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## WORKING PAPER SERIES

### GRADUALISM AND THE EVOLUTION OF THE FINANCIAL STRUCTURE IN CHINA

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**Abstract:** In this paper we set out to show that China has certain significant *specificities* in terms of the *gradual* (i.e. “*step by step*”) approach it has followed in implementing reforms affecting its financial system. This is in contrast with the traditional *shock* or “*big bang*” therapy adopted by other emerging or transition countries, on the basis of what is known as the *Washington Consensus*, which notoriously prescribes the immediate, wholesale introduction of *market-oriented* systems through large-scale liberalisations and privatizations. Nevertheless, as we will endeavour to demonstrate the process of reform of China’s financial system has not prevented problems of *financial fragility* from arising in the banking sector, and of *corporate governance* for firms, such as to threaten the very sustainability of growth in the future.

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## Introduction

The vigorous economic growth shown by China, beginning with implementation of the first reforms in 1979 and still in progress, is drawing increasing attention from scholars and policy makers alike. In fact, we have seen a great many studies setting out to analyse the ‘take-off’ and development of the Asian giant (cf. Sachs-Woo, 1997). Nevertheless, in comparison with the vast literature concentrating mainly on the ‘*real sphere*’, the contributions examining the ‘*financial sphere*’ and, above all, the *structure* of its financial system remain relatively few (cf. Boyreau-Debray and Jin-Wei, 2005). Thus the recent contributions by Allen et al. (2002; 2005; 2007) prove particularly important, constituting to date a benchmark for the analysis of China’s financial system. In the light of the analyses presented in these studies the Chinese economy appears a veritable puzzle: in fact, despite a *financial system* as yet not greatly developed nor particularly *market-oriented*, it has shown truly impressive growth rates. One aspect that Allen and his collaborators rightly stress is the role played by *informal* financing channels – that appear in part to have substituted the traditional channels – in fostering the dynamic development of firms belonging to what is known as the *hybrid sector*<sup>1</sup> (non-state, non-listed firms).

Bearing these observations in mind, in this paper we set out to demonstrate that China shows certain significant *specificities* also in terms of the *gradual* (i.e. “*step by step*”) approach it has followed in implementing reforms affecting its financial

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<sup>1</sup> This is a highly variegated sector consisting (cf. Allen et al., 2007) : 1) of private *non-quoted firms*, controlled by Chinese citizens as well as investors in Taiwan or Hong Kong and foreign companies and citizens; 2) *collective firms*, where ownership is often a mix between public (government and local institutions) and private.

system<sup>2</sup>. Actually, this can be seen to contrast with the traditional *shock* or “*big bang*” (cf. McMillan-Naughton, 1992; Chen-Jefferson-Singh, 1992; McMillan, 1994; Stiglitz, 2002) therapy adopted by other emerging or transition countries<sup>3</sup>, on the basis of what is known as the *Washington Consensus*, which notoriously prescribes the immediate, wholesale introduction of *market-oriented* systems through large-scale liberalisations and privatizations.

With analysis of the *gradualism* applied in implementing reforms regarding the financial *structure*, the evolution and development of the latter over the years can be brought into full evidence, and comparison made between the so-termed “*bank-based*” and “*market-based*” systems. As we will endeavour to demonstrate, although it has so far ensured a certain *macroeconomic stability*, the process of reform of China’s financial system has not prevented problems of *financial fragility* from arising in the banking sector, and of *corporate governance* for firms, such as to threaten the very sustainability of growth in the future if the right steps are not taken (cf. OECD 09/2005; Yueh, 2004).

The paper is structured thus: in section 1 we consider the literature dedicated to *comparative financial systems*; in section 2 we go on to the origin and development of the reforms in the Chinese system, highlighting the aspects of *gradualism*; in section 3 we analyse the *evolution* of the *financial system structure* in China; section 4 addresses the problems of *financial fragility* and *corporate governance* in relation to the financial system; in section 5 we draw our conclusions.

## **1. The relevance of the financial structure**

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<sup>2</sup> It is a well-known fact that *gradualism* has characterised a good part of the reforms affecting the Chinese economic system (cf. McMillan-Naughton, 1992).

<sup>3</sup> For example, Russia and the ex-socialist countries of Central-Eastern Europe.

By *financial structure* is traditionally meant the mix of tools, institutions and markets that characterise a country's *financial system*<sup>4</sup>. Consideration of this aspect becomes crucial once we depart from the “ideal world” of Arrow-Debreu<sup>5</sup> to analyse a concrete economy characterised by incomplete markets, the presence of extremely onerous transaction costs and imperfect, asymmetric information between *insiders* and *outsiders* to the firm – all quite striking aspects, and all the more so when we consider an *emerging* and *transition* country like China<sup>6</sup>.

With the aim of limiting the problems mentioned above, the *financial system* performs a number of various functions (Levine, 1997): it mobilises saving, allows for the diversification and sharing of risk; it produces and disseminates information; it allows for the monitoring of managers and enhances *corporate governance*; and it facilitates investments and innovation. Thus we see depending on the financial system both *efficiency* in the allocation of resources and the *stability* of the economic system (cf. Allen et al., 2004), and so the *growth* of an economy<sup>7</sup>.

As the reader will probably know, the literature on *comparative financial systems* is still characterised by the classical *dichotomy* (cf. Allen-Gale, 1999; Levine, 2002) contrasting the *bank-based view* with the *market-based view*. The two topologies of *financial structure* are in fact taken to be *alternative*, having found

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<sup>4</sup> This remains true despite the process of intensive globalization of the last few years: from the point of view of the structure of the financial system, in fact, many countries still show substantial differences (cf. Allen et al., 2004).

<sup>5</sup> In a perfect capital market, financial structure proves irrelevant to real decisions, as demonstrated by Modigliani and Miller in their famous 1958 theorem; moreover, in such a situation the role of the financial system would give way to the action of the investors themselves (cf. Campbell - Cracaw, 1980; Fazzari-Papadimitriou, 1992).

<sup>6</sup> Obviously, the degree of uncertainty and the ‘imperfections’ obtaining within an economic system characterize both the developed and the developing countries. Nevertheless, as we shall seek to demonstrate with reference to China, these aspects have particular weight in the developing countries, especially during the early stages of development (Cf. Mishkin, 1996; Sau, 2003).

