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## **Banking Integration in EU: Lessons for the Opening and Reform of the Chinese Banking System**

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### **Abstract:**

The EU has advanced on the financial market integration for more than one decade and provides a good field for bank M&A, banking opening, reform and global financial integration research. This paper is just aimed to draw some lessons from the EU banking integration experience for the opening and reform of China banking system.

We first clarify the types and levels of different financial services integration. And to measure the progress and degree of financial services integration, we use both price and quantity based indicators to measure the integration development.

Then the barriers and effects of the integration are analyzed. Specifically this paper points out that the efficiency issue should be the most important consideration in the integration process. The relationship between structure, competition and efficiency is the real point in realizing the benefits of integration. Thus the market structure, consolidation, efficiency types, risks and stability issues are touched together with the EU banking integration progress.

In the third part of this paper, EU experience is drawn for the banking industry opening, reform and M&A in China. Just as the competition enhanced in the EU banking integration progress, banks in China are also facing fierce competition pressure and other problems. Many banks sell some shares to foreign investor or going publicly listed. Their main aims are raising adequate capital, increasing management level, and improve risk management ability. But are these aims guaranteed or promised by their competitive behaviors? So this paper recommends focusing on those efficiency concepts and cultivating the synthetic measures or strategies to help banks improve efficiency, such as cost, revenue, profit efficiency and risk diversification efficiency.

In conclusion the EU financial service integration procedure, banks have to spend more of their resources to competition and efficiency improvement. So when China reform and open its banking system, banks should closely relate their behaviors with efficiency improvement. And use some middle term targets to monitor the progress and make sure the behaviors are in line with the end objects, such as market efficiency and customer benefits. Only then could we establish a high efficient and healthy banking system.

**Keywords: Financial Integration, Competition Behavior, Financial Efficiency, Bank Regulation, Bank Management**

European financial integration is an important issue in both economic theoretical and empirical research, as theories and history suggest that the integration and development of financial markets are likely to contribute to economic growth by removing frictions and barriers to trade or transaction, and by allocating capital more efficiently. It is sure The European financial landscape has changed significantly over the past decade, especially since 2000, EU financial markets have been characterized by a deepening of liquidity and by an expansion in the range of financing techniques and products. For example Market-based financing has gained in importance, fuelled by a demand for market-based investments and the emergence of a population of institutional investors to service that demand. A number of profound structural factors have been driving these changes, such as globalization, financial innovation in products and institutions, technology, market openness, the relentless competition and continuous search for consolidation-based efficiency gains. Further, these changes have been facilitated by the introduction of the euro and ongoing action to remove policy impediments to the EU single financial market.

In China, since the entrance of WTO, the reform of Chinese state-owned banks and the building of health financial system have speed up; regulatory and other public policies are also implemented to solve the NPL problem and improve the competitive ability of Chinese financial institutions. But this reform is obviously difficult and need more check points to make sure the progress is in the anticipated line. So we could gain benefits from analyzing the EU financial integration experience and drawing some useful lessons for the situation in China.

## Section One EU Banking Industry Integration Review

### 1.1 Financial service integration: types and measurements

The market for a given set of financial instruments and/or services is fully integrated if all potential market participants with the same relevant characteristics: (1) face a single set of rules when they decide to deal with those financial instruments and/or services; (2) have equal access to the above-mentioned set of financial instruments and/or services; and (3) are treated equally when they are active in the market.

That is to say: Financial markets are integrated when the law of one price holds, which states that assets generating identical cash flows command the same return, regardless of the domicile of the issuer and of the asset holder.

#### 1.1.1 Types and Levels of Financial Service Integration

Depending on the scope and depth of integration, we could into several types: scale integration, scope integration, geography integration, and business operation integration.

Table 1  
Simple Types of Financial Services Industry Integration

Simple Type of Integration	Example
Scale integration	M&As of similar organizations
Scope integration	M&As among commercial banks, investment banks, and insurers
Geographic integration	Cross-regional M&As of regional providers
International integration	Cross-border M&As of organizations of national providers
Horizontal integration of distribution systems	Offer "one-stop shopping" for multiple services in a single location
Horizontal integration of production systems	Share information in underwriting loans, securities, and insurance
Vertical integration of production and distribution systems	Shift from independent agents to direct distribution of services

#### 1.1.2 The Financial Market Integration Measurement Indicators

For understanding the integration procedure well, it is important to assess (1) the current level of integration in different financial markets and, (2) whether integration is progressing, stable or regressing, and

then to judge (3) whether the integration is realizing the benefits it promised. To measure the current state of financial integration, we would use some categories of integration indicators and find out all frictions and barriers to financial integration.

The first broad category of measures includes price-based measures, which measure discrepancies in prices or returns on assets caused by the geographic origin of the assets. This constitutes a direct check of the law of one price, which in turn must hold if financial integration is complete.

The second category of integration measures is quantity-based measures, which we consider in order to quantify the effects of frictions faced by the demand for and supply of investment opportunities.

Other broad categories of measures include news-based measures, which are designed to distinguish the information effects from other frictions or barriers. Also indicators of integration could be based on household or firm choices, and legal institutional differences. Also these kinds of indicators could be used to measure the integration level of different markets. Normally including money market, bank credit market, bond market (government and corporate) and equity market. In this paper we focus on the indicators of banking integration.

- price-based indicators of banking integration based on bank charges' differentials for cross-country credit transfers, such as interest-rate differentials to analyze the degree of convergence in the inter-bank market, the mortgage market, and the short-term corporate loan market in the EU.

- quantity-based indicators of banking integration. A first set of indicators considered the importance of foreign banks in terms of the number of foreign banks present in the domestic markets and the overall share of assets and liabilities held by foreign banks. A second set of indicators considered cross-border lending and borrowing as an alternative way of achieving credit market integration.

#### ● **Price-based Measures Of Banking Integration**

Bank interest rate levels reflect both macro and microeconomic factors. The macro factors refer to market interest rate levels while the micro factors relate more to banks' pricing behavior and market power. Normally we could distinguish between four lending rates, they are short-term loans to enterprises, medium- and long-term loans to enterprises, and loans to households for consumer loans and mortgage loans.

#### **Cross-Sectional Interest Rate Standard Dispersion**

The cross-sectional dispersion measure would be informative with respect to the degree of integration. As the price of capital, interest rate dispersion should decrease as integration across markets increases. We could see from the figure that since 1999, which is the first years of Stage Three of the EMU and exchange rate risk within the euro area is removed, the dispersion seems to have decreased for medium- and long-term loans to enterprises and for mortgage loans, while remaining at roughly the same level or even increasing in the case of short-term loans to enterprises and loans for consumer credit.

#### **Banks' MARGINS**

Cabral et al (2002) provides a way to disentangle the impact of macro and microeconomic factors on interest rate that is to calculate the spreads between bank interest rates and comparable market rates. Convergence of these margins over time could be seen as signaling greater integration, while a decline in the level can be interpreted as a sign of increased competition. The following figures show high variability of the dispersion of margins at the beginning of the nineties and stabilization since 1999 for lending rates to enterprises, and consumer credit rates, while margins on mortgage rates have strongly converged since the late of the nineties.

