

EMERGING CHINA



International School of Management

PARIS | NEW YORK | SHANGHAI | TOKYO

ISM JOURNAL OF INTERNATIONAL BUSINESS

ISSN : 2150-1076

VOLUME 1, ISSUE #2, MARCH 2011

International School of Management



"Emerging China"

ISM Journal of International Business
Volume 1, Issue 2; ISSN 2150-1076

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***“When it is obvious that the goals cannot
be reached, don't adjust the goals,
adjust the action steps”***

.....Confucius (551-479 BC)

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China's Challenges to Future Sustainable Economic Growth and the Implications for the United States

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Abstract: The 'stunning comeback' of China after almost two centuries is one of the most significant trends affecting Western economies, particularly the United States (US). None of the key drives that have promoted China's growth are really at risk if the Chinese government does not deviate from its present economic policy and keeps up gradual refinement of its unique and effective social-capitalist model. The real risks to China's future growth are remaining poverty, the unbalanced and unsustainable growth model, bureaucracy, and the corruption of government officials. China's government is taking determined steps to solve these challenges. Gone is the absolute dominance of the US (in terms of ideas and money). The US will have to learn to share the world leadership with other countries, particularly with China, Europe and other fast growing developing countries.

Keywords: China's economic transformation, China's social-capitalism, China's challenges to economic growth, China's remaining poverty, China's corruption, China's unsustainable growth model, US accumulated debt, inflation and devaluation of the dollar.

Reference: Reference to this paper should be made as follows: Degen, R. (2010) "China's Challenges to Future Sustainable Economic Growth and the Implications for the United States", The ISM Journal of International Business, ISSN 2150-1076, Volume 1, Issue 2, March 2011.

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China's 'stunning comeback'

The stunning comeback of China, after almost two centuries, is restoring its status as the largest economy of the world during the 21st century. This comeback has had a significant impact on Western economies, particularly that of the United States (US).

At the beginning of the 19th century, China's Celestial Empire was the largest economy in the world, with a Gross Domestic Product (GDP) that exceeded that of Western Europe, Japan, the US, and Russia combined (Malkiel et al., 2008, p. 21). At this time, when Great Britain was laying the groundwork for European industrial revolution, there was a stillness and immobility within China. The Celestial Empire saw itself as the world's premier entity in terms of size, population, age and experience; and as untouchable in its cultural achievements, as well as its moral, spiritual, and intellectual superiority.

China's splendid history

The Chinese developed porcelain, gunpowder, the wheelbarrow, the compass, the stirrup, the spinning wheel and paper. They built huge ships to navigate and trade all over the Pacific and Indian Ocean, almost a century before the Europeans. They may have discovered and mapped America before Columbus (Menzies, 2002) and Leonardo da Vinci's inventions may have been copied from the Chinese (Menzies, 2008): and yet China has never seemed to capitalize on these discoveries.

Possessing a powerful centralized government, based on the peace and serenity of Confucius's teaching, China perfected a rigorous civil service examination system in which anyone could participate, regardless of social background. This created a monolithic society that nevertheless dampened competition and scientific advancement. Education came to be viewed as the path to advancement in civil service, rather than an instrument for encouraging free inquiry and the consequent development of science and technology. The best and the brightest were selected into government services, and shunned commerce. This trend occurred because in the Confucian social ranking places scholar-bureaucrats at the top, followed by the farmers, the artisans, and, last of all, the despised merchants. By contrast, entrepreneurship has been celebrated in Europe as opening a unique path to riches, where irreverence, creativity and daring were the 'sine qua non' of success. In this way, China imposed isolation upon itself, and remained uninvolved in the enormous change occurring in Europe as a result of the industrial revolution.

However, this immobility of China did not mean that it did not understand the market economy, or the importance of foreign trade and capitalism. Professor Chow (2006, p. 22) has explained that China has a long history of a market economy, the operation of which was well understood as described by the great historian Sima Qian (ca. 135 or 145 BC to 86 BC) in the Han dynasty (206 BC to 220 AD). Foreign trade flourished in

the Tang dynasty (618 to 907 AD), as evidenced in the ‘Silk Route’, and during the early Ming dynasty (1368 to 1644 AD) extensive overseas exploration and trade stimulated economic development, which permitted enormous construction projects, including the ‘Forbidden City’ in Beijing. China had evidenced a fairly mature form of capitalism since the Song dynasty (960 to 1279 AD) and is attributed with the first generally circulating paper money.