<sup>7</sup> There are, in fact, models of *endogenous* growth that take into account the role of the financial system (cf. Pagano, 1993)

application in such different economic systems as those of Germany and Japan (*bank-based systems*), on the one hand, and the United States and the United Kingdom (*market-based systems*), on the other.

Upholders of the *bank-based view* lay particular stress on the way a monetary economy<sup>8</sup> develops thanks above all to the action of *coordination* guaranteed by the presence of certain institutions, among which the credit agencies play a decisive role. In fact, the commercial banks play a very special and indeed central *informative* role (Stiglitz, 1985): they are the “social accountants”; they perform the activities of *screening* potential clients and *monitoring* in the case of clients obtaining credit; finally, they not only *acquire* but also *produce* information<sup>9</sup>.

Thus the commercial banks should be the most efficient intermediaries in the allocation of resources since they are better equipped than others to minimize the costs associated with information asymmetry (i.e. the standard debt contract is optimal; cf. Diamond, 1991).<sup>10</sup>

On the other hand, advocates of the *market-based view* stress the virtues of particularly extensive, widespread and liquid *financial markets* (in shares, bonds and private equity) (Boot-Thakor, 1997; Allen-Gale, 1999). In fact, it is these that most favour the financing and constitution of *new* firms, and thus of the more innovative projects (Holmstrom and Tirole, 1993). They also enhance *corporate control*, triggering, through the possibility of *takeovers*, the generation of

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<sup>8</sup>I.e. one that rests on a complex system of financial debit and credit interrelations in a context characterized by imperfect, asymmetric information.

<sup>9</sup> Opening a line of credit to an entrepreneur is in fact a “signal” of reliability given to society, favouring generation of long-period relations between the firm itself, its clients and its suppliers (Boot et. al., 1993; Boot-Thakor, 1997). The *bank-based view* stresses that these functions cannot be performed by the “securities” markets due to occurrence of the “*free rider*” phenomenon (cf. Stiglitz, 1985): in practice, the acquisition and sale of information would be thwarted by the risk that someone might appropriate the information without bearing any cost. This implies that the two phenomena of *moral hazard* and *adverse selection* are indeed hard to eliminate.

<sup>10</sup> With analysis of the “informative” role played by the banks it was in fact attempted to give an *endogenous* foundation for the very presence of these intermediaries. The function they perform would not give rise to the “free rider” phenomenon since they provide *internal debt* contracts, providing for the possibility for the creditor to have access to or even take part in the decision-making process, but without the possibility to negotiate such activities.

disincentives to opportunistic action by the managers (Jensen-Murphy, 1990); finally, they offer a way to avoid many of the problems associated with the close (i.e. “*relationship-based*”) link that forms between banks and firms, which can give rise to frequently collusive behaviours apt to harm other creditors and hamper efficient *corporate governance* (Wenger-Kaserer, 1998).

However, some more recent contributions – i.e. the *financial service view* - set out to demonstrate that both systems (*bank-based* or *market-based*) show both advantages and disadvantages, and that it is therefore impossible to state (cf. Levine (2002)) that one system is *universally* better than the other<sup>11</sup>. According to the “*financial service view*” (Merton and Bodie, 1995; Levine, 1997) the *bank-based* and *market-based systems* are in fact *complementary* rather than *alternative* in fostering the efficient allocation of resources and economic growth. Thus the sheer contraposition of the two approaches is superseded, and the role of both the financial markets and the banks stressed in limiting the *imperfections* and problems of *coordination* present in a given economic system.

In this respect Tadesse (2002, 2005) demonstrates that the *optimal financial structure* is not to be viewed in a *static* way since it depends on a set of *country-specific factors* in a given period, including:

- a) the development of the *institutions* and *legal system* within which the banks and markets operate (cf. La Porta et al., 2002; Rajan-Zingales, 1998);
- b) the incompleteness and *imperfections of information* marking the economic system (cf. Boot-Thakor, 1997);
- c) the “technological” characteristics of the firms to be financed, or in other words the structure of their *industrial system* (i.e. *traditional firms* vs. *innovative firms*, cf. Allen-Gale, 1999; Rajan-Zingales, 2001).

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<sup>11</sup> In fact, both the *bank-based* (Germany and Japan) and the *market-based systems* (USA and UK) have shown fairly health average growth rates.

If we take this perspective into account, in the course of the phase of *transition* from planned to market economy China is clearly in a critical situation in relation to both the former and the latter aspect (cf. McMillan-Naughton, 1992). However, coming to the structure of its industrial system, it is seen to be characterised mainly by *manufacturing firms*. According to Tadesse's analysis (2002), mentioned above, in the case of a country showing these characteristics it will prove preferable to develop a *bank-based*<sup>12</sup> system to begin with, and only when the above-mentioned specific factors have improved and/or changed, to work towards further development of the *financial markets* (i.e. *market-based financial system* (cf. FIG. 2).

As we will see in the following sections, we hold this approach to be particularly significant in that it helps us to appreciate the reasons why China still has a largely *bank-based* financial system and is moving only *gradually* towards effective boosting of the national financial markets and opening up to the international financial markets.

## **2. *Gradualism* in the reforms of the Chinese financial system**

In this section the focus comes on the *origin* and *development* of the complex of intermediaries and markets characterizing the Chinese financial system. As we shall try to demonstrate, we have here an evolution that is still in progress, and that was launched thanks to the implementation of *gradual* reforms brought in as from the end of the 1970s to the present day.

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<sup>12</sup> The analysis provided by Tadesse (2002) takes no fewer than 36 countries into account, distinguished on the basis of their respective financial and legal systems. He demonstrates that should these specific factors be characterised by poor development in such indicators and by serious agency problems (characteristics typical of the developing countries), it is preferable to begin by promoting a *bank-based system*.



With regard to the *banking system*, we must take a backward glance and recall that the advent of the *People's Republic of China* (1949)<sup>13</sup> brought in its wake, in the space of just one year, the blanket nationalization of the financial institutions and firms. For this reason, for nearly thirty years (1950-1978) the country's *financial system* remained anchored on one single bank: the *People's Bank of China*. This was entirely under state ownership, and until 1978 remained under the direct control of the Ministry of Finance. Playing the twofold role of central bank and commercial bank, the *People's Bank of China* was in the privileged position of being able to control practically all the financial transactions that took place in the country.

