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Li-Gang LIU
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Li-Gang Liu*

Former Senior Fellow
Research Institute of Economy, Trade and Industry (RIETI)

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Abstract

This paper shows that financial services trade liberalization in China has set impetus for accelerated domestic financial liberalization. Foreign banks, though still relatively small in size, have already exerted considerable influence on China's capital flows. Empirical findings from a gravity model analysis indicate that financial services trade liberalization under the WTO promotes bank loans to developing economies strongly though not evenly conditional on country characteristics.

Keywords: Financial services trade liberalization, capital flows, financial and capital account liberalization, gravity model

JEL Classification Number: F13, F34, and O16

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I. Introduction

China is undertaking a set of simultaneous, though gradual, domestic financial and capital account liberalization. At the same time, its financial sector is also experiencing increased foreign competition as the country has already started to allow considerable foreign participation in its domestic financial sector. 2007 will be a watershed year as China will have to fully implement its WTO commitments on financial services trade liberalization.

While foreign banks in emerging markets promote efficiency through enhanced competition and transfer of skills (Claessens, *et al* … 2001, Committee on the Global Financial System (CGFS), 2004), they also pose challenges to policy makers in areas of managing liberalization pace, upgrading supervision skills, and conducting monetary policy. Empirical findings suggest that with more countries embarking upon financial liberalization, the risk of financial crises has also increased. It was observed that since the 1980s, over two-thirds of IMF member countries have experienced significant problems in the banking sector (Lindgren, et. al…1996). Studies on the relationship between financial liberalization and banking crisis also indicate that financial liberalization raises the probability of a banking crisis (Demirguc-Kunt & Detragiache, 1998). Moreover, in emerging market economies, a banking crisis is usually associated with a balance of payment crisis when the country's capital account is open (Kaminsky & Reinhart, 2000).

Because financial services trade liberalization often involves capital flows, foreign participation will certainly complicate the ongoing process of domestic financial and capital account liberalization in emerging market economies. It is hypothesized that foreign bank participation would accelerate both domestic financial and capital account liberalization and in particular, it would make a host country's capital control regime progressively more ineffective, thus leading to *de facto* capital account liberalization. Without necessary modifications regarding their exchange rate regimes and the ways they conduct monetary policies, emerging market economies may experience inherent policy inconsistencies that could eventually lead to capital account crises.

This paper intends to examine these issues raised above in two segments: First, it examines the impact of foreign bank presence on China's rapidly evolving domestic and external financial liberalization. Using China as a case study, the paper intends to shed light on whether foreign participation helps accelerate China's domestic financial and capital account liberalization. The paper then examines the impact of the WTO financial services trade liberalization commitments and especially the banking sector commitments on bank loans to developing economies. Specifically, the empirical study of this section hopes to shed light on whether financial services trade liberalization helps promote bank loans to developing economies.

The paper proceeds as follows: Section II provides an updated review on the General Agreement of Trade in Services with a focus on the financial services.

Section III examines whether foreign bank presence in China helps accelerate domestic financial and capital account liberalization. Section IV presents some empirical findings on whether the financial services trade liberalization commitments promote bank loans to emerging market economies. Section V discusses implications for policy.

II. Financial Services Trade Liberalization under the GATS

II. 1: GATS Rules: An updated review

Financial services trade liberalization negotiations (FSTLN), under the General Agreement on Trade and Services (GATS), aims at reducing or even totally removing all trade barriers in financial services sector by allowing foreign financial firms in insurance, banking, securities industry and other related financial services sectors to enter a host country and enjoy national treatment. The GATS, launched in the Uruguay Round in 1986, was not able to reach any agreement until April 1994, several months after the conclusion of the Uruguay Round at the end of 1993 (Kono, et al …, 1997). Negotiations on financial services agreements were also extended far beyond the Uruguay Round and finally reached agreement in 1997. In the current and new Doha round of WTO negotiations, financial services and other services will be a "built-in" agenda, thus having the benefit of renewed emphasis (Key, 2003).

FSTLN specifies general commitments, specific exemptions, and modes of supply of services. These commitments governing modes of financial services supplied and they can differ from country to country and can be phased in over time depending on the initial agreements. However, the general commitments of GATS also apply to FSTLN have the following features (Kono, et al …, 1997): [1]

- Most favored nation (MFN): All liberalization measures must be extended to all WTO members equally.
- Market access and national treatment: WTO member countries can not discriminate between domestic and foreign firms, except when explicitly indicated at the time of joining the GATS.
- Transparency: Local regulations should be published and made accessible to all.
- Progressive liberalization: Member states agree to increase the number of liberalized sectors and to eliminate exceptions within sectors by committing to future negotiating rounds.
- Dispute settlement mechanism: All commitments are legally binding. Harmed states can initiate an arbitration procedure. If found harmed, the country can impose sanctions against the violating country.

[1] If international contestability of markets is based on three pillars: 1) National treatment and market access; 2) Domestic structural reform, and 3) Freedom of capital flows, the current FSTL under the GATS only deals with the first issue, national treatment and market access. The second issue will be a central topic of the Doha round. The third issue is a concern of the IMF and not a trade liberalization issue (Key 2003).

However, FSTLN also has some important exemptions:

- Exemption for government services: Activities of the central banks or other government authorities carrying out monetary and exchange rate policies are excluded from GATS.
- Prudential carve-out: It is exempted from GATS and is designed to ensure that host country governments can protect their domestic financial system and participants of the financial system through the application of the host country prudential standards. These prudential measures in principle do not have to comply with the national treatment, market access commitments and its most favored nation responsibility (Key, 2003). However, the prudential carve-out is not meant to be an overriding exception to a member's obligations, as prudential measures should not be used to avoid a member's obligation or commitments.
- Some non-prudential related government regulations (for example, practices related to industrial policy to provide credit to certain industries) are also exempted from the commitments of the GATS unless such policies violate the general commitments as specified above (Kono, et al …, 1997).

Similar to other types of services, FSTLN also covers four modes of supply: cross-border, consumption abroad, commercial presence, and movements of natural persons.

- Mode 1 or cross-border supply: If a consumer in country A and a supplier in country B, the service crosses the border to meet the need of the consumer in Country A (e.g., A Japanese bank in Tokyo lends to a Chinese firm in Shanghai). Depending on the nature of transactions, this mode of supply in financial services will often involve not only financial services but also capital flows (Table 1).
- Mode 2 or consumption abroad: It refers to a scenario that a consumer in Country A will have to travel to Country B where the service supplier is located in order to conduct a transaction (e.g., A Japanese company opens a bank account with a bank in China (a Japanese, other foreign, or even a domestic Chinese bank) for transactions occurring in China).
- Mode 3 or commercial presence: It refers to a service in country A provided by a supplier in country B took place at a permanent place of business located in country A (e.g., A Japanese bank lends firms in China through its branch in China) (Table 2).
- Mode 4 or movement of natural persons: It refers to a service in country A is provided by country B with personnel imported from country B (e.g., A branch of a Japanese bank draws its management from its headquarters in Tokyo).

As discussed above, measures undertaken for prudential purposes are exempted from the basic rules. Because there is no necessity test of validity, such "carve-outs" could be potentially used as restrictions or barriers for foreign entry. In addition, only a sovereign, not a private bank, can bring complains to the WTO dispute panel (Key, 2003).

Although financial services often involve capital flows, the FSTLN under GATS does not have any authority to override the measures of capital controls in a host economy. Under capital controls, a cross-border financial service trade may occur but not necessarily the capital flows associated with the service. This is because FSTLN under GATS has to be consistent with the current account transactions of the IMF Articles of Agreement. It does not, however, cover capital account transactions. In principle, countries that have signed on the GATS in financial services can continue to engage their capital control measures and practices.

Table 3 uses the banking business as an example to highlight the areas in which foreign bank entry not only brings financial services trade but also cross-border capital flows. Out of 17 categories of banking business in Mode 1, only three types of banking business can take place without involving capital flows (financial leasing, provision of financial information, and financial advisory). Only in Mode 3 (Commercial Presence), most financial services trade can occur so long as foreign capitals are not involved.

Despite these perceived limitations, FSTLN under GATS is an important step forward in liberalizing the financial service trade worldwide as it provides national treatment to foreign financial firms, promotes transparency of financial regulations, and promises further liberalization in financial services. Similar to foreign direct investment in manufacturing sectors, the impact of foreign participation in a host country may be much larger than one can contemplate based only on the existing WTO rules and regulations.