Figure 1 Cross-sectional standard deviation of interest rates on short-term and medium-and long –term loans to enterprises

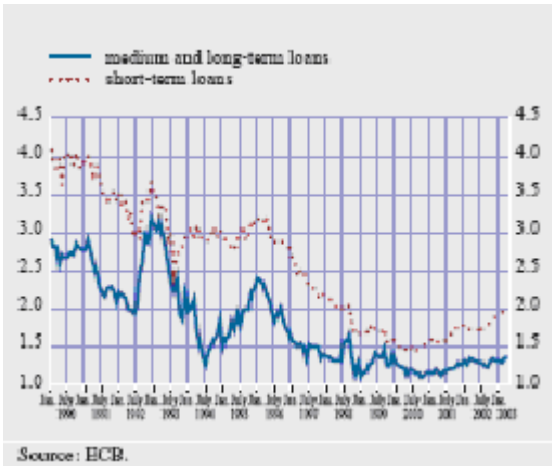


Figure 2 Cross-sectional standard deviation of interest rates on consumer and mortgage loans and time deposits



The data is since the beginning of the nineties, excluding Greece from the calculations.

Figure 3 Cross-sectional standard deviation of banks' margins for lending to enterprises



Figure 4 Cross-sectional standard deviation of banks' margins for lending to households



### ● Quantity-based Measure Of Banking Integration

As seen from the figure, loans made by banks located in the euro area to borrowers in other euro area countries, in other EU countries and in other non-EU countries as a percentage of domestic loans has increased steadily. For inter-bank loans, however, the increase is considerably larger. And as a result of substitution effect, it shows a decline in cross-border inter-bank loans outside the euro area.

Figure 5 Cross-border loans (as a percent of domestic loans)



Figure 6 Cross-border interbank loans (as a percent of domestic loans)

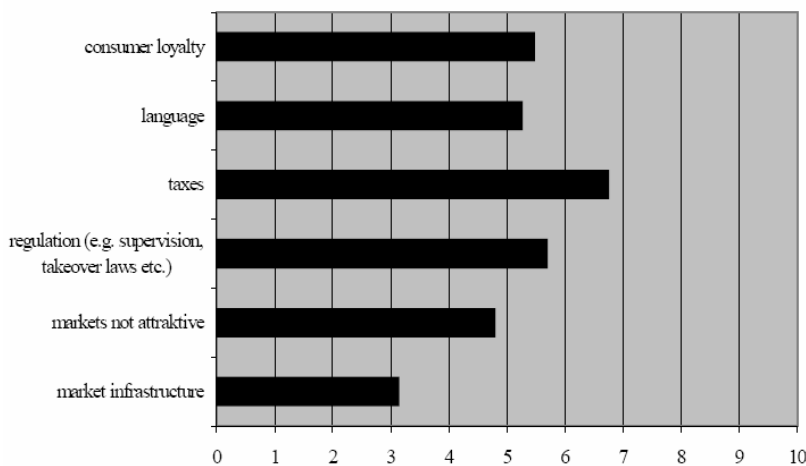


## 1.2 EU Banking Market Integration Development

### 1.2.1 Remaining Barriers

Since the integration is still in progress and has not fully realized. There are still general factors representing barriers to market entry. For instance, "natural barriers" like different cultures, language or different consumer preferences are of high relevance. In some regions or markets those natural obstacles like language or consumer preferences noticeably hinder market access more than those often referred reasons, such as market infrastructure or market attractiveness. Also there are "politically induced barriers" like different national tax-legislation or different regulations (BUCH, 2001). And tax legislation and regulations specific to each country represent a most important obstacles for all foreign entering banks. Since natural barriers may be more difficult to change, politically induced barriers could be removed by political decisions to increase the potential of future *integration* and consumer *benefits*. Therefore, politically induced barriers are discussed in more wide fields.

Figure 7 Relevance of different barriers to market access in regard to retail bank products



The importance of different barriers is measured by using a scale from 10 (highly relevant) to 1 (no relevance at all). Source: Questioning of Leading Pan-European Banking Groups (2001).

### 1.2.2 EU Financial Integration Status

- Financial integration is progressing

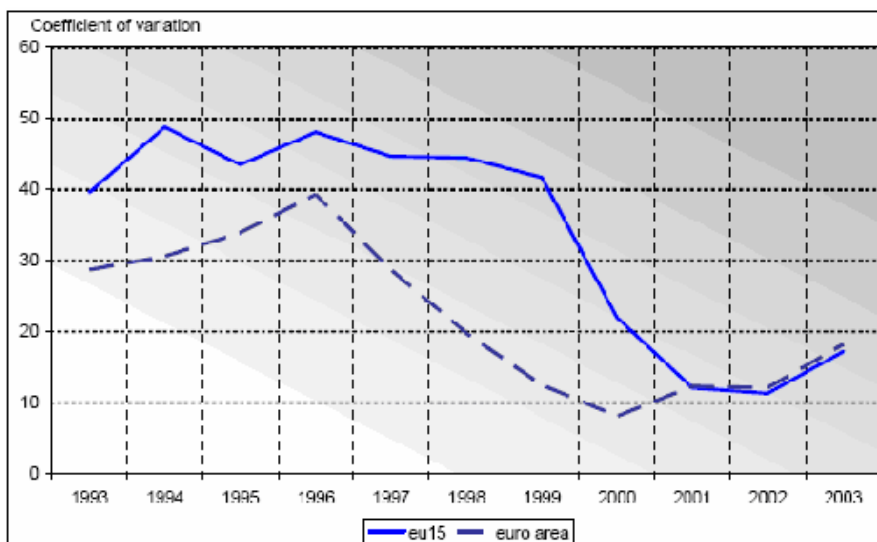
Progress is not the same in all market segments, for direct cross-border activity mainly takes place in big volume markets. Direct cross-border offer of retail financial products remains less developed as reasons can be seen from the above barriers.

Delivery of many products to the end-investor continues to be organized through local distribution networks (branches or local intermediaries). Thus establishment-based trade is relatively widespread, contributing to the emergence of a number of groups or entities with significant presence in other EU-countries than the home country.

- Banking market somewhat slowed down

The convergence process of *national bank lending rates* has trended downwards, before the introduction of the euro and boosted by the euro. But from 2001 the convergence seems to have slowed for most of the markets both for the euro area and EU15.

Figure 8 Convergence in bank lending rates: short term loans to corporations



Source: ECB and Commission Services

Convergence of interest rates may be observed independently of any significant increase in cross-border lending. For the convergence of rates could certainly be due to perceived contestability of the markets: the threat of entry by partner country institutions may be sufficient to force incumbent banks to set competitive interest rates. Alternatively, competition between local incumbents may be sufficient to force all operators in the local market to pass-through the benefits of the lower cost of capital in the wholesale markets. The remaining dispersion in euro area bank lending rates is chiefly linked to the local character of some lending activity.