So it was that 1978 came to represent a sort of watershed in the analysis of China's *financial structure*; on the one hand, it marked the "divorce" between the *People's Bank of China* and the Ministry of Finance (the bank became a partially autonomous entity, remaining under government supervision); on the other hand, the period following after 1978 is of particular interest with respect to the transformations that took place in the *credit system*, seeing the birth of three newly-constituted state banks that deprived the *People's Bank of China* of many of its functions as a commercial bank. These three new state banks were: the *Agricultural Bank of China*, which was to focus on activities in support of the agricultural and rural areas; the *Bank of China*, which was to specialize in money transactions; and the *People's Construction Bank of China*, which was to deal with the financing of real-estate investments.

Alongside these three large banks there came a fourth rather later, in 1984: the *Industrial and Commercial Bank of China*, which totally removed all the commercial activities that still depended on the *People's Bank of China*, making

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<sup>13</sup> Before 1949 China had a fairly well developed financial system revolving about Shanghai.

of it a proper *Central Bank* for all practical purposes, and giving rise to the state credit bloc known as the “*Big Four*”, which constitutes, as we will endeavour to demonstrate, the *core* of the Chinese bank credit system (cf. Chiarlone-Amighini, 2007).

In the second half of the 1980s new financial intermediaries of a *local* nature began to develop, such as: the *Regional Banks* (partly in the ownership of the local government); the network of *Rural Credit Cooperatives* under the supervision of the *Agricultural Bank*, and, finally, the *Urban Credit Cooperatives*. The same period also saw the birth of the first *non-bank intermediaries* and the first *foreign financial institutions*, but their functions proved somewhat limited.

This emerges fairly clearly from TABLE 1, which classifies the various bank topologies present in China taking into account the bank deposit and the provision of loans. We need only consider the period 2000-05 to see just how the so-called *Big-Four* dominated<sup>14</sup> within the Chinese bank credit system, both for volume of total assets (16,932 billion RMB in 2004, including 10,086 billion in loans) and for deposits (14,412 billion RMB in 2004), well above the other three commercial bank topologies, private, foreign and local. One consequence of this was the low *degree of competition* within the banking system, which characterised it for quite a long time. In fact, the comparative analysis carried out by Demirguc-Levine (2001) for China, Japan, South Korea and Taiwan shows for much of the 1990s the concentration index of the Big Four – quota of assets out of the total – standing around 91%, proving the highest among the Asian countries considered. However, as from 1997 the entry of new private banks and new intermediaries gradually generated a drive towards greater competition (cf. Allen et. alt. 2007).

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<sup>14</sup> The fact that the Big Four played an almost exclusive role in supplying loans and collecting deposits does not imply that they were also efficient in the allocation of resources, as we shall see in the following section.

Reform of the banking system, implemented under the supervision of the *China Banking Regulatory Commission (CBRC)*, thus pursued a mixed strategy<sup>15</sup> between the “*rehabilitation approach*”, as it was known, and the “*new entry approach*” (cf. Claessens, 1996), but with a bias towards the former of the two. In fact, China was in the first place aiming to enhance the state bank sector (i.e. the *rehabilitation approach* for the *big four*) before allowing the entry of *new banks*, whether national or foreign (i.e. the *new-entry approach*), and thereby raising the level of competition in the sector of intermediaries.

On the other hand, the *capital market* only came into operation as from the '90s, although the introduction of this market launch as second “pillar” of the financial system, i.e. as distinct from the credit market, can also be traced back to 1978 (cf. Gordon- Wei Li, 1999). Hitherto the scant savings<sup>16</sup> were deposited in the *People's Bank of China*. Elimination of a number of the constraints on private property opened the way for the rise of a great many private or quasi-private firms, and gradually opened channels for savings to find some use other than deposit in the one bank.

As noted above, official activation of the two “national” stock exchanges, the *Shanghai Stock Exchange (SHSE)* and *Shenzhen Stock Exchange (SZSE)*, took place at the beginning of the early '90s, respectively in 1990 and 1991. Alongside these the *Hong Kong*<sup>17</sup> *Stock Exchange (HKSE)* subsequently came into action, and it was here that the biggest and most innovative firms were quoted.

The Chinese capital market then went on to see rapid development in the course of the '90s although, in the world ranking of major stock markets (cf. Allen et al.

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<sup>15</sup> In this respect the reform of the Chinese banking system is very different from the reform adopted in Russia and Estonia, and is closer to the reform carried out in Hungary and Poland.

<sup>16</sup> In 1978 amounting to about 6% of the GDP (State Statistical Bureau, 1997)

<sup>17</sup> Hong Kong has remained a special statute region and is considered separately from “*Mainland China*” in many of the Chinese and international statistics (cf. FMI, *International Financial Statistics*)

2005) it came only *eleventh* in terms of *total capitalization* at the end of 2002 (Mainland China: *SHSE* and *SZSE*; cf. TABLE 2A), while coming in *tenth* with the *HKSE*. Nevertheless, the two Chinese stock markets taken together had already reached the *fifth* place by 2002, following after the United States, Japan, the United Kingdom and France<sup>18</sup>. In terms of *concentration index* (fraction of stock exchange capitalization accounted for by the biggest firms) China showed a rather low percentage at 29.4%, or in other words less than half the Japanese value, whereas the *turnover index* took top place (224%) among the developed countries. Since many of the shares were still *non-tradable* at the end of 2002, such a high *turnover* index proves significant in terms of the considerable speculation on the stock market.