III. China's WTO Financial Services Commitments and their Implications

China signed the GATS upon its WTO accession at the end of 2001. Although there is a phasing-out period of five years with respect to business scope (local currency vs. foreign exchange banking business), customers (resident vs. nonresident, consumer vs. firms), and geographic location (Appendix I), its overall commitment is relatively liberal compared with countries in East Asia and most of the developing economies (Figure 1). Even before its WTO commitments, foreign banks have already been allowed to operate in certain geographic areas with progressively liberalized scope of banking businesses (Table 4). However, the opening was relatively modest because such liberalizations were only unilateral and based on the country's own economic needs, which may be quite different from the multilateral and rule-based financial services trade liberalization under the GATS that are anticipated, transparent, and extended to all members of the WTO.

III.1: Foreign Bank Presence in China

Size, entry form and location: By all measures, foreign banks at present have a relatively small presence in China. Their total asset size is only 1.4 percent of the national banking asset (Table 5)[2] and their primary form of entry is through branches (Table 6). There are 162 foreign bank branches by the end of June 2004, whereas there are only 14 foreign subsidiaries. In terms of asset size, subsidiary is only 6 percent of the total foreign assets in China (Table 7). With respect to geographic locations, foreign banks are predominantly located in two coast cities: Shanghai and Shenzhen (Figure 2).

Motivation of Entry and Customers: The motivation for foreign banks to enter the Chinese market is no different from the experiences of other countries: Foreign banks follow their customers' FDI activities (Nigh, Cho, and Krishman, 1986).[3] Figure 3 shows that foreign banks' assets by country or region in China correspond closely to their respective country's or region's FDI presence in China. The correlation coefficient is quite high at 0.8. As foreign banks follow their firms, it is not surprising that they have mainly lent to their manufacturing FDI firms (Table 8).

Funding sources: Over 60 percent of foreign bank loans are made in US dollars (Table 8). The RMB loans, supported by the increase RMB deposits, have grown rapidly in recent years. Despite such growth, foreign banks' RMB loans are mainly hampered by the restriction that they are only allowed to do RMB business in some restricted geographic areas with foreign affiliated firms and only recently with Chinese firms.[4] In the past, foreign banks mainly depended on the inter-bank market for their RMB loans. But once the restrictions on doing RMB businesses with firms are removed, their RMB loans have been largely supported by their RMB deposits from firms. Foreign banks are less and less dependent on the inter-bank market for RMB loans (Figure 4).

Other than the inter-bank market, loans of foreign banks not covered by deposits will have to be supported by borrowings either from their headquarters. Owing to limited deposit base and the restrictions to borrow from the inter-bank market prior to 1998, foreign bank loans until 2000 relied almost entirely on funds from their head offices. Indeed, once they are able to access the inter-bank markets in China, funds borrowed from headquarters until June 2003 merely meet the needs of loans. It also appears that net borrowing from head offices follows rather closely with the expectations of the RMB exchange rate. Because of the expectation of a RMB depreciation during the 1997-98 Asian financial crises, the net borrowing of foreign

[2] This should be interpreted in relative terms as Chinese banks have increased their lending rapidly in recent years in an attempt to reduce the non-performing loan ratio in spite of foreign banks' increased presence in China.

[3] However, a recent paper by Seth et al. (1998) showed that these patterns are not necessarily valid for Japanese and European banks in the US market.

[4] Foreign banks are allowed to engage in the RMB business with both foreign entities and Chinese firms in 18 cities. There are still restrictions for them to deal with Chinese deposits. However, such restrictions will be removed by the end of 2006.

banks from their head offices declined rapidly from over $22 billion in 1997 to merely $6 billion in 2002. However, since the end of 2002 the borrowing from headquarters has increased considerably, exceeding the need of loans extended, largely reflecting the reverse of the expectation on RMB's valuation. Direct borrowing from head offices is one of the most important channels that foreign banks can affect China's cross-border capital flows.[5]

III. 2: Impact of Foreign Bank Presence on China's Domestic Financial Liberalization

Despite their relative small size, the impact of foreign banks has already been felt in terms of helping accelerate domestic financial liberalization and reform. Domestic financial liberalization includes a) interest rate liberalization through elimination of interest rate and price controls; b) removal of entry barriers through admission of new entrants both domestic and foreign based on transparent regulatory requirements; c) removal of barriers on the scopes of financial business; d) reduction of sector barriers to allow financial industry to compete each other's traditional scope of business; and e) less state involvement through privatization of state-owned financial intermediaries and reduction of direct lending (Capiro, Honohan, and Stiglitz, 2001).

1) The impact of foreign banks on China's interest rate liberalization: China's interest rate liberalization essentially follows a standard textbook sequencing approach: Short-term rates are liberalized before long-term rates, lending rates before the borrowing rates, and lending and deposit rates of foreign currency before that of domestic currency. At this moment, inter-bank rates and government bond rates are fully determined by markets (Figure 5). On January 1 2004, bank lending rates were allowed to fluctuate between 10 percent below and 170 percent above the base one-year lending rate set by the Central Bank. After October 29th 2004, the limit on the upper bound of lending rate has been abolished. Although deposit rates are not yet fully liberalized, the deposit rates of large deposits can be negotiated between depositors and banks. The rationale of such a sequencing strategy appears to aim at protecting the franchise value of banks so as to avoid excessive competition for deposits among banks.

Foreign banks, because of their small RMB deposit base, have always been active participants[6] of the inter-bank markets since 1998 and their participation has acted to help unify the national inter-bank market by breaking barriers of regional segmentation. One concrete case was in the early days of foreign entry in the inter-bank RMB market. Shanghai and Shenzhen are two major inter-bank market centers. To prevent excessive competition for businesses of foreign banks, the Bankers Association in Shenzhen reached an agreement that the RMB loan rates to foreign

[5] Realizing this tendency, the State Administration of Foreign Exchange (SAFE) issued a new regulation in June 2004 by restricting total amount of foreign banks' short-term borrowing to a quota that is no more than 5 times of operating capital of a foreign bank branch or subsidiary.
[6] Foreign banks' net borrowing from the inter-bank market is about 8.2 percent of the inter-bank trading volume at the end of June 2004.

banks should not be below 20 percent of the average standard lending rate. However, the Shanghai inter-bank market center did not have such an anti-competition practice. Indeed, available data indicate that the inter-bank rates in Shanghai could go down as much as 36 percent in 2001 (Huang 2004). As a result, foreign banks did most of the borrowing in the Shanghai market. Fearing of losing market shares to Shanghai, the Shenzhen Bankers' Association eventually revoked the practice in 2002.

2) Fee-Based Business: After China's accession to the WTO by the end of 2001, foreign banks operating in China could immediately conduct foreign exchange business with Chinese depositors. Although foreign banks provide better services, customers would have to pay for such services, which were not entirely expected by Chinese customers. For example, Citibank in 2002 charged depositors $6 or 50 RMB monthly if the monthly average deposit of a customer is less than $5000 dollars. Other foreign banks such as HSBC and Bank of East Asia also had charges on deposits but of various forms. Domestic banks followed the examples of foreign banks quickly and started charging fees on foreign currency deposits. They then started to charge fees on ATM transactions across banking groups. With respect to the RMB business, domestic banks also innovated by providing differentiated services offered to their large depositors.

Fee-based business, a vague area in China's commercial bank regulation, caused many legal disputes between consumers and the banking sector. The regulatory authority then had to revise regulations on this issue by issuing a new rule to clarify the scope of the fee-based businesses that commercial banks are able to conduct. It finally recognized the principle that fee-based business is legal with only limited exceptions. Commercial banks are granted the right to charge fees on their intermediation businesses. Certain prices of the fee-based businesses are regulated by the government, but the majority of them are determined by the market. Because of strong opposition from the consumer groups, a compromised solution was reached on the RMB deposits. Fees charged on foreign currency deposits remain. However, banks are not allowed to charge fees on the RMB deposits.

3) Impact on the scope of banking business: One important feature of China's financial service trade liberalization agreement is that criteria for authorization to operate in China's financial sector are based on prudential means alone and are not based on economic needs test or quantitative limits on licenses.[7] As a result, corresponding changes in regulation after the accession must be made. From 2002-2003, the bank supervisory authority has removed 26 bank businesses from the list that requires approval. Certain banking businesses once granted, the headquarters of a bank can decide whether its bank branch can conduct such business, without further approval from the regulatory authority. For those new categories of banking businesses that require approval from the regulatory authority, once an application is filed, a decision should be made within 10 business days. Indeed, the WTO accession

[7] See report of the Working Party on the accession of China, WTO October 2001.

has sped up the converging process of the Chinese regulatory practices to the international standard. Transparency and efficiency have been improving.