## Section Two EU banking Market structure, competition, efficiency and stability in the integration

While it is generally agreed that deepening financial integration is beneficial on the whole, it is also conceivable that it may have less positive effects. For example, too much consolidation in a market segment might hinder competition. As a consequence, it is extremely important to monitor and understand the process of

financial market integration. In addition, insofar as policymakers and private agents see good reasons to promote further integration, it is important to measure accurately the competition and efficiency effects of integration in various segments of the market so that we may identify areas where further initiatives are particularly needed.

## 2.1 Market Structure

Banking sector of EU countries is characterized by high concentration, such as share of the five largest institutions in total banking sector assets and Herfindahl index. However, concentration remained relatively low in Germany, Italy, Luxembourg and UK. The capacity is also still high in some countries.

Table 2 Herfindahl index for CIs' total assets and share of the 5 largest CIs in total assets (index ranging from 0 to 10,000 and in percent)

	Herfindahl Index for CIs				Share of the 5 largest CIs in total assets			
	2001	2002	2003	2004	2001	2002	2003	2004
Belgium	1,587	1,905	2,065	2,100	78.3	82.0	83.5	84.3
Czech Republic	1,263	1,199	1,187	1,103	68.4	65.7	65.8	64.0
Denmark	1,119	1,145	1,114	1,146	67.6	68.0	66.6	67.0
Germany	158	163	173	178	20.2	20.5	21.6	22.1
Estonia	4,067	4,028	3,943	3,887	98.9	99.1	99.2	98.6
Greece	1,113	1,164	1,130	1,069	67.0	67.4	66.9	65.0
Spain	551	529	521	482	44.9	44.3	43.9	41.9
France	606	551	597	623	47.0	44.6	46.7	44.7
Ireland	512	553	562	556	42.5	46.1	44.4	42.9
Italy	260	270	240	230	28.8	30.6	27.0	26.0
Cyprus	1,304	1,330	1,302	1,365	71.5	69.3	69.7	69.4
Latvia	1,053	1,144	1,054	1,021	63.4	65.3	63.1	62.4
Lithuania	2,503	2,240	2,071	1,854	87.6	83.9	81.0	78.9
Luxembourg	275	296	315	304	28.0	30.3	31.8	29.7
Hungary	892	856	783	795	56.4	54.5	52.1	52.7
Malta	2,163	2,390	2,199	2,015	79.6	82.0	79.3	78.7
Netherlands	1,762	1,788	1,744	1,726	82.5	82.7	84.2	84.0
Austria	561	618	557	552	44.9	45.6	44.2	42.8
Poland	821	792	753	692	54.7	53.4	52.3	50.2
Portugal	991	963	1,043	1,093	59.8	60.5	62.7	66.5
Slovenia	1,582	1,602	1,496	1,425	67.6	68.4	66.4	64.1
Slovakia	1,205	1,252	1,191	1,154	66.1	66.4	67.5	66.5
Finland	2,240	2,050	2,420	2,680	79.5	78.6	81.2	82.7
Sweden	760	800	760	854	54.6	56.0	53.8	54.4
United Kingdom	282	307	347	376	28.6	29.6	32.8	34.5
MU12	544	553	581	600	39.1	39.4	40.5	40.5
unweighted average	885	904	947	966	51.9	52.8	53.2	52.9
EU25	506	521	549	569	37.8	38.3	39.8	40.2
unweighted average	1,185	1,198	1,186	1,171	59.5	59.8	59.5	59.0

Source: ECB.

Note: Aggregate concentration figures display both weighted and unweighted averages.

Table 3 EU banking sector capacity indicators relative to population (2004)

	CI	Pop. per CI	Pop. per ATM*	Pop. per employee	Population density	Assets per employee
BE	104	100,172	1,468	146	315	12,818
CZ	68	150,031	4,000	264	129	2,238
DK	202	26,748	1,876	123	125	12,368*
DE	2,148	38,408	1,613	114	231	9,244
EE	9	150,667	2,096	304	30	2,020
GR	62	178,082	2,008	186	84	3,884
ES	346	123,238	785	173	84	6,981
FR	897	69,317	1,464	146	113	9397*
IE	80	50,702	2,070	114	58	16,130*
IT	787	74,021	1,490	173	193	6,753
CY	43	17,140	1,958	87	80	4,502
LV	23	100,557	2,681	240	36	1,157
LT	74	46,472	3,484	473	53	1,171
LU	162	2,794	1,161	20	175	30,826
HU	213	47,451	3,401	279	109	1,793
MT	16	25,094	2,674	120	1,255	6,081
NL	461	35,365	2,151	141	399	14,552
AT	796	10,270	1,078	112	97	8,720
PL	653	58,448	5,051	255	118	882
PT	197	53,325	871	199	114	6,547
SI	24	83,225	1,610	172	99	2,108
SK	21	256,302	3,571	295	110	1,590
FI	363	14,400	2,604	206	15	8,371
SE	212	42,425	3,344	230	20	14,878
UK	413	145,336	1,277	117	245	13,628
MU12**	6,403	48,689	1,347	142	121	10,226
EU25**	8,374	54,966	1,523	150	115	11,077

Source: Computations based on data in Annex 1 and ECB Blue Book.

Note: Population density is expressed as inhabitants per square kilometre. Assets per employee is measured in EUR thousands.

\*: Data for the year 2003. \*\*: Unweighted average

## 2.2 Competition and Consolidation

The potential impact of integration on competition structures is dual: Integration means a better match of supply and demand on an enlarged scale; While at the same time integration also driver for a consolidation process.

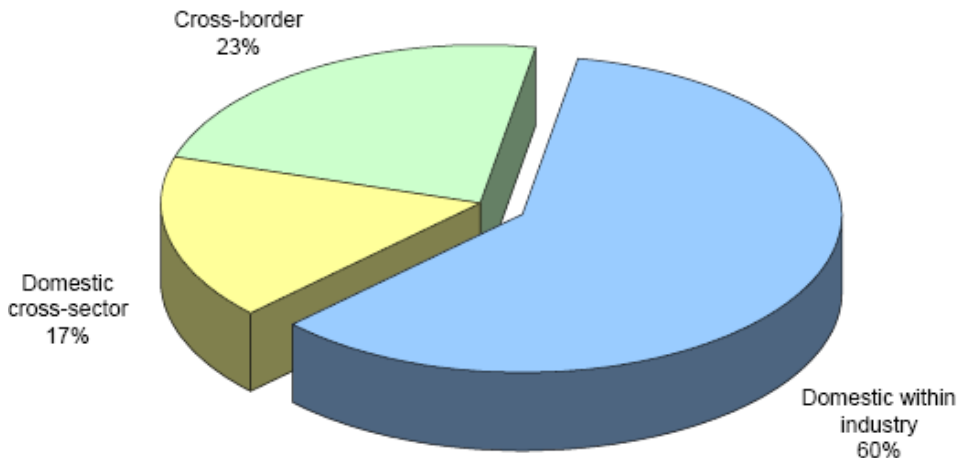
Three patterns of competitive structures have been identified. They coexist in the different market segments and evolve as the integration process proceeds. Three patterns of competition structures are emerging: Competition within national markets; Multi-domestic competition with cross-border entities; Competition on an EU basis.

