# Explaining the High Profitability of China's Major State-Owned Banks Jie Ren

## I. Introduction

After the outbreak of the global financial crisis in 2007, China's banking sector emerged as one of few winners, with its major state-run banks posting record profits, besting their peers in the developed economies in terms of market capitalization, and even topping the Fortune 500 list. In fact, the Big Five<sup>1</sup> state-run banks were so profitable that the Chinese Prime Minister, Wen Jiabao, openly accused them of "making profits far too easily".<sup>2</sup>

The extraordinary profitability in itself, however, is not a bad thing. If it is the result of improved governance and advanced risk management due to decades of reforms in the banking sector, it may be just a reflection of the increased competitiveness and efficiency of the banks as financial intermediation. If, on the other hand, the outsized profits are due to other factors, such as "repressed" interest rate policy, significant entry barriers and unfair competition, this high profitability may have totally different meaning and policy implications. Thus it is imperative to have a clear understanding of the real source and nature of the exceptional profitability in China's banking sector.

This paper seeks to understand this phenomenon by studying the relationship between the profitability of major Chinese state-run commercial banks, especially the Big Five banks,<sup>3</sup> and various external and internal factors. Section II provides a brief overview of China's banking sector, including its historical development, main players and major reform policies. It also seeks to identify typical characteristics of the industry by comparing its recent performance to that of international peers in both developing and developed economies. In Section III, which focuses on bank performance in developing countries, I review some studies on the determinants of bank performance in Malaysia, Thailand and Tunisia. The purpose of this section is to provide some methodological background and establish the proper context on which to base and better evaluate the performance of Chinese banks. Section IV identifies the major factors that explain the high profitability of Chinese state-owned commercial banks (SOCBs) and discusses their relevance for future policymaking. Each factor is examined using both qualitative and quantitative analysis. In the last section, I summarize the major findings of my analysis

<sup>&</sup>lt;sup>1</sup> The Big Five Banks are the Bank of China (BOC), the Agriculture Bank of China (ABC), the Construction Bank of China (CBC), and the Industrial and Commercial Bank of China (ICBC), the so-called "Big Four", plus the Bank of Communication.

<sup>&</sup>lt;sup>2</sup> Barboza, D., 'Wen calls China banks too powerful', The New York Times, April 3, 2012 http://www.nytimes.com/2012/04/04/business/global/chinas-big-banks-too-powerful-premiersays.html?\_r=1

<sup>&</sup>lt;sup>3</sup> As of 2010, the Big Five banks account for 60% of total commercial banking assets (Walter and Howie 2011).

and their policy implications, and I provide policy suggestions that may lead to a more competitive and efficient banking system.

# II. The Chinese Banking System

# Historical Development

China's banking system has come a long way. Until 1978, there was only one bank, the Peoples' Bank of China (PBoC), which handled virtually all banking activities as a department of the Ministry of Finance (MOF). It suffered from numerous problems: there was virtually no professional staff in the bank, it was organized along the lines of the administrative system, interest rates were fixed, and its lending decisions were dictated by the MOF (Walter and Howie 2011).

Reform in the banking sector began with the Big Four banks being removed from the PBoC during the period from 1979 to1984. In 1983, the PBoC was designated as the central bank of China. At that time, however, the central bank did not play an important role, since the local Party committee, rather than the central government, controlled the key management of the banks. This arrangement soon led to a lending spree that resulted in inflation and corruption in 1989, which caused Beijing to abandon this Soviet banking model in favor of the American one (Walter and Howie 2011). From 1992 to 2005, under the leadership of Jiang-Zhu, the pace of financial reform in China accelerated. In 1990, two stock exchanges were set up in Shenzhen and Shanghai to facilitate the financial intermediation process, and three specialized "policy" banks were established in 1994 in an effort to reduce the commercial banks' burden with respect to financing state-directed trade and development projects (Zhang 2007).

The rapid development of the financial industry, however, caused a number of problems. The banking sector soon went through a major lending and nonperforming loans cycle as aggressive directed lending to industry led to massive nonperforming loans. The real estate investment craze in Hainan province also went out of control during the early 1990s, causing concerns about the sustainability and stability of the financial system. As a result, the Party established a broad reform agenda in 1993, recognizing the need to allow banks to operate on a commercial footing. Since then, steps have been taken to gradually implement the reform agenda. Major state-owned banks were recapitalized, bad assets were expunged and moved to Asset Management Companies (AMC), bank supervision was revamped, and foreign strategic investors were introduced (Feyzioğlu 2009).