4) Impact on financial regulation: The case of the financial holding company: China's Commercial Bank Laws, modified in 2003, stipulates that commercial banks operating in China are prohibited from engaging in trust and securities business, investing in real restate business not for self use, and investing non-bank financial institutions and enterprises only with limited exceptions.[8] Indeed, the Bank of China Group is one of such exceptions. It controls 3 commercial banks, 3 investment banks, 1 mutual fund, and 2 insurance companies. However, large foreign banks operating in China are generally within a financial holding group and they are perceived to have unfair advantage over the Chinese banks.[9] As a result, a new law on financial holding group is under discussion. In addition, because of foreign entry and the presence of its own financial holding groups, China has put great emphasis on cross-agency coordination and information sharing in its amended Central Bank and Commercial Bank Law. The newly established financial stability bureau is supposed to be in charge of such coordination.

5) Impact on new entry into the financial sector and privatization of state owned commercial banks: Since 1996, the regulatory authority has authorized 112 city commercial banks and 4 rural commercial banks to be formed. Many of them were merged from city and rural cooperatives. If China can offer national treatment to foreign banks under its WTO obligations, how it should treat the entry of newly formed and privately-owned banks has raised strong interests in recent years. The banking regulatory commission, in stead of issuing more new banking licenses to allow domestic entry, has taken an approach to encouraging private investors to be equity shareholders of existing banks. Even if a privately-owned Chinese bank applies for a banking license, the applicant will be required to have a foreign investor as a strategic partner. Based on the experiences of and lessons learned from emerging market and transition economies, private banks mushroomed after financial liberalization have failed in great numbers and eventually the tax payers would have to shoulder the losses. Therefore, the domestic entry should be treated with great care. In this sense, the current regulation is prudent. However, because of the lack of transparency on financial conditions of city commercial and state owned banks, private investors have been quite hesitant in becoming shareholders. They fear that their investments are going to be used to fill the holes of NPLs but at the same time, they can not participate effectively in the decision making process because the state remains as the majority shareholder. Indeed, the privatization process of the big four state-owned commercial banks faces similar dilemma if the state is unwilling to yield its majority control on these banks.

III.3: Capital Controls and Prudential Regulations on Foreign Entry

[8] Article 35, section 2 of the Commercial Bank Law of the People's Republic of China, 2003.
[9] For example, foreign holding financial companies are viewed as "supermarket", whereas Chinese commercial banks are viewed as "specialty" shops that lack economies of scale to compete with foreign entities (Huang, 2004).

Although China's financial services trade liberalization is more liberal compared with countries in East Asia as presented in Figure 5, many capital account related financial services trade transactions would be limited because of its existing capital controls. Table 9 reviews China's capital controls related to commercial credits. Indeed, the existing capital control regime has made the direct cross-border commercial bank credit flows mostly limited. Consequently, most banking business related to Mode I, cross-border supply, will be restricted. However, Mode III, or commercial presence will be largely allowed (Table 3).

As mentioned above, whether a foreign bank can enter the Chinese market is mainly determined by prudential considerations. As a part of its prudential measures, only large and reputable foreign banks are allowed to enter the market. For example, in order to set up a branch in China, a foreign bank must have a total asset of at least $20 billion at the end of the year prior to filing an application. However, for a foreign bank that wishes to set up a joint venture with a Chinese bank, the required amount of bank assets is only half of that of an independent branch.

The operating capital requirement also varies with the range of business a foreign bank wishes to provide in China. For example, if a foreign bank branch is interested in providing a full range of banking businesses for all types of customers, the branch capital requirement is US $500 million. In addition, the branch capital will be divided into domestic currency and foreign currency with at least $300 million in RMB and the rest in US dollar.

If a bank that wishes to set up a subsidiary, it must have an operating capital of at least US$1 billion, of which $600 million should be in RMB and the rest in US dollar. The same requirement applies to forming a joint venture bank. In addition, the branch capital of a foreign subsidiary or a joint venture should not be less than US$300 million, of which $200 million should be in RMB.

Finally, if a foreign subsidiary or a joint-venture subsidiary wishes to expand its branch network, it should have been operating in China for at least 3 years and should be profitable for at least 2 years. In addition, when setting up a branch, 100 million RMB is required as operating capital for the branch. In addition, its total sub-branch capital should not exceed 60 percent of the registered capital. The branch rule implies that for a foreign subsidiary with a registered capital of US$1 billion, the maximum branches it is able to establish is about 6.

III.4: Impact of Foreign Bank Presence on China's Cross-Border Capital Flows:

By a conventional measure, China has already become a highly opened economy with its total trade close to 60 percent of GDP. Capital flows from the lead and lag of its trade alone are estimated at $170 billion (Ma and McCauley, 2004). As foreign banks have already been able to deal with joint-venture, foreign-funded, and Chinese firms, they play an active role in intermediating China's capital flows. Table 10

shows that foreign-funded firms and foreign banks borrowed over $58.5 billion in 2003, or 20 percent of total Chinese external debt in that year.

Foreign banks, once in China, certainly have opened more channels for cross-border capital flows, thus making China's capital controls more porous. Indeed, foreign banks may have played an active role in intermediating short-term bank loans to China.

Interest rates on foreign exchange loans and large deposit in China after liberalization in 2000 are usually set by LIBOR or HIBOR plus 100 to 200 basis points. Since the fourth quarter of 2000, the 3-month LIBOR rate has fallen rapidly, largely reflecting the Fed's aggressive monetary ease. On the other hand, China's short-term lending rate for RMB loans less than 6 months has been hovering slightly above 5 percent, thus providing arbitrage opportunities for foreign banks. They can borrow from the London market at rate of less than 2 percent and then lend to foreign funded or joint venture firms in China or even to Chinese firms after 2002 at LIBOR plus 1 to 2 percent, netting a profit of at least 1 to 2 percent of the lending. Such loans are also welcomed by the firms because they can quickly exchange dollar loans to RMB and save at least one to two percent interest rate charges if they borrow in RMB. Indeed, this could be the reasons why China's short term loans have gone up rapidly from around US $20 billion at the end of 1999 to US $38 billion in 2004 (Figure 6), thus prompting the SAFE to issue a regulation on June 21 2004 to intervene by setting a limit of short-term external debt of both foreign and domestic banks to no more than 5 times of their operation capital. Given the size of operating capital of foreign banks was 5.2 billion by the end of 2004, the maximum short-term debt outstanding per annum by the regulation is about $26 billion.

Another channel of moving capital in and out of the country is through borrowing from and lending to foreign branches' head offices. Indeed, as Figure 4 already indicates, foreign banks' net borrowing from their head offices is driven mainly by two factors: One is the amount of local currency they can amass in the local market to support their local currency lending activities. If foreign banks have access to the RMB, they will have less incentive to borrow from their head offices, thus less capital inflows and less exposure to external debt. This indeed argues for foreign banks to be given the access to local currency for purposes of their domestic lending needs. In addition, it is also easy for regulatory agency to monitor the funding motives of foreign banks and their transactions with head offices. The other factor is related to the exchange rate risk. Figure 4 clearly shows when the RMB is facing appreciation pressures, it creates incentives for foreign bank branches to borrow from their head offices and lend to their clients in China, whereas there is a depreciation pressure, they will borrow less from their head offices.

The advantage that foreign banks have to arbitrage between domestic and external market and their privileges to borrow directly from their head offices will surely make China's capital controls more porous and the existing control regime less effective. Indeed, the foreign bank presence in China at this moment is still relative

small. Should foreign bank operating capital double or even triple, say to $10 or 15 billion, the maximum short-term foreign exchange debt outstanding per annum under the current regulation will be about US$50 or $75 billion. As capital flows have become large enough, onshore and offshore interest rate differential will essentially disappear, making capital control ineffective. In addition, financial derivatives, often making term structures of capital flows fungible, will pose even greater challenges for the authorities to monitor short-term capital flows (Garber, 2001).

IV. Impact of Financial Services Trade Liberalization on Bank Loans to Emerging Market Economies: Some Empirical Evidence

Arguments for foreign bank entry into domestic banking market are mainly based on increased funding sources, improved quality of financial services (Levine, 1997, Demirguc-Kunt, Levine, and Min, 1999), bank efficiency spillovers (Claussens, Demirguc-Kunt, and Huizinga, 1998), and greater stability of credit in time of financial stress (Goldberg, Dages, and Kinney, 2001).

The presence of foreign banks also helps improve host country's financial market infrastructure by encouraging entry of a range of supporting industries such as credit rating agencies, accounting and auditing firms, and legal service (Glaessner and Oks, 1994).