China’s ‘Century of Humiliation’

From the second half of the 19th century, China’s economic importance in the world began to decline. Western colonial powers, led by England, took advantage of their superior military technology to exploit and plunder China, forcing it to submit to colonial dominance, in what the Chinese historians call the ‘Century of Humiliation’ (Malkiel et al., 2008, p. 23-28). This exploitation ended with Mao Zedong’s (1893 to 1976) communism in 1949. The adoption of the Soviet Marxist Economic Model by Mao Zedong (promoted by him and his followers as the ‘Great Leap Forward’), was a disaster, culminating in the ‘Three Bitter Years’ These years (from 1958 to 1961) produced the largest known famine in the world, with an estimated death of 20 to 30 million Chinese. After this disaster, and aggravated by the ‘Cultural Revolution’ that produced a decade of confusion and repression (from 1966 to 1976), came unprecedented economic growth, initiated by Deng Xiaoping’s (1904 to 1997) economic reforms in 1978. This growth, at an astounding average of 10 percent per year over the last 30 years (Malkiel et al., 2008, p. 29-39), is only comparable in its global significance to the emergence of the United States as an economic giant during the 19th century.

Deng Xiaoping’s economic liberalization

When Deng Xiaoping took control of the Communist Party in 1978, he initiated reforms to the planned economy system introduced by Mao Zedong, toward establishing a more market-oriented economy. These initial reforms were partially a continuation of the ‘Four Modernizations’ (these were science and technology, agriculture, industry and defense) initiated by Premier Zhou Enlai (1898 to 1976) in 1964, and interrupted by the ‘Cultural Revolution’ in 1966 (Chow, 2007, p. 47). In 1978, China was ready for these reforms: the excesses of the ‘Cultural Revolution’ made the Communist Party and the government extremely unpopular; in distancing themselves from it they were able to regain the support of the people. The communist party of that time understood the need for change after the disaster of the ‘Great Leap Forward’ (the planned economy system copied from the Soviet Marxist Economic Model by Mao Zedong), and the economic success of the ‘Four Asian Tigers’ (Taiwan, Hong Kong, Singapore and South Korea) during this time indicated to them (and to the Chinese people), that market economies were more efficient for generating growth and progress than the planned economies of the Soviet or Eastern Bloc.

In the first years of the economic liberalization, entrepreneurship flourished in China, bringing an increase in corruption. Unemployment rose as inefficient state-owned enterprises were forced to adapt to the new competitive environment. Students, with their new freedom, began protests for political reform, and these protests culminated in the demonstration at the Tiananmen Square in Beijing in the summer of 1989. Den Xiaoping believed that an uncontrolled political reform (such as was being conducted in the Soviet Union), would be disastrous for China, and decided to repress the demonstration (Malkiel et al., 2008, p. 38). His decision was justified a year later, when the Soviet Union dissolved into many different states with a corruption riddled market economy that is yet to provide the expected benefits to its people. At the same time, some members of the Communist Party felt that Den Xiaoping was too soft and progressive, and the resultant fierce political in-fighting forced internal repression and economic retrenchment. For these reasons, foreign investment was withdrawn, and economic activity was reduced.

Den Xiaoping: “to get rich is glorious!”

In 1992, in defiance to traditionalists in the Communist party, Den Xiaoping (at the advanced age of 92) made the epic “Southern China Tour”, reminding people that the old days were not good, and that conditions in the future should be much better. He advocated that the pace of the economic reform be accelerated. During the trip he famously told people that “to get rich is glorious!” (Malkiel et al., 2008, p. 38). The population responded with enthusiasm, and his detractors in Beijing could not ignore the message. With this trip, Den Xiaoping restarted China on its remarkable transformation, leading to it becoming the second largest economy in the World (with a GDP only surpassed by the US), when measured on the basis of purchasing power parity (World Bank, 2009). As China has begun to engage in the global economy, there is an awareness of the humiliating lessons of past dealings with the West, and thus this expansion is undertaken according to strict terms and conditions; China is clearly determined to maintain its economic and diplomatic independence as it develops its unique model of social-capitalism.

While this model of social-capitalism has brought tremendous wealth and opportunity to its people, it is also clear that the economic reforms started by Den Xiaoping are a unique experiment that still requires further refinement as China continues to return to its position as one of the world’s leading nations. There are tremendous economic and social challenges, and risks to be overcome in the future to reach this goal, particularly toward improving the livelihood of the entire population of over 1.3 billion, and not only that of the privileged minority.