One of the most peculiar characteristics of the Chinese *stock market* is, of course, the remarkable *segmentation*: there are in fact a great many stock typologies (cf. Gordon-Li, 1999; Beltratti-Caccavaio, 2006; Allen et al. 2005). An appropriate way to approach classification, and one serving particularly for the observations to be made later on the incidence of this market within the *financial system*, is with the distinction between *tradable shares (TS)* and *non-tradable shares (NTS)*. While the former can be exchanged freely, the *NTS (State Shares and Restricted Institutional Shares)* can only be sold out privately, and are thus not subject to public trading on the market. The latter are in fact issued in favour of the founders and employees of a state-owned company and serve the twofold function of preventing state control from being removed and maximizing the subsequent quotation through IPO. Green and Black (2003) point out that the former aspect has to do with the government's endeavours to prevent "*wild privatizations*" while the restructure of public companies is under way. At the beginning of 2005 the

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<sup>18</sup> Calculating capitalization taking PPA into account China comes in the top positions in ranking (cf. Allen et al. 2005).

*non-tradable shares* still accounted for about 2/3 of all the shares in circulation (cf. Beltratti-Bortolotti, 2006).

Coming, now, to the *tradable shares*, they can in turn be classified in terms of *domestic shares* (i.e. *A shares*), as being owned and exchanged by domestic investors alone, and *foreign shares* (i.e. *B and H shares*)<sup>19</sup> denominated in foreign currency and reserved for foreign investors<sup>20</sup>.

As from 29 April 2005 the China Securities Regulatory Commission (CSRC) has launched an important reform project that should have far-reaching effects on the future pattern of the *structure* assumed by China's *financial system*. In fact, it provides for the *gradual* reduction of *non-tradable* shares. More particularly, this reform was applied to the period from April 2005 to September 2006, requiring that holders of *NTS* have to *compensate* in a variety of forms (cash, bonus shares, warrants) holders of *TS* in order to have the right to sell their shares (cf. Beltratti-Caccavaio, 2006; Beltratti-Bortolotti, 2006). The reform process consists of two stages: in the first stage, every company involved announces sale, but before the transaction can be made the forms of compensation are to be established. In this way the effect of the *shock* associated with the increase in supply on the share prices should be softened.

By the end of 2006 (cf. TABLE 2B) in terms of *total capitalization HKSE* was, entirely on its own account, *sixth*, registering an increase of 62.6% over 2005; *SHSE* and *SZSE* were still *eleventh*, but showing a shift from the year before of 220.6% and 97.1% respectively. Comparing these data with the data previously seen and analysed by Allen and his collaborators regarding 2002, the *stock market*

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<sup>19</sup> The H-shares differ from the B-shares in that they are quoted on the Hong-Kong Stock Exchange.

<sup>20</sup> Another characteristic of the Chinese stock market has to do with the fact that the prices of domestic shares are usually higher than those underwritten by foreign investors. Gordon –Li (1999) point out that this is the result of the government's decision to act as a sort of monopolist discriminating on the financial market, maintaining a lower domestic interest rate to favour financing of the state deficit.

can clearly be seen to be gathering momentum within the structure of China's *financial system*<sup>21</sup>.

Improvement is also to be seen in the *concentration index* for the two *mainland* stock markets, standing at 71.2% for Shanghai and 37.7% for Shenzhen. Again, the 2006 *turnover index* came fairly high, indicative of high levels of exchanges, coming to around 153.8% for Shanghai and 251.7% for Shenzhen, while standing at 62.1% for Hong Kong. Subsequent to reform of the stock market *non-tradable* shares had come down from 66% (of the total of shares)<sup>22</sup> to 60.6% by February 2006 (cf. Fig. 3A and 3B), and down to 57% by June of the same year, while *tradable shares* rose from 34% to 43% (35% of which accounted for by A-shares). To this is to be added that the percentage variation in floating shares in 2006 in comparison with 2005 came to 208.7% for *SHSE* and 174% for *SZSE* (cf. world-exchanges.org, 2006).

As for the Chinese *bond market*, it is worth noting that the most significant increase of new bonds was mainly in the state sector, namely *Treasury bonds*, with an increase of 32.8% in the 1990-2002 period, together with the bonds issued by the *state-owned banks*, which registered an increase of 38% in the same period. Compared with these, the bonds issued by the private companies are virtually negligible at 8.2% (cf. Statistical Yearbook of China 1990-2002). The following period (2002-2006) showed gradual advance in the issue of *corporate bonds*, registering an increase of 20.4% (cf. Statistical Yearbook of China, 1990-05)

The end of the '90s was marked by the rise of the *institutional investors*, although they continued to play a relatively minor role in the economic system. The first two Chinese *common investment funds* were constituted in 1998 (*Guo Tai and Nan Fang*), and they have now come to number 46 including 13 foreign (*Qualified*

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<sup>21</sup> This aspect will be examined in section 3 with analysis of the structural indexes.

<sup>22</sup> The figure is for the beginning of 2005.

*Foreign Institutional Investors* or *joint ventures*). There are no traces of *hedge funds* since short- or very short-term financial transactions are still *banned*, whether abroad or within the country<sup>23</sup>, while *pension funds* have great difficulty in getting off the ground (Cf. Allen et al. 2005, 2007). The OECD Report on China (09/05) points out that one of the major shortcomings of the Chinese *financial system* is precisely the scant representation of *institutional investors*, and urges that the problem be addressed without delay.

Concerning with *international capital flows*, the inflows were minimal in 1970s and 1980s, impeded by *capital controls* and the reluctance of international investors to undertake investment in socialist economy with weak institutions and limited exposure to international trade. A big change raised in 1990s, when *foreign direct investment* (FDI) inflows surged dramatically on account of the *selective opening* of China's capital account as well as the rapid trade expansion (cf. Prasad – Jin Wei, 2005) . This *gradualism* in the opening in the capital account is, once again, in constast with the *shock therapy* advocated by Washington Consensus that suggested *immediately integration* into the international economic and financial system as the most important policies goals for emerging and transition countries.

FDI have dominated China's inflows: a pattern that appears to be favorable for an emerging countries, since FDI tend to be *more stable* and associated with other benefits such as transfers of technological and management expertise. As for other types of inflows, China has limited its external debt to low levels, and non-FDI private capital inflows have typically been *quite limited*, until recently. This composition of inflows in China may be considered as the "*right one*" taking into

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<sup>23</sup> As from the summer of 2007 the government has allowed Chinese residents in the *Mainland* to purchase any amount of shares quoted in Hong Kong, showing the tendency to reduce control over short-term capital flows *gradually* (cf. The Economist, 25/ 8/2007).

account the literature on the recent experiences of financial crisis in emerging and transition countries. Very often these countries had indeed external debt in relatively short maturity and in foreign currency open the way to *maturity* and *currency mismatches* troubles (cf. Sau, 2003).