### 2.2.1 Competition Within National Markets

Integration taking place in other parts of the financial sector may, however, encourage consolidation and exert upward pressure on concentration levels of the concerned market segment, thus resulting in the creation of national champions. This is typically the case for the EU retail banking sector.



Figure 9 M&A activities involving EU credit institutions



Source: Thomson Financial

### 2.2.2 Multi-domestic Competition with Cross-border Entities

In a second structure, customers are confined to their national markets, which are dominated by a few, large companies. Yet, under these circumstances, some are part of pan-European groups. Although consolidation is taking place at the domestic level, it chiefly happens on a cross-border basis through acquisitions, resulting in significantly increased concentration levels at pan-EU level. From a company perspective, an important share of business takes place in countries other than the home country. From a customer point of view, choice does not improve as no cross-border provision of services is taking place.

### 2.2.3 Competition on an EU-wide basis

The third competitive structure is the one traditionally associated to a fully integrated market. It is characterized by the presence of companies operating in several EU countries, either through branches or directly via cross-border provision of services. New entrants from outside can easily acquire a significant market share, indicating the openness of the market to new entrants.

### 2.2.4 Consolidation Behavior

The data shows that the number of credit institutions in the EU has been declining since 1997, and in 2004 it dropped by a further 2.8%. In 2004 the total number of EU credit institutions stood at 8,374. Mergers & Acquisitions activity has been declining since 1999, and this trend continued in 2004 and the first half of 2005. This suggests that consolidation is proceeding, albeit at a decelerating pace. This decline can be explained mainly by a slowdown in domestic M&A activity. By contrast, cross-border M&As have increased relative to the period 1993-1998, both in absolute and relative terms, accounting for about 30% of the number and 24% of the value of all deals in the more recent period, up from 20% in the earlier period (Figure 10).

Table 4 Number of credit institutions and local units (branches) of CIs

	Number of credit institutions				Number of branches			
	2001	2002	2003	2004	2001	2002	2003	2004
Belgium	112	111	108	104	6,168	5,550	4,989	4,837
Czech Republic	172	83	77	68	1,751	1,722	1,670	1,785
Denmark	203	178	203	202	2,376	2,128	2,118	2,021
Germany	2,526	2,363	2,225	2,148	53,931	50,868	47,351	45,505
Estonia	7	7	7	9	210	198	197	203
Greece	61	61	59	62	3,134	3,263	3,300	3,403
Spain	366	359	348	346	39,024	39,021	39,762	40,621
France	1,050	989	939	897	26,049	26,162	25,789	26,370
Ireland	88	85	80	80	970	926	924	909
Italy	843	821	801	787	29,267	29,948	30,501	30,946
Cyprus	43	46	47	43	528	521	506	500
Latvia	23	23	23	23	590	567	581	583
Lithuania	54	68	71	74	156	119	723	758
Luxembourg	189	177	169	162	274	271	269	253
Hungary	230	225	219	213	2,950	2,992	3,003	2,987
Malta	17	14	16	16	58	55	58	63
Netherlands	561	539	481	461	4,720	4,269	3,883	3,649
Austria	836	823	814	796	4,561	4,466	4,395	4,360
Poland	711	664	658	653	4,080	4,302	4,394	5,006
Portugal	212	202	200	197	5,534	5,390	5,440	5,408
Slovenia	69	50	33	24	717	721	720	706
Slovakia	20	20	21	21	1,052	1,020	1,057	1,113
Finland	369	369	366	363	1,571	1,572	1,564	1,585
Sweden	149	216	222	212	2,040	2,040	2,046	2,034
United Kingdom	452	451	426	413	14,554	14,392	14,186	14,001
MU12	7,213	6,899	6,590	6,403	175,203	171,706	168,167	167,846
EU25	9,363	8,944	8,613	8,374	206,265	202,483	199,426	199,606

Source: ECB.

Note: For SI, CIs include banks, savings banks and savings and loan undertakings (cooperative banks). Before 2004 the savings and loan undertakings did not have the Bank of Slovenia authorisation and were not obliged to report the number of employees and local units (branches) and hence, the former figures are without the savings and loan undertakings. For LT, the figure for CIs includes small credit cooperatives (51 in 2004) and the number of branches includes small non-registered local units (since 2003). For CY, data refer to domestic banks and international banking units but exclude cooperative credit institutions. For CZ, credit unions are excluded.

### 2.3 Market Efficiency

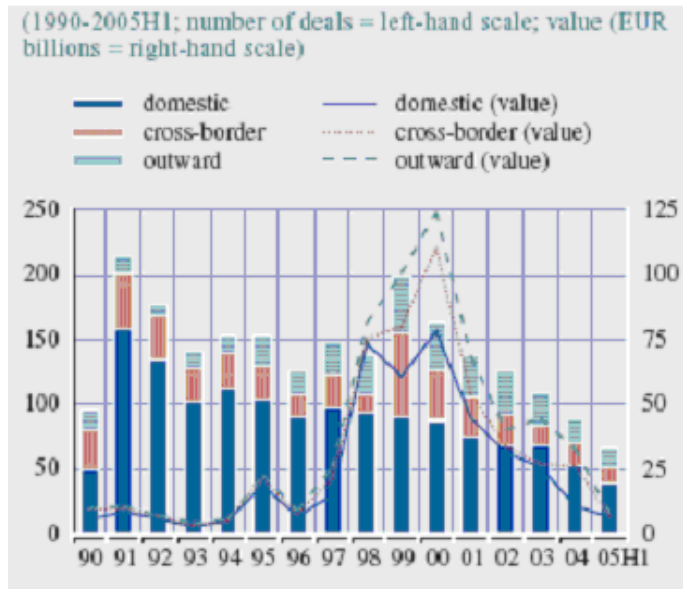
Integration is expected to deliver benefits in terms of: Economies of scale and scope; Better risk allocation; Innovation and more choices.

In EU financial market, overall efficiency has improved (as profitability and cost-to-income ratio shows), even in less integrated segments; the integration process spurred innovation in all segments, but with a more different scenario. Banking market gains some middle level efficiency improvement and innovation, while still has some higher market power.

**Economies of scale, scope and cost efficiency.** Total costs, as a share of total assets, still declined for all bank categories. Developments varied among the components of total costs. For example, service providers can realize efficiency gains at a rather early stage of the integration process through the process of back-office integration. While the share of staff costs declined only marginally, and this left banks relying on administrative and other costs to reduce their total costs. This may imply limited scope for future cost-efficiency gains. As banks in the euro area have relied rather heavily on cost-cutting to support profitability over the last few years, the exhaustion of this source of profitability may exert pressure on results

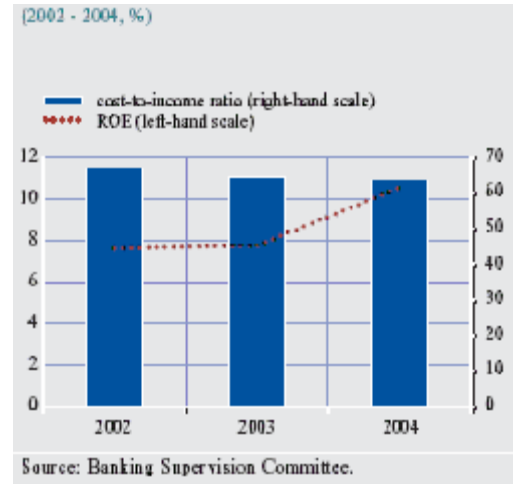
in the future.