China’s unique social-capitalism

The unique nature of the Chinese economic model of social-capitalism as developed by Deng Xiaoping, lies in the fact that it results in neither a market economy (where prices

and transactions are solely determined by individual consumers and producers), or a planned economy (where all prices and transactions are under government control): these two extremes are the capitalist and the socialist economic models. China is refining its particular social-capitalist economic model in the middle of these two extremes, with a mixture of state-owned and private-owned enterprises, and this change is occurring in the context of a complex bureaucratic government structure.

Another insight by Den Xiaoping was the need to promote and support entrepreneurship, in order to fuel economic growth and progress (encapsulated in his famous saying “to get rich is glorious!”). His approach echoed Schumpeter’s (1942) thesis that without entrepreneurs acting as ‘agents of creative destruction’, there is no real economic growth and progress; the inference is that the pure socialist model was doomed to failure, because it did not promote entrepreneurship.

China’s stunning success

In the past thirty years, China has transformed itself from an economically and technologically backward nation, into one of the world’s most dynamic economies. It has opened its doors to new ideas and techniques, introduced competition to all aspects of production, strengthened its commitment to widespread education, and taken advantage of the opportunities offered by its World Trade Organization (WTO) membership in December 2001. The results of this have been dramatic for both China and the United States (US). From 2001 to 2008 the US exports to China rose from United States Dollars (USD) 19.2 billion to 71.5 billion, and imports from China rose from USD 102.3 billion to 337.8 billion (Table 1). The Chinese in 2006 displaced the US as the second trading nation in the world, and are now only behind Germany (WTO, 2009).

Table 1: China's trade with the United States (USD billions)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	
US Exports	13.1	16.3	19.2	22.1	28.4	34.7	41.8	55.2	65.2	71.5	
% change		-8	24.4	18.3	15.1	28.5	22.2	20.6	32.1	18.1	9.5
US Imports	81.8	100	102.3	125.2	152.4	196.7	243.5	287.8	321.5	337.8	
% change		14.9	22.3	2.2	22.4	21.7	29.1	23.8	18.2	11.7	5.1
Total	94.9	116.3	121.5	147.3	180.8	231.4	285.3	343	386.7	409.2	
% change		11	22.6	21.4	21.2	22.8	28	23.3	20.2	12.7	5.8
US Balance	-68.7	-83.7	-83	-103.1	-124	-162	-201.6	-232.5	-256.3	-266.3	

Note: US exports reported on FOB basis; imports on a general customs value, CIF basis

Sources: US International Trade Commission, US Department of Commerce, and US Census Bureau (copied: <http://www.uschina.org/statistics/tradetable.html>).

Currently, the Chinese have one of the highest savings rates in the world, around 40 percent of the Gross National Product (GDP) (Figure 1). This contrasts sharply with the US, where the saving rate is close to zero. In other words, on average, the Chinese save more than they spend, while in the United States spending has, on average, overtaken saving. As a consequence, the Chinese economy is awash in capital from savings, looking for investment opportunities. This capital has been used for modernizing production, which in turn has increased profitability and generated more capital.

The government also took advantage of the abundance of capital to improve the country's infrastructure, and this has in turn fueled economic growth. For example, China now has the only commercially operated Maglev train in the world. The train operates in Shanghai between the city and the airport at speeds up to 260 miles per hour using magnets to elevate it above the track.

Some recent statistics illustrate the growing success of the Chinese economy. China has been the fastest-growing major nation for the past quarter of a century, with an average GDP growth rate above 10%. In 2005, the Chinese per capita income (GDP per head) was only \$1,700, compared with the \$42,000 of the US. In 2008, the Chinese estimated per capita income rose to \$2,900 and the US rose to \$46,700. The per capita income gap decreased from twenty-five to one in 2005 to sixteen to one in 2008. This reduction was accomplished in only three years (World Bank, 2009, April).

As previously stated, China is now the second largest economy in the world (after the US) with a GDP of USD 7.8 trillion in 2008 (when measured on the basis of purchasing power parity). The IMF (2009, April) reported that in 2008 China was the third largest economy (after the US and Japan) when measured using exchange-rate: with a nominal GDP of USD 4.4 trillion. The Chinese foreign exchange reserve is now around USD 1.3 trillion, and China is the largest investor in US treasury bonds. According to some