As of 2010, there were about 3,769 financial entities in China with 196,000 outlets and nearly three million employees. Total financial assets reached \$128 trillion RMB or US \$19.4 trillion, making the Chinese financial industry one of the largest in the world.

# Pre- and Post-Crisis Performance

To measure a bank's profitability, researchers typically use two accounting metrics: return on equity (ROE) and return on asset (ROA). ROA reflects the profit earned per dollar of assets and is therefore a measure of management's ability to utilize

the bank's financial resources to generate profits. ROE, on the other hand, represents the profit earned on every dollar invested in the firm's equity (Sufian and Habibullah 2009). Compared to ROE, ROA may be a better measure of a bank's profitability, since it is not affected by the capital structure of the bank, while ROE may be subject to distortion caused by high leverage. To measure other aspects of a bank's performance, analysts also use indicators such as growth of total assets, cost income ratio and market capitalization.

Based on the standard financial indicators discussed above, Chinese banks were doing extraordinarily well in both the pre- and post-crisis periods. According to Feyzioğlu (2009), the financial crisis that originated in 2007 did not have a noticeable impact on the Chinese banking sector, with the ROA of major Chinese banking institutions reaching 1.1 percent, much higher than banks in developed countries. Although the non-performing loan (NPL) ratio was higher than that of developed countries, it was lower than that of other developing countries such as Russia and Brazil. (See Table 1)

# Table 1. Pre-Crisis Performance

| Table 1. Financial Performance of Largest Banks 1/<br>(In percent, 2007) |        |        |         |       |       |      |      |        |        |       |       |        |
|--|--------|--------|---------|-------|-------|------|------|--------|--------|-------|-------|--------|
|  | Canada | France | Germany | Italy | Japan | UK   | US   | HK SAR | Brazil | China | India | Russia |
| Return on average assets   | 1.0    | 0.3    | 0.5     | 0.7   | 0.4   | 0.6  | 0.7  | 1.6    | 2.5    | 1.1   | 1.0   | 2.2    |
| Net interest margin  | 1.8    | 0.3    | 0.8     | 2.4   | 1.0   | 1.0  | 3.0  | 2.0    | 10.7   | 3.0   | 2.7   | 4.3    |
| Capital asset ratio  | 12.1   | 9.9    | 13.1    | 9.7   | 19.0  | 11.0 | 11.2 | 12.8   | 16.0   | 13.4  | 13.5  | 27.2   |
| NPL ratio  | 0.5    | 2.6    | 3.5     | 5.3   | 1.7   | 1.7  | 0.8  | 0.5    | 8.3    | 4.2   | 3.0   | 8.8    |
| Interest earned as a share of income                                     | 72.0   | 73.8   | 79.6    | 78.6  | 42.2  | 79.0 | 76.6 | 83.5   | 55.0   | 89.7  | 78.7  | 65.0   |
| Loans/Deposits   | 57.9   | 45.3   | 45.0    | 104.4 | 52.7  | 52.7 | 78.2 | 60.8   | 64.6   | 56.1  | 69.4  | 98.5   |
| Interest expenditure as share of total                                   | 60.0   | 47.8   | 68.7    | 54.4  | 45.5  | 65.0 | 53.6 | 68.5   | 49.6   | 50.7  | 67.7  | 45.8   |
| Labor cost as share of total   | 22.1   | 14.2   | 17.2    | 25.7  | n.a.  | 21.4 | 22.5 | 13.2   | 21.3   | 15.5  | 14.2  | 17.3   |
| Overhead cost as share of total  | 17.9   | 9.6    | 14.1    | 19.9  | n.a.  | 17.7 | 25.1 | 18.4   | 32.3   | 30.0  | 18.1  | 36.9   |

1/ Covers largest five banks, except Brazil, which covers four banks, and China, which includes ICBC, CCB, BoC, and BoCOM.

Source: Feyzioğlu, 2009, p. 6

In fact, profitability strengthened even more in 2008. According to *The Banker* ranking, the Big Five state-owned banks became globally dominant in terms of their size and profitability from 2008 to 2010, and contributed one fifth of global banking profits in 2010.<sup>4</sup> Most notably, ICBC was the most profitable bank in the world for three consecutive years (See Table 2).