Figure 10 Number and value of banking sector M&As in EU-15



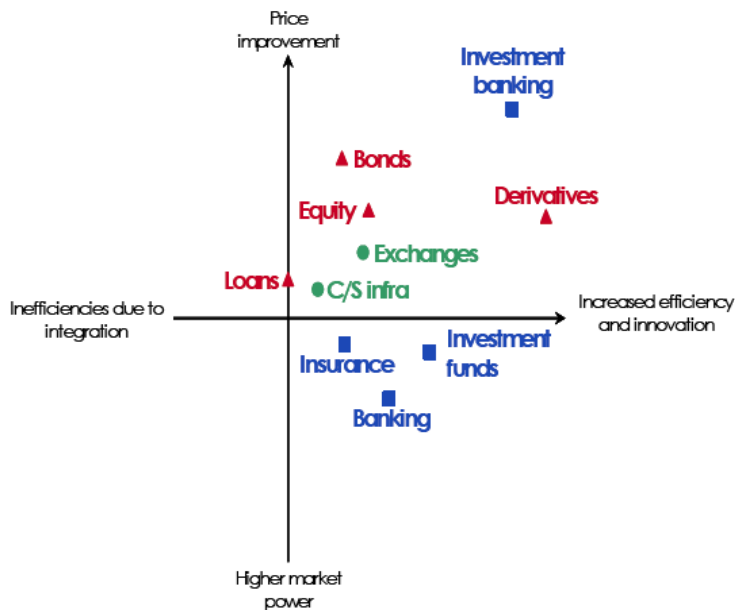
Source: Thomson Financial SDC.  
 Note: 2005 figures are annualised. Cross-border M&A refers to transactions in EU-15 involving a non-domestic acquirer. Outward M&A refers to non-EU acquisitions of EU-15 banks (only up to 2005Q1). The number of deals is shown on the left-hand scale. Value of deals is represented as stacked lines on the right-hand scale, but is missing for a number of deals.

Figure 11 profitability and cost-to-income ratios of euro area banks



Source: Banking Supervision Committee.

Figure 12 EU Financial Integration Efficiency Spectrum



Source : DG Internal Market

**Product availability and risk efficiency.** Under integration, the resulting wider pool of participants will increase the variety of the risk profiles and facilitate the risk diversification, resulting in a possible prices reduction when compared with the smaller pre-existing markets. This improves not only corporate profitability but also enhances product availability.

For instance, the development of integrated money markets allows banks to have a more efficient and cheaper liquidity management, and thus has consequences for the price of domestic risk management service. Risk could thus be diversified at lower prices and in a larger market.

**Innovation and dynamic efficiency.** Market integration is expected to foster innovation, not only in terms of new methods or tools to improve existing products but also in terms of new products and services. For instance, the initial fixed costs implied by the developments of new and more efficient infrastructures are more easily distributed among a larger number of participants. Therefore, such developments clearly require that markets reach a “critical size”, in order for them to enhance market efficiency and foster demand for existing, as well as new, services and products. For the market capacity is once a key issue in comparing the competitive advantages of Europe with US. So increased liquidity, coupled with wider possibilities of risk diversification, also opens up new opportunities for investments in less standardized products, such as structure finance, which help London gain its strength in global financial center competition.

#### **2.4 Market Stability**

The increased scale of financial institutions implies that many national markets have become vulnerable to a few, systemic institutions; also though the resulting cross-border and cross-sector inter-linkages normally contribute to an efficient distribution and allocation of risk across the EU but may propagate financial contagion across sectors and countries. So financial stability concerns soon become an issue of European interest.

**Scale developments and too big to fail.** In recent years, the EU financial sector has been through a strong consolidation phase which has changed the structure of the financial system towards larger and more complex financial institutions and group structures. A growing number of financial institutions have attained a critical size, allowing them to monitor their risks with more advanced tools in a more efficient way. At the same time, the stability of the EU national markets has become increasingly dependent on a few systemic institutions.

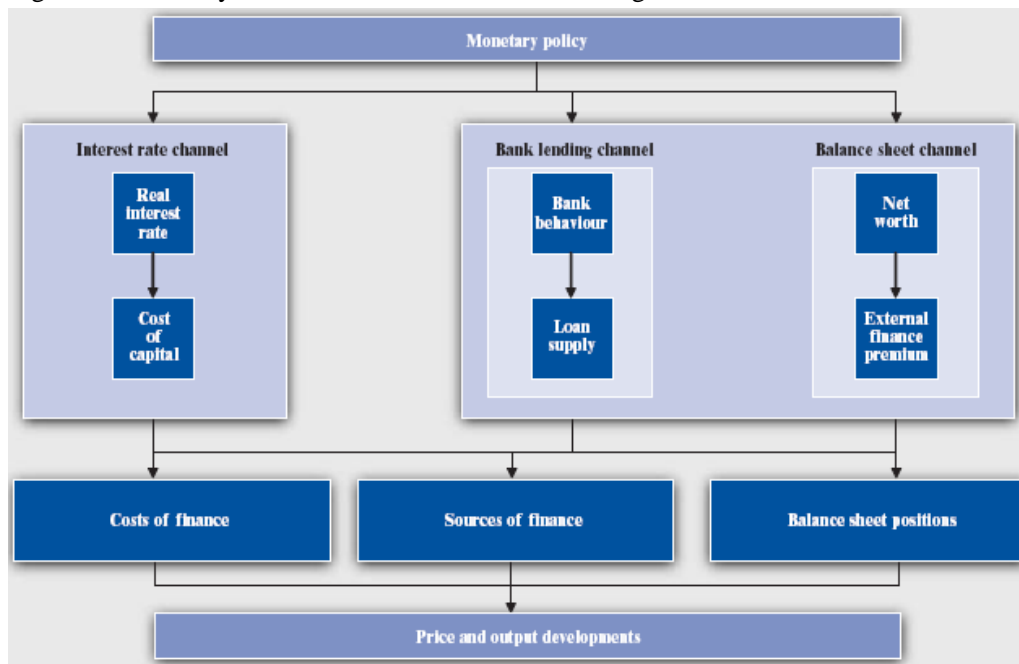
**Conglomeration and cross-sector linkages.** One of the most striking developments in European financial markets in recent years is the emergence of a tier of complex groups and conglomerates as European financial institutions have implemented broader diversification strategies to evolve away from the traditional banking/insurance split, which also makes cross-sector risk or crisis contagion possible. These strategies have involved the creation of financial conglomerates spanning a combination of banking, insurance, investment services and collective portfolio management. As a weighted average, financial conglomerates account for approximately 30% of the deposits and 20% of premium income in EU15 Member States. These years, cross-sector links have been reinforced in recent years through the development of instruments for credit risk transfer and hedging.