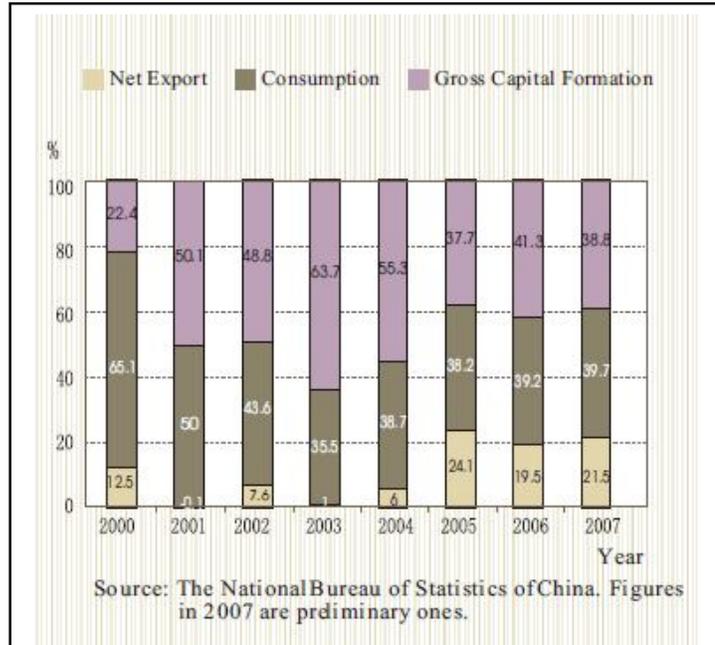


Figure 1: The Share of export, consumption and gross capital formation in China in 2007

Source: The People's Bank of China (2008). (Copied: <http://www.pbc.gov.cn/english/chubanwu/nianbao/2007/en6.pdf>)

estimates, 80% of the Chinese foreign exchange reserve is in USD. The Chinese per capita income has been growing at an average annual rate of more than 8% over the last three decades, resulting in a drastic reduction in poverty. However, this rapid growth has been accompanied by rising income inequality.

China's growing influence

China's influence in the world economy remained minimal until the late 1980s. At that time, the economic reforms started in 1978 began to generate a significant and steady growth in investment, consumption and standards of living. China now participates extensively in the world market, and its larger companies, such as Galanz and Haier, have begun to play a major role in the world economy. Galanz, with its aggressive price strategy based on disruptive innovation, has captured 40 percent of the global market, with a 45 percent share in Europe, and more than 70 percent in South America and Africa. Building on this success, Galanz began to compete in the market for air conditioners and rice cookers, and has stated an aim to be the world's largest manufacturer of these items in the near future (Hexter & Woetzel, 2007, p. 194-195). Similarly, the Chinese appliance manufacturer Haier has become a global competitor, based on an aggressive innovation strategy that focuses on three key capabilities: design, manufacture and distribution. The aggressiveness of Haier's innovation plan can be seen in its stated objectives: two successful intellectual patent applications for every working day. Today, Haier is a dominant player in the appliance world market, selling in over 30 countries, with a product line of 96 appliance categories (DiPaola & Li, 2007, p. 3).

China has become the world's second largest consumer of luxury goods, surpassing in the US in 2008 and currently second only to Japan. The demand for luxury items in China is growing at the rate of 20% annually. China has an estimated 18 thousand billionaires, 440 thousand millionaires, and a fast rising middle class of around 250 million who have high purchasing power and are eager to spend in luxury goods (Morisset & Lee, 2008). China now has 170 cities with more than one million inhabitants, compared to the US, who has only ten cities of this size. There are over 400 million Chinese subscribers to wireless phone services, representing 100 million more than the entire population of the US (Malkiel et al., 2008, p. 44).

Reasons for the economic success of China

To evaluate the future challenges and risks to China's unprecedented economic growth over the past three decades, it is important to understand the reasons for the extraordinary success of the economic reforms started by Deng Xiaoping. As mentioned previously, the Communist Party, government and people were ready for the reforms, however this only accounts for the enthusiastic acceptance of the reforms, and not their success. This success was a direct function of the way these reforms were executed: the Chinese leaders were pragmatic in approach, rather than guided by ideology. The

phrase “one should not care whether a cat is black or white as long as it catches mice”, attributed to Deng Xiaoping, clearly illustrates this pragmatism and lack of ideological constraints.

The government did not have a formal plan or model for the reforms. Policies were adopted, tested, adapted, or even abandoned through experimentation. This process of learning by trial-and-error was described by Deng Xiaoping using an old Chinese proverb, “crossing the river while feeling the rocks”. Due to the lack of a formal planning or models, and the use of experimentation, the reforms were implemented gradually in a step-by-step approach. This ‘gradualism’ in making the necessary reforms from a planned economy to a Chinese style or pragmatic market economy contrasted substantially with the ‘shock therapy’ approach adopted by the Soviet Union and some Eastern European countries at that time. These countries, after the fall of the Berlin wall in 1989, adopted a US style liberal market economy immediately, without the necessary preparation and transition. The consequence was significant economic disruption and corruption, with many of their citizens disillusioned with the market economy and supportive of a return to the old communist regimes.