<sup>&</sup>lt;sup>4</sup> *The Banker*, July 2011, p. 143

Table 2. Post-Crisis Performance

|    | 2007                           | 7       |                     |    | 2008                 |         |              |  |  |  |  |  |  |
|----|--------------------------------|---------|---------------------|----|----------------------|---------|--------------|--|--|--|--|--|--|
|    | Bank                           | Country | US\$ million        |    | Bank                 | Country | US\$ millior |  |  |  |  |  |  |
| 1  | Bank of America                | USA     | 31,973              | 1  | ICBC                 | China   | 21,260       |  |  |  |  |  |  |
| 2  | Citigroup                      | USA     | 29,639              | 2  | CCB                  | China   | 17,520       |  |  |  |  |  |  |
| 3  | HSBC Holdings                  | UK      | 22,086              | 3  | Banco Santander      | Spain   | 15,825       |  |  |  |  |  |  |
| 4  | JP Morgen Chase                | USA     | 19,886              | 4  | BOC                  | China   | 12,620       |  |  |  |  |  |  |
| 5  | Royal Bank of Scotland         | UK      | 18,033              | 5  | BBVA                 | Spain   | 9,640        |  |  |  |  |  |  |
| 6  | Crédit Agricole                | France  | 14,060              | 6  | HSBC Holdings        | UK      | 9,307        |  |  |  |  |  |  |
| 7  | Barclays Bank                  | UK      | 14,009              | 7  | Barclays Bank        | UK      | 8,859        |  |  |  |  |  |  |
| 8  | BNP Paribas                    | France  | 13,921              | 8  | ABC                  | China   | 7,659        |  |  |  |  |  |  |
| 9  | Mitsubishi UFJ Financial Group | Japan   | 12,824              | 9  | UniCredit            | Italy   | 6,952        |  |  |  |  |  |  |
| 10 | Wells Fargo                    | USA     | 12,745              | 10 | Royal Bank of Canada | Canada  | 6,077        |  |  |  |  |  |  |
|    | 2009                           | )       |                     |    |                      | 2010    |              |  |  |  |  |  |  |
|    | Bank                           | Country | <b>US\$ million</b> |    | Bank                 | Country | US\$ millior |  |  |  |  |  |  |
| 1  | ICBC                           | China   | 24,494              | 1  | ICBC                 | China   | 32,528       |  |  |  |  |  |  |
| 2  | CCB                            | China   | 20,316              | 2  | CCB                  | China   | 26,448       |  |  |  |  |  |  |
| 3  | Goldman Sachs                  | USA     | 19,826              | 3  | JPMorgan Chase & Co  | USA     | 24,859       |  |  |  |  |  |  |
| 4  | Barclays                       | UK      | 18,869              | 4  | BOC                  | China   | 21,463       |  |  |  |  |  |  |
| 5  | Wells Fargo & Co               | USA     | 17,606              | 5  | HSBC Holdings        | UK      | 19,037       |  |  |  |  |  |  |
| 6  | Banco Santander                | Spain   | 16,951              | 6  | Wells Fargo & Co     | USA     | 18,700       |  |  |  |  |  |  |
| 7  | BOC                            | China   | 16,319              | 7  | ABC                  | China   | 18,230       |  |  |  |  |  |  |
| 8  | JPMorgan Chase & Co            | USA     | 16,143              | 8  | BNP Paribas          | France  | 17,406       |  |  |  |  |  |  |
| 9  | BNP Paribas                    | France  | 12,222              | 9  | Banco Santander      | Spain   | 16,079       |  |  |  |  |  |  |
|    | Itaú Unibanco Holding SA       | Brazil  | 11,521              |    | Goldman Sachs        | USA     | 12,892       |  |  |  |  |  |  |

Table 1 Global top 10 banks by pre-tax profit 2007-2010<sup>3</sup>

Source: The Banker

Source: Löchel and Li, 2011, p. 1.