However, arguments against foreign bank participation are mainly based on fears that 1) domestic financial industry is a strategic industry that is best controlled by domestic interests; 2) foreign entry increases competition and foreign banks "cherry-pick" customers and markets; and 3) foreign banks are likely to facilitate capital flights when capital account is open. Indeed, on the competition ground, empirical evidence does indicate that an increase of foreign bank shares leads to a lower profitability of domestic banks.[10]

The effect of financial services trade liberalization on financial development and stability is a new and evolving issue. Using data from 27 emerging market economies, Kono and Schuknecht (2000) find that financial services trade liberalization reduces distortion and volatility of capital flows to developing countries, thus promoting financial sector stability. Similar findings were obtained by Kireyev (2002). However, Valckx (2002) finds that financial trade services liberalization is weakly linked to financial instability. In addition, more liberal commitments on commercial presence have systematically increased the likelihood of banking crises, most likely reflecting the short-run negative effect of increased foreign competition on host country's financial services market. Bias toward cross-border supply of financial services, on the other hand, has increased the probability of a currency crisis because of increased volatile capital flows. The findings of these existing studies appear to provide contrasting empirical results: On the one hand, financial services trade liberalization promotes financial stability; on the other hand, they could lead to financial fragility.

[10] Classens, Demirguc-Kunt, and Huizinga (1998) and CGFS (2004).

However, the existing foreign bank literature has not paid much attention on the aspect of international bank loans to developing economies under the GATS. This section looks at the issue by applying a gravity model[11] to see whether financial services trade liberalization encourages bank loans to developing economies after adjusting for factors such as macroeconomic conditions, economic linkages, institutional quality, and traditional gravity variables that measure market size (GDP size), economic development (per capita GDP) and information asymmetry (distance between a lending and a borrowing country).

The gravity model approach can be justified on several grounds. First, the well-documented fact that countries of large economic size tend to trade more with each other indicates that economic size is an important determinant of trade credits and finance through international banks. Second, higher per capita income is closely associated with deeper financial markets, leading to greater international bank loans. Third, information asymmetry may become greater with a longer geographical distance between a lender and a borrower country, thereby raising monitoring costs and exerting a negative influence over cross-border bank loans. In addition, to the extent that the lender country has closer economic, political, and historical ties with a borrower country, international bank loans to the latter tend to be higher. These linkages in this context act as factors that reduce the problem of information asymmetry and therefore facilitate cross-border banking transactions. Finally, certain macroeconomic, institutional, and history of default variables of the borrower country can also help explain why some countries attract more bank loans than others. After adjusting for these factors, we will then be able to estimate the impact of two specific issues of our interests.

- Whether emerging market economies that have signed upon financial services trade liberalization under the GATS attract more bank loans from developed economies than those that have not.
- For the emerging market economies that have already made liberalization commitments, whether the level of liberalization commitment helps attract more bank loans from developed economies.

The paper also takes into account recent theoretical advances that recognize the importance of the country fixed effect, or the so called "multilateral resistance factor", in empirical applications of the gravity model (Anderson and van Wincoop, 2003, Rose, 2003, Subramanian and Wei, 2003). The estimating regression equation can then be specified as follows:

[11] The theoretical underpinnings of the gravity model and its applications were reviewed by Frankel (1997). See Frankel (1997) for an application of the gravity model approach to explain the factors affecting the formation of trade blocs, Kawai and Urata (1998) on the relationship between trade and FDI using Japanese data at the industry level, Portes and Rey (1999) on the determinants of equity flows, Rose and Spiegel (2002) on the effect of a default on sovereign lending on bilateral trade, and Kawai and Liu (2004) on the determinants of bank loans to developing economies.

$$\log(\ BL_{ij}\ ) = \sum_k \beta_k Z_{ijt} + \sum_k \lambda_k M_j + \sum_k \gamma_k X_{ijk} + \sum_k \delta_k Y_{jk} + \sum_k \varepsilon_k Z_{jk} + \mu_{ij}$$

Here BL_{ij} indicates bank loans from developed country *i* to less developed country *j*. Vector Z_{ijt} represents key gravity variables such as economic size, per capita income, an indicator of economic development, and distance between a lender country *i* and borrower country *j*, which could also be interpreted as a proxy of information asymmetry. Vector M_j represents country fixed effect of loan recipient economies. Vector X_{ij} represents variables related to bilateral country linkages, such as bilateral trade, official development assistance (ODA) and other economic linkage variables such as trade arrangements, geography, colonial ties, and common language. Vector Y_j represents variables for a borrower country *j* related to its country risk such as macroeconomic volatility variables, institution characteristics such as whether a country has any explicit form of deposit insurance and whether the country has a higher level of domestic financial liberalization or capital account opening and other relevant factors. Vector Z_j represents variables such as whether a loan recipient economy has signed upon the financial services trade liberalization and in addition, the intensity of the liberalization commitment.

The indexes of financial services trade liberalization are calculated and updated using the combined metrics of Mattoo (2000) and Valckx (2002). Detailed specifications are presented in Appendix II. The indexes are updated to 2003 as more countries have become members of the WTO and have signed the GATS. All gravity variables and some variables in X_{ij}, Y_i and Z_j are also in logs, except for dummy variables. A detailed description of the data source is presented in Appendix III.

Table 11 presents the empirical results of the gravity model regressions for both panel and five-year average cross-section specifications. For the panel regression, fixed-effect regression techniques are used because the recent theoretical advance that emphasizes the importance of multilateral resistance effect when applying the gravity model empirically. We use two indexes of FSTLN commitment: One is an index that includes all financial sectors (insurance, banking, securities, and other securities), WTO score total. The other is an index that measures the banking sector commitment only, WTO score banking.

Gravity Variables: Equations 1 to 4 present panel regression results after adjusting for both time and country fixed effect. Indeed, gravity model variables explain the model well. The log GDP variables of lending and borrowing countries, a measure of country or market size, are statistically significant and have the right sign, indicating the larger the lending country, the more loans it provides; whereas the smaller the borrowing country, the relatively more loans it tends to receive at margin. Borrower countries of higher economic development as indicated by the per capita income do not necessarily receive more loans from lender countries although lender countries of higher economic development do provide more loans.

The distance between a lender and a borrower, an indicator of information asymmetry, is negatively and statistically significant, thus confirming that the farther away between a lender and a borrower, the less information tends to flow between them and therefore less bank loans.

Economic Linkages: In general, the more trade between a borrowing and a lending country, the more bank loans will go from a lending country to a borrowing country, thus demonstrating that bilateral trade flows play a significant role in facilitating bank loans to developing economies. This also confirms empirical observations that trade financing and trade credit facilitate international trade. Official development assistance (ODA) plays a positive role in facilitating commercial bank loans to developing economies. Similarly, other economic linkage variables such as whether a lending and a borrowing country share a common border, a common language, or whether the borrowing country is a former colony of the lending country all help facilitate bank lending to developing economies.

Country Risk Indicators: The model also attempts to capture the effect of how country risks measured by the exchange rate and GDP volatility, fiscal sector sustainability, and short-term debt as a share of foreign exchange reserves affect bank loans from a lender to a borrower country. However, these measures do not appear to be statistically significant.[12]

Institutional Quality and History of Default: Similarly, variables that attempt to measure institutional support or guarantee of the borrowing country's banking system such as whether the country has an explicit deposit insurance system, financial sector quality and development, quality of rule of law as measured by the corruption index, and history of default measured by the IMF loan dummy variable all do not appear to be relevant here. Interestingly, whether a country has a high or a low degree of capital control simply does not matter, which appears to imply that capital control is not an important factor in affecting commercial loans to developing economies.

Indexes of financial services trade liberalization commitment: Essentially, the paper is interested in determining whether a country signing upon the financial services trade liberalization commitment under the GATS helps it attract more international commercial bank loans. Indeed, the regression result shows that in general it is not helpful. This is true for both the overall financial services trade liberalization index in general and the banking sector liberalization index in particular. To some extent, such a result is not surprising. Our indexes do show that the financial services trade liberalization commitments do not necessarily correlate with the per capita income variable. Some small, low-income transition and African economies tend to have very liberal commitments. However, they do not necessarily receive international bank loans after adjusting for economic size,

[12] When the country risk measure is replaced with a synthetic country risk rating variable such as the S&P sovereign ratings, similar result is obtained.

market potential and economic development. But this does not mean that it should be the case for all developing economies. When the developing country group is split into sub-regions such as Latin America, ASEAN countries plus Korea, China, and offshore financial centers, the result is indeed quite different. Making more liberal commitments helps promote more loans to China and offshore financial sector, although it has little effect on the Latin American countries as a whole and the group of ASEAN countries plus Korea.[13]

Results from the 5-year average regression: Similar results are found for the five-year average cross-country regression. The difference is that most of the country risk indicators, institutional quality measures, and history of default measures have the right sign and some of these explanatory variables are also statistically significant. The other major difference is that regional effect of the financial services trade liberalization commitment indexes such as Latin America and ASEAN plus Korea have turned quite significant. On the other hand, the China effect measured by the overall financial services liberalization index is no longer significant. However, the five-year average regression results need to be further verified using instrumental variables to check robustness. In addition, because of the diversity of countries in the sample, further tests need to be conducted to see whether the data have heteroscedaticity.