### 3. The evolution of the financial structure in China

Having reviewed the main reforms that have affected the Chinese financial system, in the previous section we will go on to analyse the *structure* of the system and attempt to illustrate the *evolution* in the relative importance taken on by the various forms of financing. Here we must again return to the oft-cited contributions by Allen et. al. (2002; 2005; 2007), bearing in mind the effects on the Chinese *financial system* produced by the most recent reforms<sup>24</sup>. Comparative analysis of China with analysis of the other countries is based on *structural indexes, calculated* with the method proposed by Levine (2002) and Demirgüç-Kunt and Levine (2001)<sup>25</sup>, in relation to the sample studied and classified by La Porta et al. (1997, 1998)<sup>26</sup>.

Following the approach of Allen and his collaborators (2005; 2007), we will begin with a magnitude that tells us something about the *dimensions* of the bank credit market as compared with the stock market from the *macroeconomic* point of view, considering the year 2002 (cf. TABLE 3A).

To this end, on the evidence of the total bank credit<sup>27</sup> in *ratio* with the GDP (*bank*

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<sup>24</sup>The analysis by Allen et al. (2005; 2007) refers mainly to 2002, and thus to a period before stock market reform came in.

<sup>25</sup> Cf. Appendix

<sup>26</sup>La Porta et al. (1997; 1998) take no fewer than 49 countries into consideration, both developed and developing, but excluding China.

<sup>27</sup> In the bank credit calculation, Levine (2002) excludes all the financing that the deposit banks make in favour of the *public sector*. In the case of China, however, for reasons we shall see, these loans prove particularly important, and we therefore cannot disregard them.



*credit ratio*) we can without a shadow of a doubt confirm that the incidence of the banking system within the Chinese financial structure is indeed significant, actually *exceeding unity* (1.11). The truly surprising thing, however, is that it proves even higher than that calculated for the “countries of Germanic origin<sup>28</sup>” (0.99) in the sample considered by La Porta et al. and which should be emblematic, as pointed out in section 2, for what we term the *bank-based systems*. However, when we turn to the figure for credit supplied to the *hybrid sector*, as it is called, the value plunges (0.24), demonstrating that the majority of bank loans supplied by the Chinese banks went to *state owned enterprises (SOE)* or *listed firms*.

In the case of the capital market, the situation proves the *reverse*: in fact, China registers a ratio of no more than 0.32 (32%) (total stock exchange/GDP capitalization, or *market capitalization ratio* ). This proves to be among the *lowest*, and well below the average considered, which is 47%. The result drops to 11% if we go on to consider the “*floating supply*” of the market in ratio with the GDP (i.e. *Float supply ratio* or *total value traded ratio*). The later datum proves particularly significant in that, unlike the total capitalization, the *floating supply* is equal to the value of shares *that are exchanged* on the market.

Allen et. al. (2002; 2007) are aware of the fact that simple comparison between the data taking into account the *volume* of *total credit* supplied and the *total stock of market capitalization* (in ratio with the GDP) are not, however, sufficient to draw conclusions on the *relative importance* assumed by the banks in comparison with the capital market within the Chinese financial system; on the fact, that is, that the structure is *bank-based* rather than *market-based*.

In this respect analysis is extended to take into consideration the *Structure Indices*,

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<sup>28</sup> This is actually a sample of countries with legal and financial systems very similar to Germany's (i.e. Rhenish capitalism), including Japan.

as they are termed; cf. TABLE 3B). Now, if we consider the index that measures “*Structure Activity*”, obtained on the basis of the *Log (float supply ratio / bank credit ratio)*, and the index that measures the “*Structure Size*”, obtained, in turn, with *Log (market capitalization ratio / bank credit ratio)*, China appears among the countries with the lowest indexes as far as the sample considered by La Porta et al. is concerned. Respectively, they come to: (- 1.07) and (- 1.24)

All this points to some significant conclusions on the *predominance* of the bank sector over the stock market. In fact, as we have seen, in terms of both *volume* and indexes, the Chinese financial structure has been dominated by the role of the banks and, as noted in section 2, above all the public banks (i.e. *SOBs*).

If, however, we then turn our attention to certain measurements of *efficiency* regarding the bank credit market, the performance we observe proves singularly disappointing: indeed, the *overhead costs* in *ratio* with the total bank assets are among the *highest* to be seen in the sample (0.12). Again, the index measuring the efficiency of the financial market in comparison with the activity of the banks – what is known as the *Structure Efficiency Index*, obtained on the basis of *Log ((capitalization ratio) x (overhead costs ratio))* – yields a very high value (-1.48) as compared with the indexes shown by the other countries in the sample, demonstrating that the financial market is *more efficient* than the bank credit market<sup>29</sup> in allocating resources on account of the high cost of *intermediation* obtaining in China.

Thus it emerges quite clearly from the analysis carried out by Allen and his collaborators (2005; 2007) that the Chinese financial system centres around the *bank credit market*, which, however, shows scant *efficiency*. On the other hand, the stock market is still of very little account, although it offers better results in

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<sup>29</sup> With regard to the distorting effects of the Chinese financial system for the allocation of resources, see also Boyreau- Debray- Jin Wei (2005).

terms of efficiency.

As we have seen, the preference with the “*financial service view*” approach (cf. section 1) is to consider the role played by the entire financial system rather than taking the roles of the banks and the financial markets separately. This is how Allen et al. (2005), applying the Levine (2002) method, obtain indexes for the *overall development of the financial system* (i.e. *financial development indices*). Essentially we have here three types of indexes referring respectively to *size*, *development* and *efficiency*.

The *finance-activity index* is obtained on the basis of  $\text{Log}(\text{float supply ratio} \times \text{private credit ratio})$ ; as far as bank credit is concerned, we will at this point limit our attention to the financing of firms belonging to the *Hybrid Sector*.