Löchel and Li (2011) conduct a more comprehensive analysis, comparing the Big Five Chinese SOCBs with the twenty largest international banks according to total assets for the period 2003-2009. (See a summary of the key statistics in Table 3) They find several interesting characteristics of the large Chinese state-own banks. First, the Big Five banks, with an average ROA of 0.81% and an average ROE of 12.91%, have been consistently more profitable than their international counterparts, whose average ROA and ROE are 0.41% and 8.17%, respectively. Second, the share of bad loans in the Chinese banks (8.11%) is significantly higher than the international average of 3.01%. When the bad loans were removed to Asset Management Companies (AMC), however, the bad loan ratio decreased dramatically from 17.6% in 2003 to 1.86% in 2009. Third, corporate lending makes up the majority (81.03%) of the loan portfolios of Chinese banks, whereas their international peers have much more balanced portfolios, with only 37.6% of total loans being in the corporate sector. Fourth, the Chinese Big Five banks have an impressive cost advantage. Their average cost income ratio is about 42.29%, 40 percent lower than their international competitors. Last, these banks benefit from a high asset growth rate of 18.36%, while the average growth rate for the international banks is 9.16%.

|                                    | Size                          | Profitability |             | Lending business                 |  | Loan portfolio  |   |   | Cost control                   |   | Business<br>diversification                     | Growth                           | Capital strength    |  |                               |
|------------------------------------|-------------------------------|---------------|-------------|----------------------------------|--|---|---|---|--------------------------------|---|---|----------------------------------|---------------------|--|-------------------------------|
| Bank name                          | Total assets<br>(million USD) | ROAA<br>(%)   | ROAE<br>(%) | Net<br>interest<br>margin<br>(%) | Impaired<br>loans/<br>gross loans<br>(%) | Residential<br>mortage<br>loans/<br>gross loans<br>(%)  | Other<br>customer<br>retail<br>loans/<br>gross loans<br>(%) | Corporate<br>and<br>commercia<br>l loans/<br>gross loans<br>(%) | Cost<br>income<br>ratio<br>(%) | Personnel<br>expenses/<br>total assets<br>(%) | Non-interest<br>income/<br>gross revenue<br>(%) | Growth of<br>total assets<br>(%) | Tier 1 ratio<br>(%) | Total<br>regulatory<br>capital<br>ratio<br>(%) | Equity/<br>total asset<br>(%) |
| 'Big five" Chinese banks           |                               |               |             | and a                            |  |   |   | 53-52 (S-1  |                                |   | 111770201                                       | 10000000                         |                     |  |                               |
| ICBC                               | 1,037,671                     | 0.85          | 4.51        | 2.70                             | 8.63                                     | 14.45   | 3.75  | 81.80   | 36.59                          | 0.50  | 11.93   | 17.32                            | 9.47                | 11.35  | 0.89                          |
| 2 CCB                              | 798,040                       | 1.11          | 29.08       | 3.00                             | 3.09                                     | 15.98   | 5.42  | 78.60   | 38.40                          | 0.62  | 11.99   | 19.07                            | 9.34                | 11.43  | 5.87                          |
| 3 ABC                              | 748,382                       | 0.39          | -0.81       | 2.23                             | 19.64                                    | 10.31   | 5.75  | 83.93   | 53.61                          | 0.68  | 19.71   | 17.33                            | 7.85                | 9.75   | 0.50                          |
| 4 BOC                              | 769,076                       | 0.91          | 14.28       | 2.39                             | 5.43                                     | 19.06   | 5.10  | 75.84   | 40.58                          | 0.54  | 20.00   | 14.00                            | 9.29                | 11.29  | 6.43                          |
| 5 BoCom                            | 258,870                       | 0.78          | 17.49       | 2.71                             | 3.77                                     | 9.92  | 5.10  | 84.98   | 42.27                          | 0.42  | 12.29   | 24.07                            | 8.36                | 11.29  | 4.91                          |
| Average                            | 722,408                       | 0.81          | 12.91       | 2.61                             | 8.11                                     | 13.94   | 5.03  | 81.03   | 42.29                          | 0.55  | 15.18   | 18.36                            | 8.86                | 11.02  | 3.72                          |
| International peers                |                               |               |             |                                  |  | The second se |   | 2010/02/04/1  | 10000100                       |   | 1990-1991                                       |                                  |                     |  |                               |
| Deutsche Bank                      | 2,532,690                     | 0.22          | 10.25       | 0.63                             | 1.75                                     | 21.49   | n.a.  | 21.41   | 89.48                          | 0.67  | 48.75   | 1.67                             | 9.95                | 12.55  | 2.03                          |
| 2 BNP Paribas                      | 2,345,667                     | 0.42          | 11.77       | 0.85                             | 4.37                                     | n.a.  | n.a.  | n.a.  | 62.68                          | 0.64  | 55.86   | 13.43                            | 8.04                | 11.36  | 3.02                          |
| 3 Barclays                         | 2,102,636                     | 0.48          | 18.32       | 0.88                             | 2.68                                     | n.a.  | 47.70   | n.a.  | 60.39                          | 0.67  | 55.08   | 18.90                            | 8.48                | 12.55  | 2.78                          |