V. Concluding Remarks

This paper examines the impact of financial services trade liberalization on domestic financial liberalization and international bank loans using both a country case study and a cross-country panel study on international bank loans to developing countries.

The country case study demonstrates that financial services trade liberalization in China has set impetus for rapid domestic financial liberalization. Foreign banks, though still relatively small in size, have already had considerable impact on China's capital flows mainly between their branches and head offices and also via the arbitraging opportunities between domestic and offshore markets. Indeed, the role of intermediating capital flows played by foreign banks will become even more significant as their total asset size becomes bigger in the future after the barriers to entry are further reduced.

The empirical findings from the cross-country panel study indicate that the financial services trade liberalization under the WTO promotes bank loans to developing economies strongly though not evenly depending on country characteristics. Large emerging market economies such as China tend to benefit from further financial services liberalization while small and low income economies may not necessarily benefit from such liberalization.

[13] The result for the region may be due to the effect of the 1997-98 East Asian financial crises when large amount of loans was withdrawn from the region.

Another important finding is that banks loans to developing economies have little to do with capital controls of developing economies, possibly implying that financial services trade liberalization is likely to make capital controls less effective because of the potential capital flows associated with the presence of foreign banks. Therefore, financial services liberalization could lead to *de facto* capital account opening or at least accelerate capital account opening in developing economies.

The paper has some important policy implications. On the one hand, the China country case study indicates foreign bank presence has spill-over effect or demonstration effect on domestic financial institutions, thus promoting efficiency. Foreign bank presence can also help speed up domestic institution building as they bring both human capital and technology needed to the host economy. Thus, foreign banks should be welcome to participate in domestic financial sector.

On the other hand, policy makers in some emerging market economies should be aware that once they open up their financial services trade for foreign competition, they may also invite more capital flows to their economies, which in turn will tend to render the existing capital control regime less effective. Large cross-border capital flows will make interest rate differentials between onshore and offshore disappear. Therefore, the country can no longer maintain an independent monetary policy. As the freedom of capital flows increases and if the objective still is to maintain independent monetary policy, the exchange rate regime will have to be made flexible as a result. In the case of China, as it is expected to accelerate its financial services trade liberalization, the impact on its capital flows will become substantial, which implies that China's capital controls will become more porous in the future. Therefore, the pace of China's capital account liberalization will proceed faster than expected.

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Table 1: Domestic versus international capital flows under FSTL

	Loans provided by domestic banks	Loans provided by foreign banks abroad
Loans involve domestic capital only	No financial services trade and international capital flows	Financial services trade only
Loans involve international capital only	International capital flow only	Both financial services trade and international capital flows

Source: Kono and Schuknecht (2000) with author's change of classfication

Table 2: Domestic versus international capital flows under FSTL

	Loans provided by domestic banks	Loans provided by foreign banks in the country
Loans involve domestic capital only	No financial services trade and international capital flows	Financial services trade plus inward FDI
Loans involve international capital only	International capital flow only	Financial services trade plus FDI and international capital flows

Source: Kono and Schuknecht (2000) with author's change of classfication

Table 3: Financial Services Trade and Capital Flows under Different Modes of Supply (No Capital Account Restrictions)

	Mode1: Cross-border supply	Mode 2: Consumption abroad	Mode 3: Commercial Presence
Category of Banking and other Financial Services Business	Can FST occur without cross-border capital flow?	Can FST occur without cross-border capital flow?	Can FST occur without cross-border capital flow?
Acceptance of deposits	N	N	Y
Lending (consumer credit, mortgage, commercial loans)	N	N	Y
Financial Leasing	Y	N	Y
Payments and money transmission (credit cards, travelers checks, and bankers drafts)	N	N	Y/N[a]
Gurantees and commitments	N	N	Y
Securities trading			
Money market instruments	N	N	Y
Foreign exchange	N	N	N
Derivatives	N	N	Y/N[a]
Exchange rate and interest rate instruments	N	N	Y/N[a]
Transferable securities	N	N	Y
Other negotiable instruments	N	N	Y
Securities Issurance and Underwriting	N	N	Y/N[a]
Money Broking	N	N	Y
Asset Management (Pension, fund management, custodial, depository, and trust services)	N		Y/N[a]
Settlement and clearing servies for financial assets (securities, derivative products, and other negotiable instruments)	N		Y
Provision and transfer of financial information	Y		Y
Advisory, intermediation and other auxiliary financial services	Y		Y

Source: Adapted from Kono and Schuknecht (2000) and Kireyev (2002) with author's change of classifications
Legend: "Y" yes and "N" no.
Note: a, depending whether exteral funding is involved.

Table 4: Chronology of Foreign Bank Presence in China since 1979

Time	Events	Geographic Location	Business Scope
1979	Foreign Bank Representative Offices were allowed: Japan Export-Import Bank was the first foreign bank to set up a respresentative office in China.	Yes	Limited to Foreign Exchange Business
1980	31 foreign bank representative offices were established.	Yes	Limited to Foreign Exchange Business
July 1981	Foreign bank business was allowed	Foreign banks can open in 5 special economic zones	Only in foreign exchange business
1982	Hong Kong Nanyang Commerical Bank opened branch in Shenzhen		Only in foreign exchange business
September 1990	Foreign banks were allowed to open in Shanghai	5 special economic zones and Shanghai	Only in foreign exchange business
1992	Foreign banks were allowed to open in two more cities	7 cities including Dalian	Only in foreign exchange business
August 1994	Foreign banks were allowed to open in 11 inland cities including Beijing. Regulations on Foreign Financial Institutions were issued for the first time.	23 cities and Hainan Province	Only in foreign exchange business
December 1996 to August 1998	Foreign banks were allowed to do RMB business in limited areas at an experimental basis	RMB business was limited to Shanghai Pudong and Shenzhen	RMB deposit and loans, settlements, guarantees, government bonds, and securities investment
April 1998	Foreign banks were allowed to enter the interbank market		
July 1999	Foreign Banks are allowed to expand their RMB business	Foreign banks' RMB business in Shanghai and Shenzhen was allowed to expand to their neighboring provinces.	1) Foreign banks can borrow from central bank up to 100 million for their RMB business related activities. 2) Foreign banks are allowed to syndicated loan business. 3) The RMB loans not covered by RMB can be borrowed from Chinese banks. 4) Foreign banks can enjoy the same treatment in the interbank market. Maximum borrowing is one time of its operating capital. Up to 100 million can be borrowed with permission of the central bank. 5) RMB liabilities to foreign exchange liability ratio increased from 35% to 50%.
December 2001	China entered WTO and signed the GATS	See Appendix I	See Appendix I
December 2002	Foreign banks are allowed to do RMB business in 5 more cities	RMB business was expanded to Guangzhou, Zhuhai, Qingdao, Nanjing, and Wuhan	See Appendix I
December 2003	Foreign banks are allowed to do RMB business in 4 more cities	RMB business was expanded to Jinan, Fuzhou, Chongqing, and Chengdu	See Appendix I
July 2004	Regulations on Foreign Bank Operation in China Issued by CBRC	Maximum foreign branch and subsidiary operating capitals were lowered to 500 million	See Appendix I
December 2004	Foreign banks are allowed to do RMB business in 5 more cities	RMB business was allowed in Kunming, Beijing, Xiamen, Xian, and Shenyang. Foreign banks are encouraged to set up operations in China's West and Northeast Region.	See Appendix I
December 2006	Foreign bank RMB restrictions no longer subject to geographic and business restriction		See Appendix I

Sources: CBRC and WTO, and Huang (2005)

Table 5: Foreign Bank Presence in China (Top 10 Banks by Assets in Millions of US$)

Rank	Bank Name	Assets
1	HSBC	7570.83
2	Citibank	6700.93
3	Tokyo-Mitsubushi	3333.36
4	Standard Chartered	3032.45
5	Mizuho	2923.57
6	UFJ	2858.42
7	SMBC	2463.76
8	Bank of East Asia	2121.63
9	Deutsch Bank	677.57
10	Dutch Commercial Bank	627.62
	Total Foreign Bank Assets	48050.85
Memorandom		
	Foreign Bank Total Assets as a share of total Chinese Banking assets	1.40%

Source: China Bank Regulatory Commission (2003)

Table 6: Foreign Financial Institutions in China

	Foreign Bank	Subsidiary	Joint Venture Bank	Foreign Finance Company	Total
Subsidiary		14	10	3	27
Branch	162				162
Subsidiary Branch		9	4		13
Sub-Branch	15		1		16
Total	177	9	15	3	218

Data source: China Bank Regulatory Commission (2004).