The *finance-size index* is obtained considering  $\text{Log}(\text{total market capitalization ratio} \times \text{private credit ratio})$ . The two indexes prove somewhat low as compared with the average, especially in terms of *finance size* (-1.02). As for the efficiency of the financial system as a whole, the *finance efficiency index* obtained with  $\text{Log}(\text{floating supply ratio} / \text{overhead costs ratio})$  again proves somewhat low, showing that in terms of development the Chinese financial system still has quite a long way to go to catch up with the other countries (cf. TABLE 3C).

On the basis of the indexes dealt with above we can now go on to survey the evolution that has taken place within the structure of the Chinese financial system, taking into account the period subsequent to stock market reform. As we have seen (cf. section 2), in 2006 in terms of total capitalization the HKSE came sixth on its own account, with an increase of 62,6%; the SHSE and SZSE were still at the bottom of the list, but showing percentage variations from 2005 respectively of 220.6% and del 97.1%.

As in part explained above (cf. section 2), in June 2006 ratio between Tradable

shares on Total amount, show a healthy increase, standing at 43% (cfr. CSRC, 6/2006). Comparing the stock markets data (2002 vs. 2006), we see them looming increasingly large within the Chinese financial structure. Subsequent to the stock market reform, we thus see the Chinese financial structure evolving, both in absolute terms (cf. TABLE 2 A-B) and in the light of the indexes, towards a more *market-oriented* system (cf. TABLE 4 A-B-C)<sup>30</sup>.

#### **4. Problems connected with the structure of the Chinese financial system**

As has to some extent emerged in the previous sections, China's financial system has in many respects so far proved somewhat *fragile*. The *gradual* reforms affecting the financial system have nevertheless failed to prevent problems arising such as: the *financial fragility* of the *bank sector*, scant *transparency* in the *financial markets* and inadequate *corporate governance* for firms.

With regard to the first of these problems, the major stumbling block is clearly the huge amount of non-performing loans (NPLs) together with the scant *capitalization* of the major banks (cf. Chiarlone-Ferri, 2005). The plethora of NPLs is mainly accounted for with financing accorded by the *big-four* to state sector firms, often granted for political rather than economic reasons with steady accumulation over the years. Behind this process doubtless lies the fact that many public banks have found themselves obliged to grant loans to public corporations that were often their shareholders, creating a sort of "*siamese twinship*" that obstructed adequate *screening* and *monitoring* of debtors applying for financing. Allen et al. (2006) show on the evidence of the *Asian Banker database* that in relation both to the entire sum of new loans and to the GDP, China showed the

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<sup>30</sup> This process accords with the approach taken by Tadesse (cf. Fig. 2) and taken up here in section 1.

highest ratios above all in the period 2000-02 (cf. TABLE 5). This result is all the more significant if we take into account the fact that in the same period Japan found itself up against one of the worst crises of the banking system ever experienced. With regard to profitability (measured in terms of both *ROE* and *ROA*), too, China registers indexes among the lowest in comparison with those of the other Asian countries (cf. TABLE 6). Over the last few years the situation has been showing gradual improvement thanks to the banks' massive recapitalization interventions, but a number of international observers continue to show serious worries (cf. OECD, 09/2005)

As far as the financial markets, and in particular the *mainland* stock markets, are concerned, as we have sought to demonstrate in this paper, they are taking on increasing weight within the *structure* of the *financial system* but still show indexes of *concentration* that are too low, and of *turnover* that are too high (cf. TAB 2B), indicative of the fact that are still only a few large firms on the stock market, and a great deal of *speculation*. Moreover, the stock quotations fail to reflect correctly the values of the fundamentals held by the firms on account of scant or ineffective *regulation*. There are, in fact, problems involved in the asymmetry of information, both *ex-ante* (*adverse selection*) and *ex-post* (*moral-hazard*). With regard to the former aspect, non-state firms belonging to the *hybrid sector* seeking quotation often come up against far more formidable difficulties than the *state firms* are faced with. Indeed, for the non-state firms the process leading to the placing of shares on the stock market is very long, costly, and performed by an *auditing* body all too susceptible to political pressure. All this adds up to a veritable *adverse selection* for the firms, with the associated *equity-rationing* that thwarts the efforts of many firms showing healthy profitability to get quoted. In terms, too, of the problems associated with *moral-hazard* on the

part of the public *managers*, given the scant *transparency* and virtually total impossibility of *takeovers* by potential competitors, it is all too easy for the *managers* themselves to slip into recurrent opportunistic behaviours at the expense of economic efficiency. This brings us to another major problem looming large in the Chinese financial system, namely that of *corporate governance*. As for the quoted firms, the traditional mechanisms are somewhat weak and limited; these firms rest on an organisational system running at two levels: the *Board of Directors* and the *Board of Supervisors*. Here the basic problem is that the members of these *Boards* are not elected by the shareholders but selected by the government as public officials as the result of a process that, once again, lacks the desirable transparency. In China the government plays the role of both *regulator* and *shareholder* in many quoted firms, and in many banks and financial institutes, creating evident conflicts of interest that again detract from economic efficiency. At the legislative level, too, regulation of corporations and of bankruptcy law continues to show serious shortcomings. In fact, although the bankruptcy law was passed in 1986, the first Company Law Code came into force only in 1999 .

## **Conclusions**

Some recent and indeed significant contributions offering analysis of the Chinese *financial system* (cf. Allen et al. 2002; 2005; 2007)) argue that the high growth rates shown by China have come about thanks above all to the development of firms belonging to the *hybrid sector*, which in turn has enjoyed the support of the *informal* – as they are termed – finance *channels*.

Starting from this finding, in this paper we set out to show that China has certain

significant *specificities*, also in terms of the “*step by step*” approach followed in implementing reforms in its financial system. These reforms have been applied in various ways at various times, dealing first with the *banking system*, then with the *stock market*, and finally shaping the *financial markets*, in the broad sense, subsequent to joining the WTO.

From the theoretical point of view, this *gradual* reform process has, we believe, proved to accord well with the analysis made by Tadesse (2002, 2005), which has it that the *financial structure* of a country is not be seen in *static* terms since it depends on a series of specific factors which must of necessity be taken into account. In fact, if a country’s legal and institutional systems have seen little development, with serious problems in the supply of information and an industrial structure based mainly on traditional firms – all of which are very evident aspects when we consider a developing country like China – it will be preferable to begin by boosting a *bank-based* financial system, and work in the direction of further development of the *financial markets* (i.e. *market-based financial system*) only when these specific factors show real improvement.