| 4 Royal Bank of Scotland           | 1,867,245                     | 0.43          | 7.43        | 1.26                             | 2.22                                     | n.a.  | n.a.  | n.a.  | 65.00                          | 0.61  | 45.20   | 23.10                            | 9.07                | 14.10  | 4.37                          |
| s Société Générale                 | 1,377,227                     | 0.35          | 10.30       | 0.67                             | 4.26                                     | 22.49   | 20.81   | 35.30   | 67.77                          | 0.83  | 70.54   | 5.20                             | 8.22                | 11.10  | 3.08                          |
| 5 ING Bank                         | 1,267,358                     | 0.29          | 11.03       | 1.18                             | 1.54                                     | 52.16   | 4.29  | 37.91   | 65.84                          | 0.57  | 27.96   | 1.93                             | 7.86                | 10.98  | 2.72                          |
| 7 UniCredit                        | 1,262,059                     | 0.50          | 9.08        | 1.66                             | 6.52                                     | n.a.  | п.а.  | n.a.  | 61.54                          | 0.86  | 39.12   | 3.96                             | 7.18                | 10.74  | 5.74                          |
| 8 Banco Santander                  | 1,227,051                     | 0.91          | 15.24       | 1.88                             | 1.62                                     | n.a.  | 56.21   | 26.43   | 48.93                          | 0.70  | 41.33   | 11.04                            | 8.18                | 12.92  | 5.52                          |
| Bank of America                    | 1,131,085                     | 1.11          | 12.87       | 2.91                             | 1.43                                     | n.a.  | 8.89  | 19.85   | 54.45                          | 1.13  | 44.12   | 15.19                            | 8.77                | 11.38  | 9.01                          |
| 10 RBS Holdings (former ABN AMRO)  | 1,073,879                     | 0.20          | 8.66        | 0.83                             | 1.85                                     | 0.71  | 35.49   | 41.88   | 97.06                          | 0.80  | 111.13  | -5.50                            | 11.80               | 14.95  | 2.87                          |
| 11 HSBC Bank                       | 984,563                       | 0.63          | 13.68       | 1.13                             | 1.65                                     | 41.35   | 13.58   | 48.10   | 59.95                          | 0.79  | 57.42   | 23.46                            | 7.88                | 11.60  | 4.23                          |
| 12 Bank of Scotland                | 954,861                       | -0.28         | -11.71      | 1.18                             | 4.80                                     | 52.85   | 4.37  | 41.48   | 49.85                          | 0.35  | 31.06   | 16.18                            | 6.62                | 10.82  | 2.82                          |
| 13 Citibank                        | 949,554                       | 0.73          | 9.20        | 3.45                             | 2.34                                     | n.a.  | 27.12   | 24.27   | 64.81                          | 1.29  | 35.00   | 13.93                            | 9.38                | 13.37  | 7.96                          |
| 14 Credit Agricole                 | 846,972                       | 0.09          | 2.15        | -0.05                            | 2.36                                     | n.a.  | n.a.  | n.a.  | 109.29                         | 0.38  | 101.82  | 12.42                            | 9.22                | 10.48  | 1.87                          |
| 15 BNP Paribas Fortis-Fortis Bank  | 843,574                       | -0.36         | -6.77       | 0.89                             | 2.68                                     | 25.08   | 3.49  | 41.62   | 80.98                          | 0.54  | 39.28   | -14.73                           | 9.40                | 13.88  | 3.22                          |
| 16 Intesa Sanpaolo                 | 803,770                       | 0.77          | 8.31        | 2.16                             | 5.60                                     | n.a.  | n.a.  | 71.79   | 62.82                          | 1.03  | 34.78   | 4.10                             | 7.33                | 10.33  | 9.04                          |
| 17 Commerzbank                     | 768,572                       | -0.02         | -0.35       | 0.79                             | 4.61                                     | 17.86   | n.a.  | n.a.  | 79.51                          | 0.54  | 44.83   | 11.57                            | 8.14                | 12.67  | 2.36                          |
| 18 Lloyds TSB Bank                 | 673,396                       | 0.55          | 12.51       | 1.79                             | 3.57                                     | 48.50   | 13.83   | 34.92   | 61.27                          | 0.80  | 44.25   | 15.36                            | 9.25                | 11.55  | 3.37                          |
| 19 Natixis                         | 661,328                       | 0.06          | 1.04        | 0.43                             | 2.36                                     | n.a.  | n.a.  | n.a.  | 106.54                         | 0.56  | 43.06   | 1.48                             | 8.72                | 10.84  | 3.48                          |
| 20 Banco Bilbao Vizcaya Argentaria | 619,262                       | 1.10          | 20.41       | 2.37                             | 1.93                                     | n.a.  | 38.80   | 44.93   | 46.65                          | 0.91  | 41.20   | 10.52                            | 7.88                | 12.17  | 5.00                          |
| Average                            | 1.214,637                     | 0.41          | 8.17        | 1.34                             | 3.01                                     | 31.39   | 22.88   | 37.68   | 69.74                          | 0.73  | 50.59   | 9.16                             | 8.57                | 12.02  | 4.22                          |