Table 7: Comparision of Subsidiaries and Branches (Billions of US Dollars)

	Subsidiary	Branch	Total	Subsidiary/Branch Ratio
Assets	2.74	46.3	48.8.44	0.059
Loans	1.44	21.04	22.4	0.068
Liabilities	1.65	42.4	43.93	0.039
Deposits	0.8	11.97	12.4	0.067
Profitability	0.021	0.2	0.225	0.105
CAR (%)	35.88	8.17	9.68	4.392
NPL	4.92	2.79	2.93	1.763

Data source: China Bank Regulatory Commission (2004).

Table 8: Foreign Bank Loans by Sector (Millions of RMB)

Sectors	Total Loans Outstanding	Percent of Total (%)
Manufacturing sector	119,283	55.8
Machinery Sector	12,539	5.9
Electronics Sector	25,969	12.1
Chemical Sector	26,316	12.3
Light Industry Sector	26,622	12.4
Other Manufacturing Sector	27,836	13.0
Real Estate Sector	27,324	12.8
Retail Sector	8,929	4.2
Other Sectors	58,316	27.3
Total	213,851	100.0
Memorandum		
Total Loans in RMB	84,448	39.49
Total Dollar Loan in RMB	165,043	77.18
Total Dollar Loan in Dollar	19,981	

Source: China Bank Regulatory Commission (June 2004)

Table 9: China's Capital Control and Its Effect on Financial Services Trade Liberalization

Restrictions on Commercial Credits	Details	Comments
By Residents to non-residents	Only authorized by PBOC may lend	Mode 1 allowed but restriction
To Resident from non-resident	Must be Incorporate in the plan for the use of foreign capital, undergo transaction-based examination and subject SAFE Approval. Foreign funded enterprises may borrow from nonresident without obtaining approval but must regester the borrowing with the SAFE.	Mode 1 allowed but restriction
Financial Credits	Restrictions on Commercial Credits Apply	Mode 1 allowed but restriction
Guarantees, securities		
By residents to nonresidents	Prior SAFE Approval Required for financing guarantee Prior SAFE Approval not required for non-financing guarantee but registration with SAFE required	Mode 1 allowed but restriction
To Resident by non-residents	Foreign fund firms may accept gurantees from foreign institutions	

Provisions and controls specific to commercial banks and other credit institutions	Details	Comments
Borrowing Abroad	Same restrictions on commercial credits apply	Mode 1 allowed but restriction
Maintenance of account abroad	Registration with the SAFE is required for domestic banks, domestic nonbank financial institutions and nonfinancial enterprise	Mode 2 allowed but with restriction
Lending to non-residents (financial or commercial credits)	Same restrictions on commercial credits apply	Mode 1 allowed but restriction
Lending locally in foreign exchange	Lending is subject to review by PBOC and to asset-liability ratio requirements. Borrowers must register the transactions ex post wit the SAFE and must obtain a permit from the SAFE to repay principal. Such requirements are no longer required for residents to borrow FX from domestic Chinese financial insitutions. But creditor need to inform SAFE loan and payment structure.	Mode 2 allowed but with restriction
Differential treatment of deposit account of foreign exchange		
Reserve requirement	RR of 7.5% for deposits in RMB for all banks RR of 2% for FX deposits of Chinese funded banks RR of 5% for FX depostits with maturity less than 3 month, 3% for maturity of more than 3 months of foreign funded banks Reserves on foreign currency are not renumerated	
Liquid Assets Requirement	Asset/liability ratio for FX may not be less than 60%	
Credit Controls	Lending to a single borrower may not exceed 10%	

Source: IMF Annual Report on Foreign Exchange Restrictions (2003)

Table 10: Chinese External Debt Data by Borrowers

	1998	1999	2000	2001	2002	2003
Central Government	41.6	47.3	48.96	49.8	50.5	52.8
Chinese banks	33.98	34.4	29.84	30	29.1	33.3
Chinese non-bank financial institution	8	6.47	5.72	4.38	4.4	4.3
Chinese firms	15.5	14.7	13.52	11.2	10	7.6
Foreign Funded Enterprises	45.2	47.3	46.5	35.2	33.2	37.8
Foreign banks	..	..	..	17.04	14.5	20.7
Trade Credit				21.6	26.3	36.8
Others	1.76	1.63	1.16	0.88	0.5	0.3
Total	146.04	151.8	145.7	170.1	168.5	193.6

Data source: SAFE website in billions of US dollars.

Note: Reclassification of China's foreign indebtedness was made in 2001 in accordance to the International Standards. 1) Debt of foreign financial institutions are inlcuded as domestic debt and at the same time, foreign currency lending of foreign financial insitutions to China borrowers are deducted from the total foreign debt. 2) All trade credits (including 1-3 month) are included in the total foreign debt. 3) Long-term debt with expected payment within one year is also included as short-term debt.

Table 11: Core Regressions, Panel and 5-year Average (1998-2002)

	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)	
Log distance	-0.78	***	-0.78	***	-0.78	***	-0.78	***	-0.88	***	-0.88	***	-0.88	***	-0.88	***
	0.09		*0.09*		*0.09*		*0.09*		*0.16*		*0.16*		*0.16*		*0.16*	
Log GDP lender	0.37	***	0.37	***	0.37	***	0.37	***	0.46	***	0.46	***	0.46	***	0.46	***
	0.05		*0.05*		*0.05*		*0.05*		*0.09*		*0.09*		*0.09*		*0.09*	
Log GDP borrower	-0.42	*	-0.37	*	-0.42	*	-0.37	*	0.71	***	0.57	***	0.71	***	-0.10	
	0.24		*0.23*		*0.24*		*0.23*		*0.14*		*0.19*		*0.14*		*0.21*	
Log GDP per capita lender	0.28	**	0.28	**	0.28	**	0.28	**	0.24		0.24		0.24		0.24	
	0.13		*0.13*		*0.13*		*0.13*		*0.23*		*0.23*		*0.23*		*0.23*	
Log GDP per capita borrower	0.42		0.31		0.42		0.31		1.24	***	-0.11		1.24	***	0.22	
	0.62		*0.61*		*0.62*		*0.61*		*0.21*		*0.26*		*0.22*		*0.23*	
Common border	0.44		0.44		0.44		0.44		0.28		0.28		0.28		0.28	
	0.29		*0.29*		*0.29*		*0.29*		*0.35*		*0.35*		*0.35*		*0.35*	
Common language	0.23	*	0.22	*	0.23	*	0.22	*	-0.12		-0.12		-0.12		-0.12	
	0.12		*0.12*		*0.12*		*0.12*		*0.23*		*0.23*		*0.23*		*0.23*	
Colonial past	1.35	***	1.36	***	1.35	***	1.36	***	1.68	***	1.68	***	1.68	***	1.68	***
	0.17		*0.17*		*0.17*		*0.17*		*0.28*		*0.28*		*0.28*		*0.28*	
Bilateral trade	0.24	***	0.24	***	0.24	***	0.24	***	0.29	***	0.29	***	0.29	***	0.29	***
	0.04		*0.04*		*0.04*		*0.04*		*0.09*		*0.09*		*0.09*		*0.09*	
Exchange rate volatility	-0.02		0.00		-0.02		0.00		-0.15	*	0.08		-0.15	*	0.03	
	0.11		*0.11*		*0.11*		*0.11*		*0.08*		*0.07*		*0.08*		*0.07*	
IMF crisis dummy	-0.03		-0.02		-0.03		-0.02		0.32		-0.05		0.31		-0.89	**
	0.14		*0.15*		*0.14*		*0.15*		*0.73*		*0.46*		*0.76*		*0.45*	
Capital account restrictions	-0.04		-0.12		-0.04		-0.12		-0.02		0.33	*	-0.02		0.37	**
	0.27		*0.23*		*0.27*		*0.23*		*0.09*		*0.17*		*0.09*		*0.18*	
Deposit insurance	0.25		0.26		0.25		0.26		0.16		0.70		0.16		3.44	***
	0.40		*0.40*		*0.40*		*0.40*		*0.47*		*0.65*		*0.48*		*0.74*	
Financial sector Development	-0.15		-0.16		-0.15		-0.16		-0.56		-1.66	***	-0.52		-1.29	***
	0.29		*0.29*		*0.29*		*0.29*		*0.61*		*0.46*		*0.66*		*0.50*	
Fiscal sector sustainability	-0.33		-0.34		-0.33		-0.34									
	0.24		*0.24*		*0.24*		*0.24*									
GDP volatility	0.02		0.02		0.02		0.02		-1.14	***	-0.16		-1.14	***	-0.40	*
	0.04		*0.04*		*0.04*		*0.04*		*0.16*		*0.25*		*0.16*		*0.24*	
Corruption	-0.08		-0.09		-0.08		-0.09		-1.38	***	0.76		-1.38	***	0.53	
	0.18		*0.18*		*0.18*		*0.18*		*0.37*		*0.50*		*0.37*		*0.43*	
Short-term debt	0.04		0.03		0.04		0.03		0.62	***	0.17	*	0.62	***	0.22	*
	0.07		*0.07*		*0.07*		*0.07*		*0.10*		*0.10*		*0.11*		*0.12*	
ODA Stock	0.28	***	0.28	***	0.28	***	0.28	***	0.21	***	0.21	***	0.21	***	0.21	***
	0.02		*0.02*		*0.02*		*0.02*		*0.04*		*0.04*		*0.04*		*0.04*	
WTO score total	-0.03								0.04							
	0.06								*0.09*							
WTO score banking					-0.03								0.03			
					0.06								*0.08*			
WTO score total - Latin America			-0.04								0.41	**				
			0.12								*0.19*					
WTO score total - ASEAN+Korea			3.51								0.30	***				
			6.85								*0.09*					
WTO score total - China			1.01	***							0.15					
			0.30								*0.17*					
WTO score total - offshore			0.74	***							0.99	***				
			0.18								*0.25*					
WTO score banking - Latin America							-0.04								0.42	**
							0.11								*0.19*	
WTO score banking - ASEAN+Korea							3.35								0.73	***
							6.53								*0.13*	
WTO score banking - China							0.97	***							0.63	***
							0.29								*0.20*	
WTO score banking - offshore							0.72	***							0.97	***
							0.18								*0.25*	
Borrower fixed effects	Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	
Time effects	Yes		Yes		Yes		Yes									
Number of observations	2202		2202		2202		2202		663		663		663		663	
Sample	Panel		Panel		Panel		Panel		5-yr aver		5-yr aver		5-yr aver		5-yr aver	
R-square	0.941		0.941		0.941		0.941		0.739		0.739		0.739		0.739	
Root mean squarre error	1.330		1.330		1.330		1.330		1.361		1.361		1.361		1.361	

