dubert                         |
| <b>2004-04</b> | Trade in the Triad: How Easy is the Access to Large Markets?                                      | L. Fontagné, T. Mayer<br>& S. Zignago             |
| <b>2004-03</b> | Programme de travail du CEPII pour 2004   |   |
| <b>2004-02</b> | Technology Differences, Institutions and Economic Growth: a Conditional Conditional Convergence   | H. Boulhol  |
| <b>2004-01</b> | Croissance et régimes d'investissement  | P. Villa  |
| <b>2003-22</b> | A New Look at the Feldstein-Horioka Puzzle using a Integrated Panel                               | A. Banerjee<br>P. Zanghieri                       |
| <b>2003-21</b> | Trade Linkages and Exchange Rates in Asia :The Role of China                                      | A. Bénassy-Quéré &<br>A. Lahrière-Révil           |
| <b>2003-20</b> | Economic Implications of Trade Liberalization Under the Doha Round                                | J. Francois,<br>H. van Meijl &<br>F. van Tongeren |
| <b>2003-19</b> | Methodological Tools for SIA - Report of the CEPII Workshop held on 7-8 November 2002 in Brussels |   |
| <b>2003-18</b> | Order Flows, Delta Hedging and Exchange Rate Dynamics   | B. Rzepkowski                                     |

**CEPII**  
**DOCUMENTS DE TRAVAIL / WORKING PAPERS**

Si vous souhaitez recevoir des Documents de travail,  
merci de remplir le coupon-réponse ci-joint et de le retourner à :

*Should you wish to receive copies of the CEPII's Working papers,  
just fill the reply card and return it to:*

Sylvie HURION – Publications  
CEPII – 9, rue Georges-Pitard – 75740 Paris – Fax : (33) 1.53.68.55.04  
sylvie.hurion@cepii.fr

---

M./Mme / Mr./Mrs .....

Nom-Prénom / Name-First name .....

Titre / Title .....

Service / Department.....

Organisme / Organisation .....

Adresse / Address.....

Ville & CP / City & post code.....

Pays / Country ..... Tél.....

Your e-mail .....

Désire recevoir les **Document de travail** du CEPII n° :

*Wish to receive the **CEPII's Working Papers** No: .....*

.....

.....

.....

.....

.....

.....

.....

Souhaite être placé sur la liste de diffusion permanente (**pour les bibliothèques**)  
*Wish to be placed on the standing mailing list (**for Libraries**).*