Communist Party leadership

The majority of the Chinese people, and most of the government officials who had lived the planned economic disaster of the ‘Great Leap Forward’ and the ‘Cultural Revolution’, supported the economic reforms toward a market economy. This support for the reforms helped to maintain the necessary political stability and strengthen the power of the Communist Party leadership under Deng Xiaoping. This acceptance and legitimization of the Communist Party leadership in governing China is also part of the Chinese culture, and is based on the teachings of Confucius, which promote hard work, honesty and trustworthiness in human relations. Chinese culture also has an emphasis on family and social order, with a high value attached to the common good as opposed to individual rights, and a respect for the hierarchically superior scholar-bureaucrats that managed the powerful centralized government of Imperial China for almost two thousand years. These scholar-bureaucrats were selected according to a rigorous examination system, started in the Sui and Tang dynasties (581 to 907), and perfected during the Song dynasty (960 to 1126). They were based on Confucian teachings, in which anyone could participate, regardless of social background. This tradition of selecting civil servants based on meritocracy is to some extent replicated in the selection of the members of the Communist Party that governs today’s modern China, and this explains the easy acceptance by the Chinese people of those selected as the ruling bureaucracy.

China’s growth drivers

Bergsten et al. (2006, p. 19), under the auspice of the Center for Strategic and International Studies and the Institute for International Economics, has identified five drivers as key to China’s stunning transformation over the past three decades: “The

embrace of market forces, the opening of the economy to trade and inward direct investment, high level of savings and investments, the structural transformation of the labor force, and investment in primary school education.” They identify that none of these key drivers are at risk if the Chinese government does not deviate from its present economic policy and maintains its gradual refinement of its unique and effective social-capitalist model. Nevertheless, they identify that to sustain its economic growth, China will have to manage and overcome two important hurdles: to continue with the reform of its state-owned enterprises, and to improve its financial system for more efficient capital allocation. These hurdles will be evaluated below.

China’s state-owned enterprises

China has already made tangible progress in reforming its state-owned enterprises (created in the 1950’s when Mao Zedong abolished private ownership). Today there are approximately 150 well known state-owned enterprises that report directly to the central government, such as the China National Offshore Oil Corporation (CNOOC) and the State Grid Corporation of China (SGCC). Woetzel (2008) has explained that besides these well known state-owned enterprises, there are thousands more that fall into a grey area; there are the subsidiaries of these 150 that are controlled by the central government, and enterprises owned by provincial and municipal governments, as well as those who are partially privatized, with the state as a majority or influential shareholder (this last group includes companies such as the computer manufacturer Lenovo and the appliance giant Haier). Similarly, the majority shareholder for the automaker Chery is the municipal government of Wuhu.

Since the 1980s, the Chinese government and the Communist Party have followed a policy of separating government functions from business operations. This policy has been applied efficiently using the Chinese approach of gradualism: first to the consumer industry, then to high-tech and heavy manufacturing, and more recently to banking. As a result, government favoritism toward state-owned enterprises is fading. Woetzel (2008) has argued that global leaders (in both public and private sectors), must recognize the importance of taking a nuanced view of China’s state-owned enterprises. On closer inspection, many are quite different from the state-owned stereotype of inefficiency, and companies with majority state-ownership (such as Haier) often prove to be operating at a world-class level.

China’s financial system

The Chinese financial system arguably requires a more efficient approach to the allocation of capital. Farrell et al. (2006, p. 9-10) have stated that the principal task of a good financial system is to attract savings and channel these to productive investments. In their McKinsey Global Institute Report, they have noted that China’s financial system is very efficient in attracting savings from the population, but has considerable room for improvement in its capital allocation, and in its overall efficiency. They have claimed that

their suggested reforms could raise the GDP by 13 percent, and would help spread China's new wealth more evenly throughout the country. They have also explained that the caution of China's regulators in shifting funding toward more productive private companies is a result of their fear that this could accelerate layoffs in the less productive state-owned enterprises, and so lead to more social unrest. They have argued against this approach, and suggested that such a shift will stimulate job creation in the stronger areas of China's economy, and that the increased tax revenues from stronger private companies could fund social programs that would help relieve social tension.