**Cross-border linkages.** As integration progressing, cross-border linkages are high in financial markets. These well-developed risk transmission channels at pan-European level normally contribute to the efficient distribution of risks, which has a stabilizing impact. However, the transmission channels are also potential vehicles of cross-border risk contagion. Financial linkages and Ownership linkages both contribute to constitute risk transmission channels cross border.

## 2.5 Monetary Policy Transmission Effects

Monetary Policy is transmitted through the interest rate and the credit channel. These transmission channels operate via the costs and sources of finance and the balance sheet position of non-financial corporations, households and financial intermediaries. It is surely the monetary transmission channels have changed with the integration of banking industry.

Figure 13 Monetary transmission channels and financing conditions

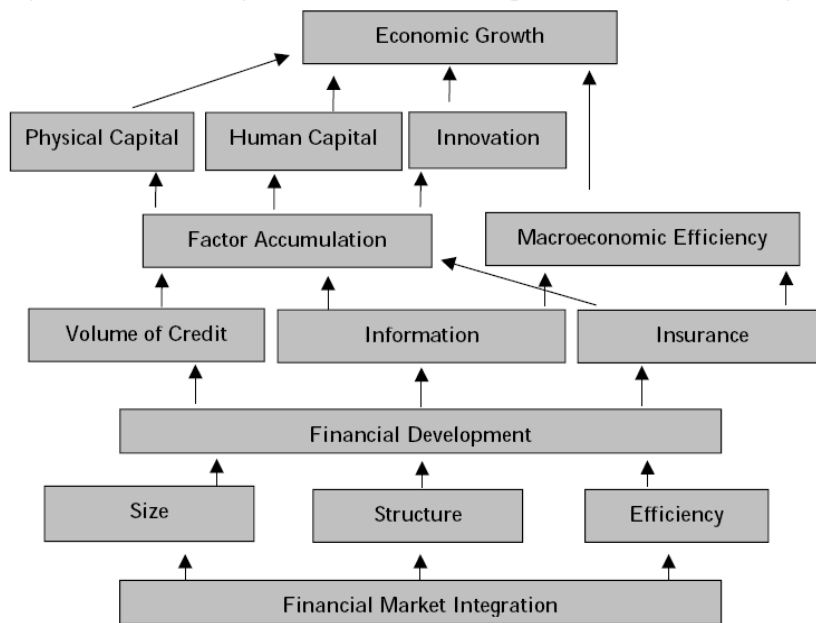


## Section Three Lessons for Banking Reform and Opening in China

Financial integration contributes to the economy in two ways, they are increasing the accumulation of input factors and improving the resources allocation efficiency. As we know the degree of financial development can be measured in terms of different components, namely the size, the structure and the efficiency of the financial sector. Using size we measure the depth of financial intermediation. Using structural indicators we try to know the competition behavior and the allocation of resources. Using efficiency indicators we could find the competition results and whether the benefits have realized.

But the transmission system among the above frame is not naturally guaranteed. And one of point we have concluded from the progress of EU banking integration is that contestability is more important than structure. From structure changes, we should pay more attention to the competition behaviors observed in the market development. And then whether the competition has realized the efficiency improvement objectives, such as in cost efficiency, profit efficiency, risk management efficiency and dynamic innovation efficiency.

Figure 14 Economic growth, financial development and financial integration



Source: Markus Neimke, Carsten Eppendorfer, Rainer Beckmann 2002

### 3.1 Exploring Into the Black Box of SCP Model to Determine Bank Competition

This issue of competition is of important interest for banking opening and reform in China, as this process has been motivated by the opinion that its benefits through the reduction of monopoly rents and the increase of cost efficiency would exceed its potential losses. Indeed, an increase in banking competition may weaken financial stability, as there is a financial interdependence between banks due notably to interbank deposits and loans. Furthermore, a heightened competition may incite banks to take excessive risks when granting loans, resulting in a higher probability of bankruptcy (e.g. Besanko and Thakor (1993)). It is therefore important to provide evidence regarding the efficiency gains expected from the increasing competition to check if benefits of banking competition really exceed costs.

The literature on the measurement of competition can be divided into two major streams. The structural approach to model competition embraces the Structure-Conduct-Performance (SCP) paradigm and the efficiency hypothesis. The SCP investigates whether a highly concentrated market causes collusive behavior among larger banks resulting in superior market performance, whereas the efficiency hypothesis tests whether it is the efficiency of larger banks that enhances their performance.

As response to the theoretical and empirical deficiencies of the structural models, non-structural models of competitive behavior have been developed namely the Iwata model, the Bresnahan model, and the Panzar and Rosse (P-R) model. Thus, the degree of competition in the banking system should be measured with respect to the actual behavior of banks. And the actual behavior should be related not only to banking market structure, but also to entry barriers (Besanko and Thakor 1992), including on foreign ownership, and the severity of activity restrictions, as those can limit the degree of intra-industry competition. Furthermore, the degree of competition from other forms of financial intermediation (capital markets, non-bank financial institutions, insurance companies) will play a role in determining banking system competitiveness.

### 3.2 Bank Reform and Opening Lessons from EU Experience

The sheer size of banks makes success of reform imperative, since China entered WTO, solid progress has been made in improving bank supervision and regulation, reducing NPLs, increasing the capital adequacy ratios,

governance system reform, performance targets and risk management guidelines for banks.

Focus on the relationship between structure, competition behaviour and efficiency, while not too much debate only on the structure. Just as mentioned above, we should look into the black box of the opening and reform procedure and increase transparency in the decision, and then it will be more reasonable to have a discussion and debate platform. For example, to foreign banks, normally they could choose from several entering strategies: Direct cross-border sales; Branches and subsidiaries; Mergers and acquisitions. When foreign banks buy the shares of state-owned banks, many disputes arouse on how much the price is reasonable. We may take their share buying activity as a way to change the structure of the banking industry in China, and one of the backing reason to sell ownership is that state-owned banks could improve their efficiency through foreign advanced management skills and experiences. But how could the black box between structure and efficiency be explained and guaranteed is not communicated to people. So the discussion or dispute on the state-owned banks shares selling is much more due to the absence of transparency, not only the absolute price level. As profit is determined by many issues, even profit could not be singly used to prove the correctness of the selected reform or opening measures. Theory also suggests that performance measures, such as the size of the banking margins or profitability, do not necessarily indicate the competitiveness of a banking system. These measures are influenced by a number of factors, such as a country's macro-performance and stability, the form and degree of taxation of financial intermediation, the quality of country's information and judicial systems, and bank specific factors, such as scale of operations and risk preferences. As such, these measures can be poor indicators of the degree of competition.

**Time-bound restructuring plans.** EU and other international experiences show time-bound plans critical to success of bank reform. Such as in the reform of Chinese state-owned banks, government gives banks a mandate to operate on a commercial basis with modern corporate governance. Stipulating commercial focus, like independent boards of directors, sound internal control and risk management, comprehensive external audits, foreign strategic investors and recapitalization, insulate them from central and local political influence. Also the government and supervision institutions are reforming important market infrastructures, like strengthening supervision and regulation, modernize tax regime (Allow banks to deduct specific loss provisions, reduce or eliminate business tax), improve legal system, facilitating measures to deal with interest rate and exchange rate liberalization and other innovation encouraging activities, etc.