Note: signs *, **, and * indicate statistical significance at 99, 95, and 90 percent, respectively. Numbers in italics indicate standard deviation.**

Figure 1: Financial Services Trade Liberalization Commitment by Mode of Supply

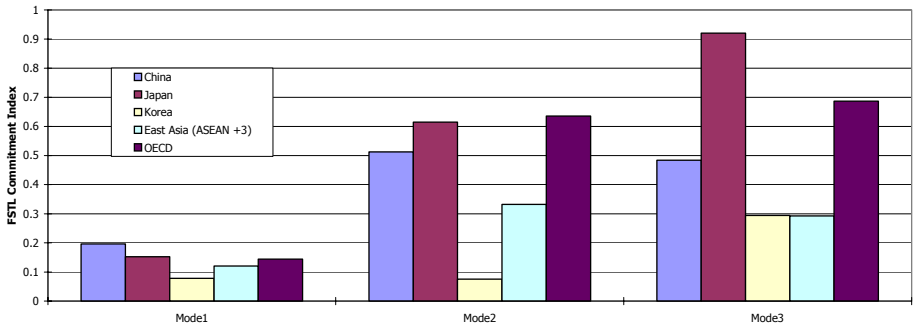


Figure 2: Foreign Bank Concentration in terms of Assets by Region

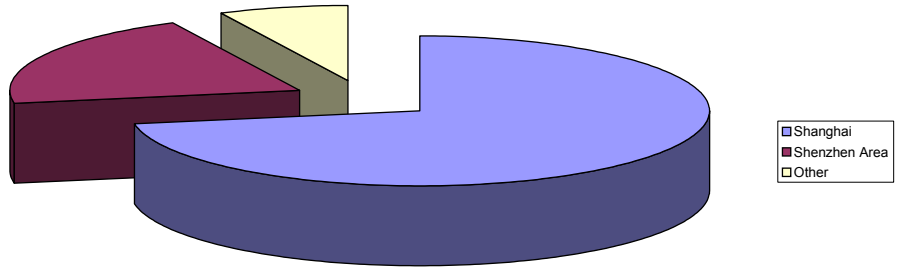


Figure 3: Foreign Banks Do Follow Their Customers in China
(correlation coefficient = 0.81)

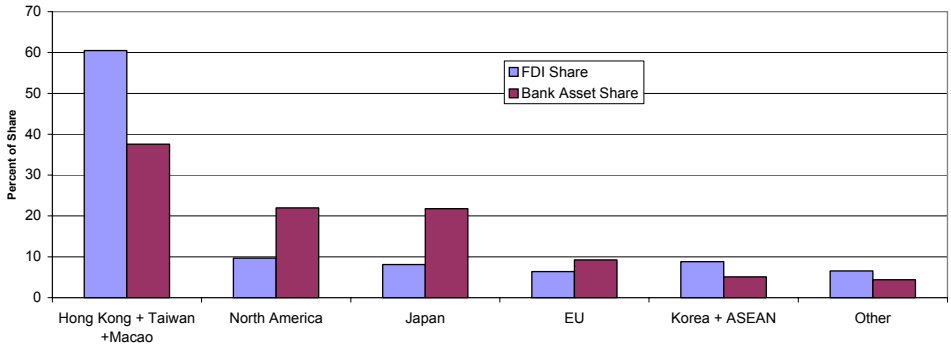


Figure 4: Funding Source of Foreign Bank Loans In China

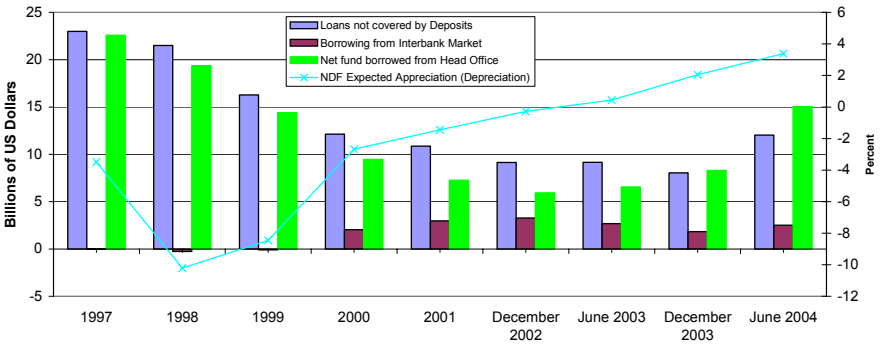


Figure 5: Trading Volume and Interest Rate in 3 Month Interbank Maket

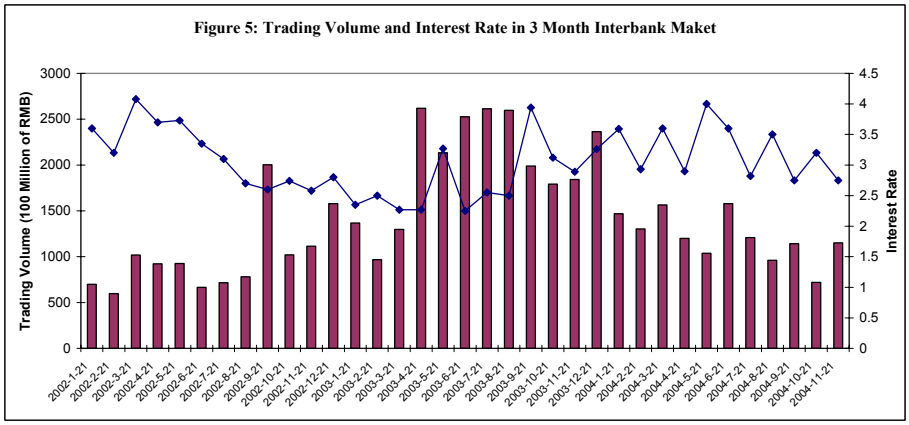
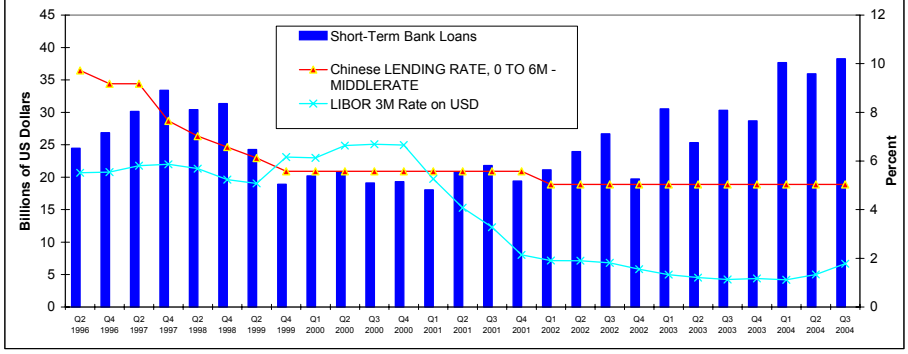