# Table 3. Comparison of the Big Five SOCBs and International Peer Banks

Key financial indicators of ton twenty banks (average value from 2003 to 2009)

Source: Bankscope

Table 3

Source: Löchel and Li, 2011, p. 15

# **III. Banking Performance in Developing Countries**

An extensive amount of literature examines the performance of the banking sector in the developed countries, but few studies have looked at the determinants of bank performance in developing economies. This section reviews briefly some of these studies in order to provide some background information on banking reform experiences and to show how bank performance was evaluated in other emerging markets. Guru, Staunton, and Balashanmugam (2002) investigate the determinants of bank profitability in Malaysia by focusing on a sample of 17 commercial banks during the period of 1986-1995. They divide the potential determinants into two categories, namely internal factors, such as liquidity and expense management, and external factors, such as ownership and firm size. They find that expense control contributes the most to high bank profitability, while a high interest ratio was associated with low bank profitability.

Chantapong (2005) studies the performance of domestic and foreign banks in Thailand from 1995 to 2000. The results indicate that foreign bank profitability is higher than the average profitability of domestic banks, although the gap between foreign and domestic

bank profitability has closed in the post-crisis period, suggesting that the financial restructuring program has yielded some positive results.

Ben Naceur and Goaied (2008) examine the impact of bank characteristics, financial structure, and macroeconomic conditions on Tunisian banks' net interest margin and profitability during the period from 1980 to 2000. They find that banks with a relatively large amount of capital and higher overhead expenses tend to enjoy a higher level of net interest margin and profitability, while a bank's size is negatively related to its profitability. They also find that stock market development has a positive impact on banks' profitability during the period under study. In addition, their findings suggest that private banks are relatively more profitable than their state-owned counterparts.

# **IV. Explaining High Profitability of Chinese State-Owned Banks**

As discussed above, China's banking sector, especially the Big Five state-run banks, has been highly profitable despite considerable inefficiency within the banking system. Understanding the sources of such high profitability is crucial, since their characteristics have significant implications for the direction of future banking reform policies. The unusually large profits enjoyed by Chinese banks can be explained by a set of distinct but inherently coherent factors: financial repression, market structure, and personnel costs advantage. Each of these factors will be discussed in detail this section.

# Financial Repression

Financial repression is a term first used by McKinnon (1973) to refer to a set of policies typically used in developing countries that regulate interest rates, set high reserve requirements on bank deposits and direct the allocation of resources in the economy. A more precise definition is given in Reinhart (2012, 38):

Financial repression includes directed lending to the government by captive domestic audiences (such as pension funds or domestic banks), explicit or implicit caps on interest rates, regulation of cross-border capital movements, and (generally) a tighter connection between government and banks, either explicitly through public ownership of some of the banks or through heavy 'moral suasion'. ...Financial repression is also sometimes associated with relatively high reserve requirements (or liquidity requirements), securities transaction taxes, prohibition of gold purchases (as in the United States from 1933 to 1974), or the placement of significant amounts of government debt that is nonmarketable. A large presence of state-owned or state intervened banks is also common in financially "repressed" economies.

China's financial policies fit this description well. For example, the deposit and lending rates in China are partially controlled by the central bank: PBoC currently sets a mandatory depositing rate cap of 3.5% and a lending rate floor of 6.56%, essentially guaranteeing a net interest margin of 3.06% for the banks, which is significantly higher than G7 countries (Löchel and Li 2011). As Lardy (2008) points out, very low deposit rates and lending rates have resulted in an implicit tax on net lenders. Since households are major net savers in China, the redistribution has been, to some extent, from

households to corporations, but even more, to the state. According to his study, one of the most significant gains for the state has been that the cost of sterilization has been kept relatively low, thus allowing for a significantly undervalued RMB during most of the past decade.