**How to judge relationship banking and overcapacity in banking.** From EU experience, we know that the implementation by the bank of a customer relationship to gain some information on the borrower is a necessary measure for banks to reduce the problems related to information asymmetries. This should not be confused with the Guanxi Lending. It is true that the ownership structure of domestic banks often leads to lending practices that are far from sound. Local governments and shareholders of non-financial companies often control domestic banks. Opening the domestic financial sector to foreign competition helps to mitigate these conflicts of interests and bring Sounder Lending Practices, advanced operation and management abilities. Also, banking activities require sunk costs, as banking markets have high barriers to exit. These barriers come from the need to implement a customer relationship through a network of branches, but also from the fact that a loan portfolio is a rather illiquid asset as the potential buyers are not able to know its real value. Sunk costs have been observed to lead to excess capacities on EU banking markets (Davis and Salo 1998). Therefore, these overcapacities of banking markets are endogenous barriers to the entry of new competitors. And this overcapacity should not be simply related to low efficiency problem.

**Pay attention to risk and stability issue brought by competition.** Just as regulatory and strategic risks are among the most mentioned risks faced by euro area banks in the integration. Chinese banks should also pay

much more attention to the regulatory and strategic risks when making reform and opening. And competition may in some circumstances transit to performance pressure, make banks to loosen the credit approval standards.

Figure 15 sources of risk for euro area banks

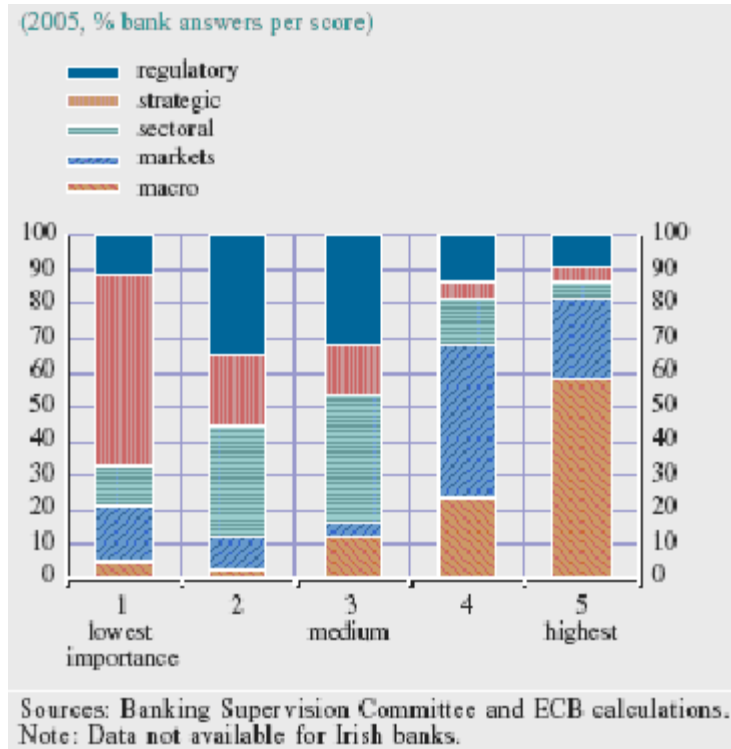


Figure 16 Changes in credit standard applied to the approval of loans or credit line to households for house purchase

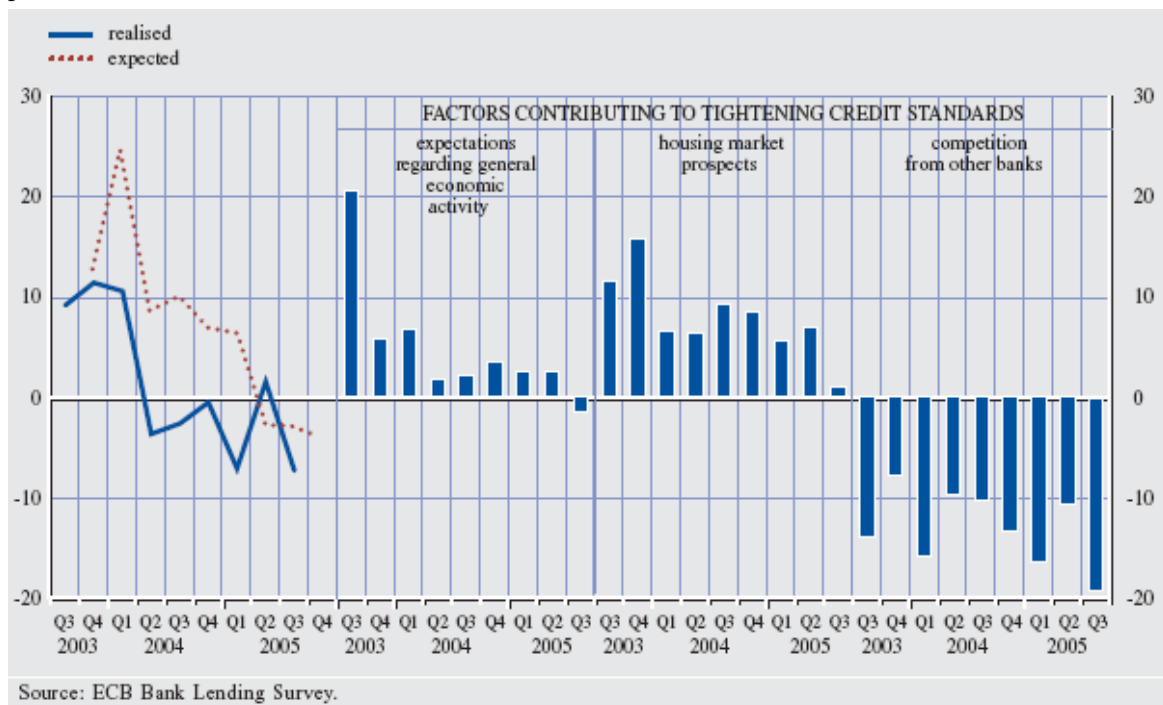
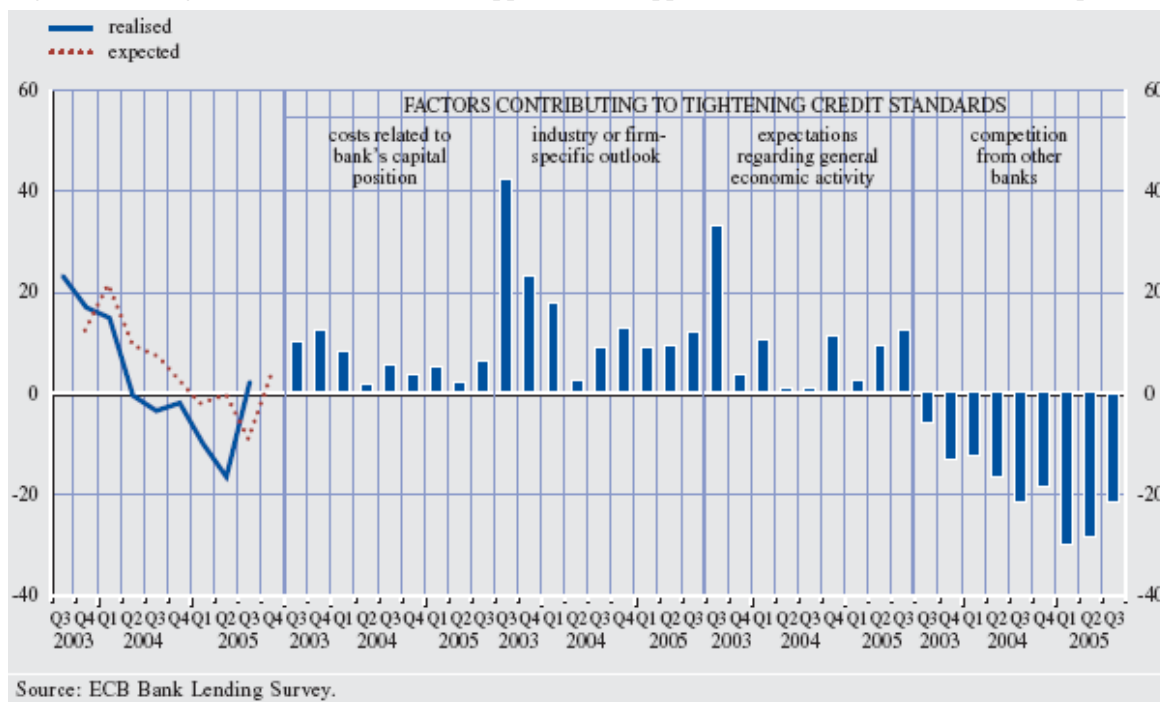