Figure 6: Interest Rate Differentials and Short-Term Capital Inflows



Sector or Subsector	**Market Access**	**National Treatment**	**Additional**
B. Banking and Other Financial Services (excluding insurance and securities) Banking services as listed below: a. Acceptance of deposits and other repayable funds from the public; b. Lending of all types, including consumer credit, mortgage credit, factoring and financing of commercial transaction; c. Financial leasing; d. All payment and money transmission services, including credit, charge and debit cards, travellers cheques and bankers drafts (including import and export settlement); e. Guarantees and commitments; f. Trading for own account or for account of customers: foreign exchange. - Motor vehicle financing by non-bank financial institutions	(1) Unbound except for the following: - Provision and transfer of financial information, and financial data processing and related software by suppliers of other financial services; - Advisory, intermediation and other auxiliary financial services on all activities listed in subparagraphs (a) through (k), including credit reference and analysis, investment and portfolio research and advice, advice on acquisitions and on corporate restructuring and strategy. (2) None (3) A. Geographic coverage: For foreign currency business, there will be no geographic restriction upon accession. For local currency business, the geographic restriction will be phased out as follows: Upon accession, Shanghai, Shenzhen, Tianjin and Dalian; Within one year after accession, Guangzhou, Zhuhai, Qingdao, Nanjing and Wuhan; within two years after accession, Jinan, Fuzhou, Chengdu and Chongqing; within three years after accession, Kunming, Beijing and Xiamen; Within four years after accession, Shantou, Ningbo, Shenyang and Xi'an. Within five years after accession, all geographic restrictions will be removed. B. Clients: For foreign currency business, foreign financial institutions will be permitted to provide services in China without restriction as to clients upon accession. For local currency business, within two years after accession, foreign financial institutions will be permitted to provide services to Chinese enterprises. Within five years after accession, foreign financial institutions will be permitted to provide services to all Chinese clients. Foreign financial institutions licensed for local currency business in one region of China may service clients in any other region that has been opened for such business. C. Licensing: Criteria for authorization to deal in China's financial services sector are solely prudential (i.e., contain no economic needs test or quantitative limits on licenses). Within five years after accession, any existing non-prudential measures restricting ownership, operation, and juridical form of foreign financial institutions, including on internal branching and licenses, shall be eliminated. Foreign financial institutions who meet the following condition are permitted to establish a subsidiary of a foreign bank or a foreign finance company in China: - total assets of more than US $10 billion at the end of the year prior to filing the application. Foreign financial institutions who meet the following condition are permitted to establish a branch of a foreign bank in China: - total assets of more than US $20 billion at the end of the year prior to filing the application. Foreign financial institutions who meet the following condition are permitted to establish a Chinese-foreign joint bank or a Chinese-foreign joint finance company in China: - total assets of more than US $10 billion at the end of the year prior to filing the application. Qualifications for foreign financial institutions to engage in local currency business are as follows: - three years business operation in China and being profitable for two consecutive years prior to the application, otherwise, none. (4) Unbound except as indicated in Horizontal Commitments. (1) Unbound except for the following: - Provision and transfer of financial information, and financial data processing and related software by suppliers of other financial services; - Advisory, intermediation and other auxiliary financial services on all activities listed in subparagraphs (a) through (k), including credit reference and analysis, investment and portfolio research and advice, advice on acquisitions and on corporate restructuring and strategy. (2) None (3) None (4) Unbound except as indicated in Horizontal Commitments.	(1) None (2) None (3) Except for geographic restrictions and client limitations on local currency business (listed in the market access column), foreign financial institution may do business, without restrictions or need for case-by-case approval, with foreign invested enterprises, non-Chinese natural persons, Chinese natural persons and Chinese enterprises. Otherwise, none. (4) Unbound except as indicated in Horizontal Commitments. (1) Unbound (2) None (3) None (4) Unbound except as indicated in Horizontal Commitments.	For financial leasing services, foreign financial leasing corporations will be permitted to provide financial leasing service at the same time as domestic corporations.
- Other financial services as listed below: k. Provision and transfer	(1) None (2) None (3) None (Criteria for authorization to deal in China's financial services sector are solely prudential (i.e., contain no	(1) None (2) None (3) None	

of financial information, and financial data processing and related software by supplier of other financial services; l. Advisory, intermediation and other auxiliary financial services on all activities listed in subparagraphs (a) through (k), including credit reference and analysis, investment and portfolio research and advice, advice on acquisitions and on corporate restructuring and strategy. -Securities	economic needs test or quantitative limits on licenses). Branches of foreign institutions are permitted. (4) Unbound except as indicated in Horizontal Commitments. (1) Unbound except for the following: - Foreign securities institutions may engage directly (without Chinese intermediary) in B share business. (2) None (3) a. Unbound, except for the following: - Upon accession, representative offices in China of foreign securities institutions may become Special Members of all Chinese stock exchanges. - Upon accession, foreign service suppliers will be permitted to establish joint ventures with foreign investment up to 33 per cent to conduct domestic securities investment fund management business. Within three years after China's accession, foreign investment shall be increased to 49 per cent. Within three years after accession, foreign securities institutions will be permitted to establish joint ventures, with foreign minority ownership not exceeding 1/3, to engage (without Chinese intermediary) in underwriting A shares and in underwriting and trading of B and H shares as well as government and corporate debts, launching of funds. b. Criteria for authorization to deal in China's financial industry are solely prudential (i.e., contain no economic needs test or quantitative limits on licenses). (4) Unbound except as indicated in Horizontal Commitments.	(4) Unbound except as indicated in Horizontal Commitments. (1) None (2) None (3) None (4) Unbound except as indicated in Horizontal Commitments.	

Appendix I: China's WTO Commitments adopted from Report on the Working Party on the Accession of China, Oct. 2001.

Appendix II: Metrics used to calculate the financial services trade liberalization commitment

Numerical Values	Score
No mention in the schedule or not a WTO member	0
Unbound against relevant mode	0.05
No new entry – unbound for new entry	0.1
Discretionary licensing -Economic needs test Licensing/Authorization Requirements: acquisition approval – not mentioning terms, conditions, or procedures	0.3
Voting/Ownership <50%	0.35
Limited Commitments	0.4
License/Authorization by supervisor (central bank, association), acquisition approval – with indications or guiding principles	0.5
Minor limitations (grandfathering clause, legal form, number of observations, ownership >50%, types of operations, value of transactions/assets, reciprocity and registration requirements)	0.75
No limitations	1

Liberalization Commitments in	
A – Insurance services (direct life and non life insurance, reinsurance, intermediation)	Mode 1: Cross-border supply
B – Banking services (deposits, lending, money broking, trading)	Mode 2: Consumption abroad
C – Securities services (underwriting, settlement, asset management)	Mode 3: Commercial presence
D – Other financial services (supply of financial information, payments and settlements)	

Source: Volckx (2002)

Appendix III: Data Sources and Financial Commitment Index

Variables	Sources
Foreign claims classifed by maturity	Bank for International Settlements (BIS) website
Border, Language, Colony	http://faculty.haas.berkeley.edu/arose/
Gross savings	IFS
Current Account Balance	IFS
Trade Balances	IFS
Balance on goods and services	IFS
Income (credit, debit)	IFS
Current Transfer (Credit, debit)	IFS
Export and Import of goods	IFS
Service (credit, debit)	IFS
Capital Account	IFS
Capital inflow and outflow	IFS
Budget deficit	IFS
Lending interest rate	IFS
Reserves	IFS
Foreign Assets	IFS
Demand Deposit	IFS
Time saving and foreign currency deposits	IFS
Foreign Liability	IFS
International Reserve	IFS
Foregn exchange	IFS
Deposit money banks (assets, liabilities)	IFS
Foreign exchange rate	IFS
Portfolio investment	IFS
Financial Account	IFS
Quasi money and money (M2)	IFS
Exchange rate regimes	IMF statistical yearbooks
Net savings	OECD website
Components of current account (goods, services, compensation of employess, direct investment income, portfolio and other investment income, current transfers)	UNCTAD website (Handbook of statistics)
FDI - total inward position	WB and IFS
External debt	WB-IMF-BIS-OECD
Budget deficit (% of GDP)	World Bank
Export and Import of goods and services (% of GDP)	World Bank website
Inflation rate	World Bank website
GDP, GDP per capita, population, GDP growth rates	World Bank website and World Development Indicators
Export and Import of other services	WTO website
Financial liberalization scores	WTO website - Financial commitments Alexei K., *"Liberalization of Trade in Financial Services and Financial Sector Stability (Analytical Approach)", August 2002, IMF website*
Istitution	ICRG, World Bank
Bilateral trade	Direction of Trade, IMF
Bilateral distance	WWW.INDO.COM/Distance
Bilateral FDI	OECD