This study by Farrell et al. (2006) has also outlined out that, as a consequence of the caution of the Chinese regulators, the state-owned (or partially state-owned) enterprises have absorbed the lion share of the available funding from the financial system. Private companies, having not received sufficient funding from the underdeveloped financial system, and thus have frequently resorted to the large informal lending market for their financial needs: besides being illegal, this market charges very high interest. Due to the 2008 financial crisis, the Chinese regulators have accelerated the necessary reforms, and already in 2009 China has arguably become the largest market in the world for initial public offerings (IPOs), as a source of funding for its private companies.

Risks to China's future growth

The real risks to China's future growth are identified as being the remaining poverty, an unbalanced and unsustainable growth model, and the bureaucratic approaches and corruption of government officials. These three major risks to China's future are examined below.

China's remaining poverty

Since Den Xiaoping began the economic reforms in 1978, more than 600 million Chinese have been lifted out of poverty. The living conditions of the people have been dramatically improved over these years, with income levels growing steadily. Between 1978 and 2007, urban disposable income per capita increased from 343.4 Yuan to 13,785.8 Yuan, while rural incomes grew from 133.6 Yuan to 4,140.4 Yuan. This is a more than six-fold increase (for both), even after adjustment for inflation (United Nations, 2008, p. 9).

The share of food spending for urban and rural residents fell from 57.5 percent to 36.3 percent and from 67.7 percent to 43.1 percent, respectively, between 1978 and 2007; the emphasis on overall spending has shifted from a focus on basic needs such as food and clothing, to more diverse consumption patterns including housing, travel, education, culture and health. The occurrence of extreme poverty in rural areas has fallen from 250 million to 14.79 million people, while public goods and services (such as universal primary education, public and basic health care, and cultural facilities) have been greatly expanded (United Nations, 2008, p. 9).

China's widening income gap

Unfortunately, not all of the population is equally benefiting from this extraordinary progress, and China's income inequality is widening. The per capita income ratio between urban and rural residents dropped from 2.6 to 1 in 1978 to 1.9 to 1 in 1985, then rose to 3.3 to 1 in 2007. China's income inequality is now the second highest in Asia, and is reaching levels that pose risks for the sustainability of future development. Such gaps are particularly critical in view of the increasing burden placed on individuals, in terms of paying for services such as healthcare and higher education. These figures suggest that income inequalities have led to disparities in access to key public services in China (United Nations, 2008, p. 13-14). Nevertheless, the Chinese income inequality is still low compared with Latin America (and this inequality has created strong political instabilities in Venezuela, Ecuador and Bolivia, and is threatening other countries).

The rise of inequality is the result of the market forces that have generated China's strong growth. The economist Arthur Levis (1954) has suggested that "development must be inegalitarian because it does not start in every part of the economy at the same time." The reason for this, according to his model (1954, p. 140-141), is the dualism of the labor market. In this model, one group (the modern, industrial, capitalist, formal, or urban approaches) can capture the full benefits of the economic development; and the other (the subsistence, informal, traditional, agricultural, or rural approaches) will benefit less from this development. This polarity has occurred China. Prior to Deng Xiaoping's reform of 1978, there was almost no financial reward for education, and in most cases taxi drivers made more money than university professors. This changed dramatically with the economic reforms. The financial rewards for education rose dramatically, leaving the uneducated, and specially the rural population behind. This trend can obviously be reversed if the whole population has reasonable access to education.

Reversing this widening income gap would help to prevent the political unrest of the underprivileged, especially from the rural areas. Nevertheless, achieving this is difficult, and remains one of major challenges for the Chinese Government in the coming years. In recent years, there has been increasing unrest among those excluded from the current economic boom, reflected in the frequent police encounters with protestors in Chinese villages and among minorities. The Wall Street Journal stated that the rioting by Uighurs in July 2009, in Xinjiang's capital Urumqi, put the international spotlight back on China's handling of its ethnic minority regions (Restall, 2009, July10). However, it would be a mistake to interpret this as a sign that China's control over its ethnic minorities is loosening. Rather, these incidents show the broader context of rising tensions within Chinese society.

Nevertheless, this unrest remains markedly different from that in Latin America, where anger is directed against free market economies and foreign investments. In China people appear to be fully convinced of Deng Xiaoping's assertion that "to be rich is

glorious!”, and the Chinese protesters desire education, and their share of the country’s growing wealth generated by the free market economy.

China’s solution to the income gap is growth

The financial crisis of 2008 represented a challenge to the ability of the Chinese economic growth solution to maintain political stability. This crisis has also created the additional risk of unrest in the cities, as consequence of the rising urban unemployment: particularly amongst the large contingent of students that are leaving the universities and are not finding adequate jobs. This year alone, more than six million new graduates are entering the employment market (The Economist, April 11th 2009, p. 40).