Figure 17 Changes in the credit standards applied to the approval of loans or credit line to enterprises



### 3.3 Different Regulation Environment, Competition Behavior and Strategic Management, Shanghai Market Case

Due to different competitive advantages and regulatory environment, domestic and foreign banks in Shanghai (which is the most open region in financial sector of China) show quite different behavior and performance. Also we could find many other reasons behind the difference between domestic banks and foreign ones, such as different business strategy, risk management framework, performance pressure, and incentive system.

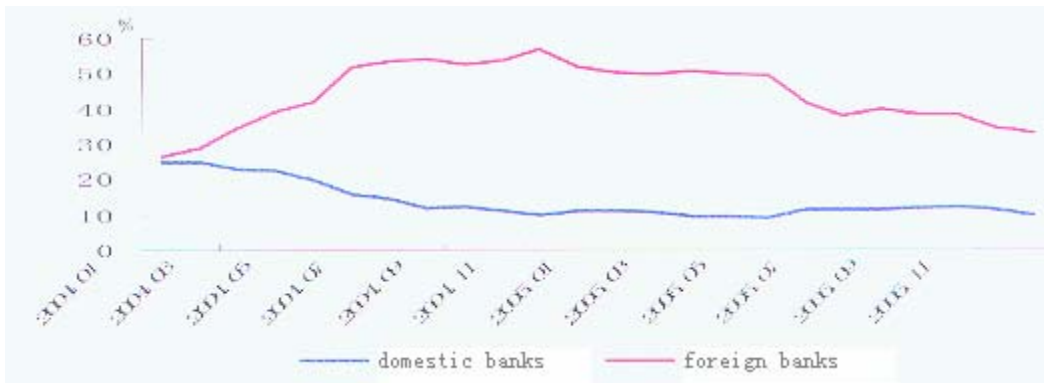
**Competition under different regulatory environment.** Foreign financial institutions undertake different regulatory and macro economic policies adjusting obligations with domestic banks. For example in 2004 and 2005, due to the macro economy adjusting, in Shanghai area loans of domestic banks only increased 9.3% in 2005, while the growth of foreign financial institutions is 32.8%, much higher and show no negative effects of the adjusting. Thus the market share of foreign financial institutions in loan market increased 4.4% and reached 11.9%, a big jump. And in foreign currency loan market, the share is as high as 54.8%.

Table 5 Market share of foreign financial institutions in Shanghai (2001–2005)

	2001	2002	2003	2004	2005
Loan market share	9.4	7.7	7.5	10.1	11.9
Deposit market share	2.5	2.7	3.4	4.2	4.7
Asset share	--	--	10.1	12.2	12.8

Source: People’s Bank of China Shanghai Headquarter

Figure 18 compare of loan growth between domestic and foreign financial institutions in Shanghai (2004.1-2005.11)



Source: People’s Bank of China Shanghai Headquarter

**Different loan behavior.** The loan of domestic banks is more concentrated in real estate and infrastructure with government background, while foreign banks diversify loan in many manufacturing industries. This obviously shows the advantages of domestic and foreign banks in different fields, and different risk management abilities or preferences. As foreign banks have more loans in foreign currency and multi-national companies, their loan margin is lower than domestic banks. DeYoung and Nolle (1996) have argued that foreign banks sometimes are relatively less profitable, because they value growth above profitability in the beginning period of entrance.

Table 6 compare of NPL ratio and loan margin between foreign and domestic financial institutions

	Foreign		Domestic	
	2005	2004	2005	2004
NPL ratio	0.59	0.79	2.39	3.96
Margin on loans	1.18	1.08	2.35	2.1

**Strong advantages of foreign banks in foreign currency business.** The deposit and loans of foreign financial institutions increased faster than domestic ones. With the enlargement of opening fields and levels, foreign financial institutions put much more resources in the RMB business, in Shanghai foreign financial institutions increased 44.4% and 42.9% in deposits and loans amount in 2005. Foreign financial institutions especially have competitive advantages in foreign currency business, in 2005 the increase of foreign currency deposits and loans have occupied 97% and 91% of total increase in Shanghai area.

**Opening and reform bring innovation and competition.** Also the regulatory authorities speed up the financial innovation progress, with more innovative products in used in market, such as commercial paper, asset securitization, the financial structure of corporations has improved. Also with the products of forward and swap, the interest rate and currency risks are more possible to hedge.

Table 7 Financing structure of non-financial institutions in Shanghai, 2000-2005

	Financing amount (100 million RMB)				share (%)		
	Loans	Bonds	Equities	Total	Loans	Bonds	Equities
2000	545.2	36.5	227.9	809.6	67.3	4.5	28.2
2001	1221.3	0	30.4	1251.8	97.6	0	2.4
2002	1767.5	25.0	58.4	1850.9	95.5	1.4	3.2

2003	2584.9	59.5	68.2	2712.6	95.3	2.2	2.5
2004	1966.9	0	74.1	2041.0	96.4	0	3.6
2005	1785.9	271.0	353.1	2410.1	74.1	11.2	14.7

Source: People's Bank of China Shanghai Headquarter, and Shanghai Statistics Bureau. The equities financing of 2000-2002 only contains domestic IPO, while the amount include oversea IPO in HK regions and foreign countries

In simple conclusion, when we reform and open the banking industry, we need focus more on the competition behaviors and make sure they improve the quality and availability of financial services in the domestic financial market, and enabling the application of more modern banking skills and technology. Also we should serve to stimulate the development of the underlying bank supervisory and legal framework, as the regulation competition quite critical in the integrating financial world.

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