These findings are borne out by *applied* and *comparative* analysis performed elaborating on the basis of the contributions by Allen et al. (2002, 2005; 2007). In fact, on the evidence of the *structure indexes* we can only conclude that the Chinese *financial system* had long been totally *bank-based*, but that it is now developing and slowly *evolving* towards a more *market-based* system.

We have also endeavoured to demonstrate that while the *gradual* process described above has ensured a certain *macroeconomic stability*, it has not prevented serious problems of *financial fragility* from arising in the banking sector and problems of *corporate governance* for the firms (cf. OECD 09/2005; Yueh, 2004), which need to be addressed without delay.

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FIGURES AND TABLES

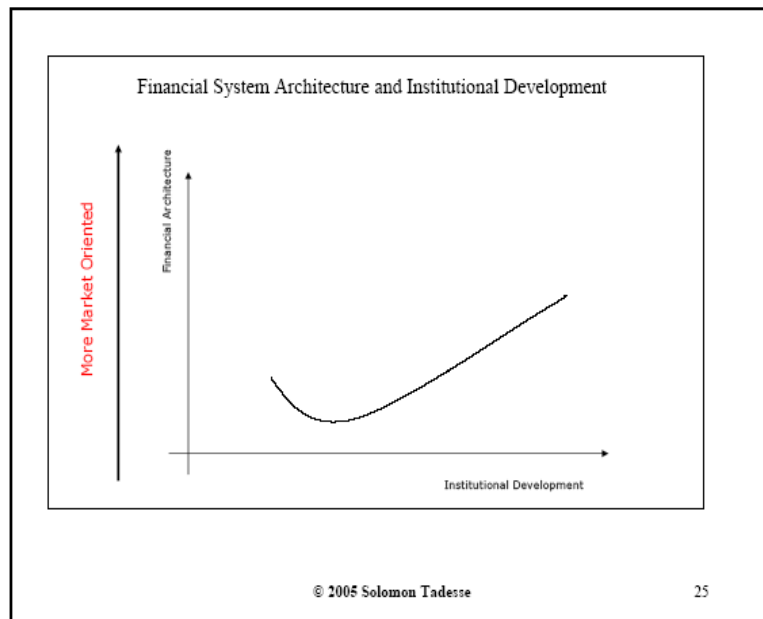
FIG. 1



Source : Yueh (2004) - *China Statistical Yearbook* (various years)

FIG. 2

(Source: Tadesse, 2005)



**TAB. 1 State and Non-State Banks ( RMB billion) -Source: Allen et al. (2007)- Almanac of China's Finance and Banking (2000-05)**

Types of Banks	Total assets	Total deposits	Outstanding loans	NPL (%)
<i>2004</i>				
• 4 State-owned Banks	• 16.932,1	• 14.412,3	• 10.086,1	• 15,57
• Other Comm. Banks	• 4.697,2	• 4.059,9	• 2.885,9	• 4,93
• Foreign Banks	• 515,9	• 126,4	• 255,8	• 1,34
• Urban credit coop.	• 171,5	• 154,9	• 97,9	• --
• Rural credit coop.	• 3.101,3	• 2.734,8	• 1.974,8	• --
<i>2003</i>				
• 4 State-Owned Banks	• 16.275,1	• 13.071,9	• 9.950,1	• 19,74
• Other Comm. Banks	• 3.816,8	• 3.286,5	• 2.368,2	• 7,92
• Foreign Banks	• 333,1	• 90,7	• 147,6	• 2,87
• Urban credit coop	• 148,7	• 127,1	• 85,6	• --
• Rural credit coop.	• 2.674,6	• 2.376,5	• 1.775,9	• --
<i>2002</i>				
• 4 State-Owned Banks	• 14.450,0	• 11.840,0	• 8.460,0	• 26,1
• Other Comm. Banks	• 4.160,0	• 3.390,0	• 2.290,0	• --
• Foreign Banks	• 324,2	• --	• 154,0	• --
• Urban credit coop.	• 119,0	• 101,0	• 66,4	• --
• Rural credit coop.	• --	• 1.987,0	• 1.393,0	• --
<i>2001</i>				
• 4 State-Owned Banks	• 13.000,0	• 10.770,0	• 7.400,0	• 25,37
• Other Comm. Banks	• 3.259,0	• 2.530,7	• 1.649,8	• --
• Foreign Banks	• 373,0	• --	• 153,2	• --
• Urban credit coop	• 128,7	• 107,1	• 72,5	• --
• Rural cred.	• --	• 1.729,8	• 1.197,0	• --

**TAB. 2 Comparison of the Largest Stock Markets in the World (2006)**

Rank	Stock Market	Total market capitalization (billion \$)	Concentration (%)	Turnover velocity (%)	% Change capit. 06/05
1	NYSE	15.421	47,8	134,3	13,1
2	Tokyo	4.614	60,6	125,8	0,9
3	Nasdaq	3.865	61,7	269,9	7,2
4	London	3.794	84,1	124,8	24,1
5	Euronext	3.708	72,3	116,4	37,0
6	<b>China (Hong Kong)</b>	<b>1.715</b>	<b>78,7</b>	<b>62,1</b>	<b>62,6</b>
7	TSX group	1.700	70,3	173,7	14,7
8	Deutsche Börse	1.637	72,7	130,2	34,1
9	BME (Spain)	1.323	N.A	167,0	37,8
10	SWX (Swiss)	1.212	71,2	130,2	29,6
11	<b>China (Mainland)</b>	<b>1.145</b>	<b>108,9</b>	<b>405,5</b>	<b>317,7</b>

Source: world-exchanges.org (2006)

**TAB. 3A- bank-based vs. market-based financial systems**

	Ratios	English system	French system	German System	Scandinav. system	Average	China (2002)
Size index	Bank credit ratio	0,62	0,55	0,99	0,49	0,73	<b>1,11</b> <b>(0,24)</b>
	Overhead cost ratio	0,04	0,05	0,02	0,03	0,03	<b>0,12</b>
	Market capitalization ratio	0,58	0,18	0,55	0,25	0,47	<b>0,32</b>
	Float ratio	0,31	0,07	0,37	0,08	0,27	<b>0,11</b>