China’s unsustainable future growth

The extraordinary growth of the Chinese economy was based on three economic drivers: net exports, domestic consumption, and public and private capital investments. In 2007, according to the preliminary numbers from The National Bureau of Statistics of China (The People’s Bank of China, 2007, p. 18), net export contributed 21.5 percent to GDP growth, domestic consumption contributed 39.7 percent, and gross capital formation contributed 38.8 percent (see Figure 1) . These figures indicate that the Chinese Government must change emphasis on the growth drivers of the GDP if they want to continue growing at a similar pace to the previous thirty years.

The huge increase in US current account imbalance, with the consequent emergence of huge surpluses in emerging economies (led above all by China) remains a problem. The US arguably cannot continue with an uncapped rise in government debt or profligate private borrowing, and its only alternative is to earn it way out with a big rise in net exports. This means that China must strongly expand demand for imports, relative to supplying exports (Wolf, 2009). Economists believe that such shifts in the growth drivers are both feasible and likely as domestic income rises.

Consumer spending in China today is around 40 percent of GDP, as opposed to 70 percent in the US. Even while maintaining a high savings rate, Chinese people on average can substantially increase their consumption (Malkiel and Taylor, 2008, p. 86). This consumption growth will be pushed by the younger generation (known collectively as the ‘young emperor generation’, and also called the ‘me generation’). This generation includes those born after the market reform started in 1978, and after the ‘one child’ policy was introduced in 1979. Typically, they have grown up indulged by their parents, who doted on them as a single child, and this was assisted enthusiastically by the grandparents. They are characterized as self-centered, frequently self-indulgent, and the most avid and savvy consumers. This generation is therefore driving demand in China, buying everything from expensive watches to imported cars (Degen, 2009, June 17, p. 1 and 6).

There also is the possibility for China to continue growing the economy for awhile longer, with room for substantial investment in infrastructure. In particular, there are still large investments required for the development of the western region of the country. The vast investments in infrastructure made in the last thirty years are credited with allowing China to grow at a much faster pace than India.

Corruption in China

The corruption of officials, who profit personally from public office, exists throughout the world to differing degrees, and Transparency International (TI, 2009) is a nonprofit organization that surveys the world's countries to determine their perceived level of corruption. Based on these surveys, they rank countries in terms of the degree to which corruption is perceived to exist among public officials and politicians. The scores range from zero (for highly corrupt countries) to ten (for very low levels of perceived corruption). Of the 180 countries surveyed by TI in 2008, China was rated as 72nd (with a score of 3.6), at the same level as Bulgaria, Macedonia, Mexico, Peru, Suriname, Swaziland, Trinidad, and Tobago. While China is not among the worst countries, the low rating reflects the fact that it has a serious problem of corruption. Gregory Chow (2005, p. 4) has argued that:

“The major factor that will hinder further economic reform in China, in my opinion, is the bureaucratic behavior and corruption of government officials. I can easily predict that further reform is gradual and slow, as in the past, mainly because there is inertia due to vested interests of the bureaucracy and because culture is difficult and slow to change”.

Farhoomand and Woo (2006, p. 6-15) explain that corruption is an extremely complex social behavior. They identify six key forms of corruption in China: government or insider control of corporate mechanisms (which encourages power manipulation within and outside the organizations), non alignment of the personal interest of managers with that of the shareholders of companies, the under-developed legal system (which leads to ambiguity to as to the definitions of commercial bribery, and thereby increasing opportunities for corruption), government officials (who, in order to secure their social status and not to be left out of the money-generating opportunities created by the economic reform, build corrupt relationships with businessmen), abuse of the ‘guanxi’ network, and a lack of basic social values.

The role of corruption in facilitating reforms

Johnston (2001, p.7) has argued that these forms of corruption may have unexpectedly helped to overcome some of the conflicts between state power (as represented by its bureaucrats), and the forces promoting the economic reforms (as represented by the rapidly emerging entrepreneurs). Government bureaucrats, motivated by corrupt purposes, may have modified and adapted government policies that would have

otherwise hindered the economic reforms, as these provided them with attractive opportunities for collusion with the entrepreneurs. This, in turn, may have promoted China's extraordinary growth.