Löchel and Li (2011) also reach the conclusion that the Big Five Chinese banks' outperformance of their international counterparts in asset return is caused, to a large extent, by the high interest rate margin realized "in the current environment of guaranteed margin system and isolation from the competition on the international financial markets due to foreign capital control" (Löchel and Li 2011, 20). One may argue that the "windfall" profits in the banking sector are the indirect consequence of the government's deliberate intention to keep RMB undervalued. On the other hand, evidence suggests that there has been gradual interest rate liberalization since 1996. For instance, the interbank lending rates and interbank repo rates were liberalized in 1997, and deposit rates were partially relaxed for large amounts of local currency in 2000 (Löchel and Li 2011). In addition, the Shanghai Interbank Offered Rate (Shibor) was set up in 2007, a notable step towards a market-oriented interest rate system.

The interest rate reform is closely related to the loosening of foreign capital control in China. As the external pressure for a higher valuation of RMB grows and the Chinese economy gradually adjusts its structural imbalances, capital account controls may eventually be eliminated, offering greater room for further interest rate liberalization. This, however, may not be good news for the large banks, since the current protective environment does not provide them with enough incentives to develop internal competitive advantages. If the interest rate were to be liberalized, they may find themselves unable to compete with other foreign or joint stock commercial banks.

# Market Structure

By simulating a stressed scenario in which the Big Five's average margin is reduced from 2.62% to the international level of 1.24%, Löchel and Li (2011) find that their ROA would decrease from 0.81% to 0.41%, but still be on the same level as the international peers, suggesting that high margin advantage is not the sole source of the high profitability of the Big Five Banks. Another factor may be the market structure of the banking industry, which has become increasingly complex over the years.

The structure of the banking industry can be analyzed using a number of different techniques. As Table 3 shows, state-run banks in China still constitute the dominant force in the banking system by owning more than half of total assets. A more sophisticated approach is to look at the Herfindahl-Hirschman Index (HHI), which sums the squares of the market shares of the firms in the market, ranging from 0 to 1, and thus serves as a measure of the level of market concentration Feyzioğlu (2009). From international experience, an index above 0.18 suggests that the market is highly concentrated. According to Feyzioğlu's study, the adjusted HHI for China's banking industry, which includes banks that compete in similar markets such as state-owned commercial banks and joint stock commercial banks, is 0.11, indicating a fairly high concentration level.

In addition, there has been no entry or exit among the large or medium size banks in the 1999-2009 period. Moreover, despite the introduction of foreign banks decades ago, their share of the market has remained around 2%, reflecting a difficulty in expanding their presence in China. The existence of significant entry barriers to the banking industry is obvious. In fact, Walter and Howie (2011) argue that the level of market concentration is much higher than the HHI index suggests. According to them, despite the different names, locations and categorizations of Chinese banks, most of them have significant state ownership, and all Chinese banks are used basically as utilities providing unlimited capital to state-owned enterprises, or rather Party-owned enterprises, for the purpose of improving and strengthening "the economy inside the system ( tizhinei jingji 体制内经济)", which they believe has been the goal of "every reform effort undertaken by the Party since 1978" (Walter and Howie 2011, 8). This commonality among the banks creates incentive for them to maintain the status quo and compete against non-state-owned entrants as a group, rather than against each other for a greater share of the profits.

### **Table 4. Banking System Overview**

|                              | Assets | Loans | Deposits |
|------------------------------|--------|-------|----------|
| State commercial banks       | 48.4   | 43.2  | 53.3     |
| Joint stock commercial banks | 18.4   | 19.4  | 17.5     |
| Policy banks                 | 9.0    | 15.6  | 0.9      |
| City commercial banks        | 6.5    | 7.0   | 7.5      |
| Urban credit cooperatives    | 0.1    | 0.1   | 0.2      |
| Rural credit cooperatives    | 7.8    | 6.0   | 9.7      |
| Foreign banks                | 2.1    | 2.5   | 0.9      |
| Finance companies            | 1.5    | 1.9   | 1.7      |
| Postal saving bank           | 3.4    | 1.4   | 4.9      |

#### Table 6. The Banking System, 2008 (In percent of total)

Source: Monetary survey.