**TAB. 3B**

	Ratios	English system	French system	German System	Scandinav. system	Average	China (2002)
Structure index	• structure activity	-0,76	-2,03	-1,14	-1,83	-1,19	<b>- 2,10</b>
	• structure size	-0,10	-1,05	-0,77	-0,69	-0,55	<b>-1,24</b>
	• structure efficiency	-4,69	-6,00	-5,17	-6,17	-5,17	<b>-1,48</b>

**TAB. 3C**

	<b>Ratios</b>	<b>English system</b>	<b>French system</b>	<b>German System</b>	<b>Scandinav. system</b>	<b>Average</b>	<b>China 2002</b>
<b>Development of the financial system</b>	• <b>finance activity</b>	-1,18	-3,38	-0,84	-2,86	-1,58	<b>-2,38</b>
	• <b>finance size</b>	5,10	4,29	5,22	4,60	4,95	<b>-2,55</b>
	• <b>finance efficiency</b>	2,18	0,44	2,85	1,04	2,01	<b>-0,60</b>

Source: Allen et al. (2005; 2007)

**China's financial system evolution: Bank vs Market based measures (1997-2006)**

**TAB. 4 A – Bank and market size indicators**

<b>Years</b>	<b>Bank credit ratio</b>	<b>Capital. ratio</b>	<b>Float. ratio</b>
<b>1997</b>	<b>0.95</b>	<b>0.24</b>	<b>0.07</b>
<b>1998</b>	<b>1.04</b>	<b>0.25</b>	<b>0.07</b>
<b>1999</b>	<b>1.10</b>	<b>0.30</b>	<b>0.10</b>
<b>2002</b>	<b>1.11</b>	<b>0.32</b>	<b>0.11</b>
<b>2005</b>	<b>1.17</b>	<b>0.39</b>	<b>0.12</b>
<b>2006</b>	<b>1.12</b>	<b>0.42</b>	<b>0.15</b>

**TAB. 4 B – Structure Indices: markets vs. banks**

<b>Years</b>	<b>Structure activity</b>	<b>Structure size</b>
<b>1997</b>	<b>- 2.60</b>	<b>- 1.39</b>
<b>1998</b>	<b>- 2.65</b>	<b>- 1.42</b>
<b>1999</b>	<b>- 2.40</b>	<b>- 1.23</b>
<b>2002</b>	<b>- 2.31</b>	<b>-1.24</b>
<b>2005</b>	<b>- 2.27</b>	<b>- 1.09</b>
<b>2006</b>	<b>- 2.10</b>	<b>- 0.98</b>



**TAB. 4 C- Financial development indices ( Banking and market sectors combined)**

Years	Finance activity	Finance size	
1997	- 4.22	- 3.08	
1998	- 4.14	- 2.92	
1999	- 3.72	- 2.55	
2002	- 2.38	- 2.56	
2005	- 1.96	-2.36	
2006	-1.74	-2.29	

Source: IMF Financial Statistics & China Statistical Yearbook (Various years)

**TAB. 5 NPLs ( in %Total Assets & (% GDP))**

	1997	1998	1999	2000	2001	2002	2003	2004
China	N/A	2.0 (2.2)	9.5 (10.6)	18.9(24.9)	16.9(22.7)	12.6(15.2)	14.4(11.0)	11.5(10.7)
Hong Kong	1.3 (3)	4.3 (10.2)	6.3 (13.9)	5.2 (12.6)	4.9 (12.9)	3.7 (9.6)	n/a	n/a
India	N/A	7.8 (1.6)	7.0 (1.6)	6.6 (1.6)	4.6 (1.7)	2.2 (0.8)	n/a (2.5)	n/a (2.2)
Indonesia	0.3 (0.2)	11.8 (4.6)	8.1 (2.0)	13.6 (3.2)	9.9 (2.2)	4.5 (0.9)	n/a (1.5)	n/a (2.1)
Japan	2.7 (5.49)	5.1 (10.8)	5.3 (10.9)	5.8 (11.5)	9.2 (15.3)	7.4 (12.8)	n/a (11.3)	n/a (7.3)
South Korea	2.9 (5.1)	4.8 (6.3)	12.9 (12.9)	8.0 (8.6)	3.4 (3.4)	2.5 (2.6)	n/a (1.9)	n/a (1.5)
Taiwan	2.4 (3.2)	3.0 (3.9)	4.0 (5.7)	5.2 (7.6)	6.2 (9.4)	4.1 (5.2)	n/a (7.7)	n/a (5.1)

Fonte: Allen et al. (2007) & OECD China's Economic Survey (09/05)

**TAB. 6 ROE & (ROA) of the banking sector**

	1997	1998	1999	2000	2001	2002	2003
<b>China</b>	<b>6.6 (0.21)</b>	<b>4.0 (0.2)</b>	<b>3.2 (0.18)</b>	<b>3.9 (0.21)</b>	<b>3.5 (0.20)</b>	<b>4.16 (0.21)</b>	<b>n/a (0.27)</b>
Hong Kong	18.7 (1.8)	11.0 (1.0)	18.2 (1.6)	18.8 (1.6)	15.7 (1.4)	15.6 (1.4)	n/a
India	17.0 ( 0.9)	9.7( 0.5)	14.2 (0.7)	10.9 (0.5)	19.2 (0.9)	19.6 (1)	n/a
Indonesia	-3.8 (-0.3)	n/a	n/a	15.9 (0.3)	9.7 (0.6)	21.1 (1.4)	n/a
Japan	-18.6 (-0.6)	-19.2 (-0.7)	2.7 (0.1)	-0.7 (0)	-10.4 (-0.5)	-14.5 (-0.6)	n/a
South Korea	-12.5 (-0.6)	-80.4 (-3.0)	-34.0 (-1.5)	-7.0 (-0.3)	15.8 (0.7)	13.1 (0.6)	n/a
Taiwan	11.2 (0.9)	9.5 (0.8)	6.9 (0.6)	5.1 (0.4)	4.0 ( 0.3)	-5.2 (-0.4)	n/a

Fonte: Allen et al. (2007) & OECD China's Economic Survey (09/05)