Source: Feyzioğlu, 2009, p. 22

Several studies provide further evidence of the lack of competition and efficiency among China's state-run banks. Berger, Hasan and Zhou (2007) analyze the efficiency of Chinese banks over 1994–2003, and find that state-owned banks such as the Big Five are by far the least efficient, foreign banks are most efficient, and minority foreign ownership is associated with significantly improved efficiency. Fu and Heffernan (2007) investigate the relationship between market structure and performance in China's banking system from 1985 to 2002, a period when this sector was subject to gradual but notable reform, and suggest that, on average, most banks were operating below scale efficient levels and

that the reforms had little impact on the structure of China's banking sector, while the "joint stock" banks became relatively more efficient. In addition, after studying the Big Four state commercial banks during the period 1994–2001 in China, Ho (2012) finds no clear evidence that the pricing of banking services has become more competitive after the reform.

It seems clear that lowering the entry barrier and opening up the banking industry to private and foreign capital can increase the level of competition, the efficiency of banks in allocating scarce financial resources, and the general level of innovation and profitability among banks. However, this would certainly hurt the vested interests built around major state-owned banks, whose power cannot be underestimated. For instance, although Wen repeatedly and openly has called for bank reform, no meaningful action has been taken so far.<sup>5</sup>

# Personnel Cost Advantage

To understand the high profitability of Chinese banks, Löchel and Li (2011) compare the financial data of Chinese banks with a large sample of international peers from Asian, Europe and North America for the period of 2003-2009, and find that Chinese banks are very good at controlling costs. According to their study, despite low efficiency, the top Chinese banks enjoy a cost income ratio of 42.29%, which is 40% lower than the international average, and a personnel expense to total assets ratio of 0.55%, 30% lower compared to 0.73% for the international peer banks. For instance, as of 2010, the largest Chinese bank, ICBC, had 397,339 employees with total personnel expenses of US \$10,515 million, compared to Deutsche Bank with 102,062 employees costing US \$16,931 million; the average wage at Deutsche Bank is thus more than six times that of ICBC (Löchel and Sottocornola 2011). The favorable lower labour cost, however, is not the result of better operational efficiency, as is evident in Feyzioğlu (2009) and Fu and Heffernan (2007).

Löchel and Li (2011) further demonstrate the importance of lower labour cost to the profitability of Chinese banks by testing the Big Five banks' profitability in a stressed scenario Their analysis shows that, assuming a net interest margin of international average level, an increase of personnel costs ratio by 30% would reduce the banks' asset return dramatically from 0.81% to 0.34%, which is far below the international peer average of 0.41%. Given that China's population is ageing rapidly and that its government aims to increases both minimum and average wages significantly in the next five to ten years, the assumption of a 30% increase in labour costs is not unreasonable. The results of the study, consequently, cast doubt on the sustainability of the high profitability of SOCBs in the long term.

<sup>&</sup>lt;sup>5</sup>Barboza, D. 'Wen calls China banks too powerful', The New York Times, April 3, 2012 <<u>http://www.nytimes.com/2012/04/04/business/global/chinas-big-banks-too-powerful-premier-says.html?\_r=1></u>

# V. Conclusion

After three decades of banking reforms, the Chinese state-run banks have become the dominant financial force in one of the world's largest economies. They have also become much more efficient and profitable than before. Their high profitability however, is rooted in guaranteed high net interest margin, lower personnel cost advantage and a oligopolistic market structure with strong protective restrictions – factors determined externally by government policy and the so called "demographic dividend".

As indicated in the 12th Five Year Plan, gradual interest rate liberalization is likely to continue and the average wage is expected to double in the next ten years. In addition, the rapidly ageing population in China may cause a labour shortage in the not-so-distant future and further increase the labour costs for the banks. Given these challenges, whether the major SOCBs can sustain their current level of profitability remains questionable, since the current regulatory environment creates little incentive for them to improve their efficiency and competitiveness. Moreover, the inherently political nature of the state-owned banks may also prevent them from becoming truly market-oriented public companies.

To help improve the financial intermediation of the current banking system, policy makers can consider lifting the ceiling on deposit rates. Doing this could facilitate the movement of deposits from large to smaller banks, which are more efficient at utilizing these deposits. It might also help lower the level of market concentration and encourage competition among the banks. Unless the large banks develop their own internal competitive advantages, the high profitability they enjoy now is not likely to last in the long run.

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