While corruption may have helped lubricate the economic reforms, it has potentially explosive consequences for China's economic and political future in the long term, as Johnston (2001, p. 8) and Minxin (2007, p. 1) have both argued. Illicit practices, such as bribery, kickbacks, theft, and mispending of public money, have cost at least three percent of GDP. This corruption may also undermine the legitimacy of the ruling Chinese Communist Party, widening inequalities in income between those that are benefiting from the economic reforms and those that are being marginalized, and so fueling social unrest by inciting popular resentment against the highly-visible new rich class of profiting bureaucrats and entrepreneurs.

The Chinese government's response to corruption

The Chinese Communist Party continues to address corruption exercised by party members and government officials. The Supreme People's Procuratorate (SPP) recently revealed that more than 9,000 officials were found guilty of corruption in the first six months of 2009 (China Daily, 2009, July 17). Those found guilty are severely punished: for example, Li Peiyong, the former chief of the Capital Airports Holding Company (CAH), was convicted of taking bribes and participating in embezzlement, and was subsequently executed in Jinan, capital of east China's Shandong province (China Daily, 2009, August 7). Similarly, Chen Tonghai, the former chairman of China's second-largest oil company Sinopec Corp., was convicted of corruption (for taking close to \$28 million in bribes), making him one of the most prominent officials from a Chinese state company to be punished for graft. He was given a suspended death sentence (Oster, 2009). The Chinese government is clearly aware that if they don't control corruption, the governing Communist Party will lose its control over the country as did, in the past, the Imperial Qing Court, and the Kuomintang government of Chiang Kai-shek.

Unfortunately, corruption is a common problem to all countries, and especially in emerging economies. The solution is a systematic and focused effort to promote transparency in the political process and government bureaucracies. This requires changes that are not easy to promote because of the many conflicting interests, particularly from the politicians benefiting from the situation. In 2007, China established the National Bureau of Corruption Prevention (NBCP), who report directly to the State Council, in order to promote transparency in all levels of government to prevent corruption (People's Daily Online, 2007). This bureau aims to monitor the flow of suspicious assets and suspicious corruption activities, by establishing an information-sharing system among prosecuting organs, courts, police authorities, and banks.

China's impact on the world

It is in China's global interests to show the world that it is restoring its past greatness and sophistication, and that the 'Century of Humiliation', 'Three Bitter Years', and the 'Cultural Revolution' are things of the past. Successful sponsoring of the 2008 Olympics in Beijing and the preparations for sponsoring the 2010 World Expo in Shanghai have been useful in this regard, and indicate that China possesses a government that can carry out whatever it deems necessary to realize its goals.

China's far-sighted approach

Zakaria (2009, p. 95) has outlined some reasons for the ability of China's government to take a far-sighted approach in developing its economy. He has argued that China simply doesn't have to respond to the public in carrying out their strategy, and so avoids making foolish and short-sighted popular political to appease voters. He has cited the US government as an example of this short-sighted practice: in order for the US government to obtain approval from congress for the much needed incentive program to restart its economy after the 2009 recession, it had to accept a lot of unnecessary (and potentially foolish) concessions to satisfy the selfish personal interest of Congressmen and Senators, before it was possible to obtain their support for a program that would benefit all Americans.

China's lead over the US in generating electricity from renewable sources is an example of its ability to respond quickly. Bradsher (2009, July 2), in his article in the New York Times, has pointed out that as the US is taking its first steps toward mandating that power companies generate more electricity from renewable sources, whereas China has implemented a similar requirement almost two years ago, and is investing billions of dollars to remake itself into a green energy superpower. This year China is on track to overtake the US as the world's largest maker for wind turbines, after doubling wind power capacity in each of the last four years.

China's new role in the world

China is fast moving to build strong relationships in Latin America, filling in the void left by the US, by offering large financing packages to countries that are struggling with slowing economies, plunging commodity prices, and lack of credit. These problems are largely due to the financial crisis, which is attributed US and its excessive neo-liberal economic policies. Most of these developing countries have suffered in the past under the policies imposed by the International Monetary Fund (IMF) sponsored by US, and have had to privatize their state-owned enterprises, let bad banks fail, maintain government spending under control, and keep interest rates high so to let the market economy work. Noticeably, in response to its own crisis of 2008 the US did exactly the opposite on all four fronts, which has perhaps contributed to mistrust in Latin America for the US.

In the New York Times, Romero and Barrionuevo (2009, April 15) have recorded that during the first quarter of 2009, China has been negotiating deals to double a development fund in Venezuela to \$12 billion, has lent Ecuador at least \$1 billion to build a hydroelectric plant, has provided Argentina with access to more than \$10 billion in Chinese currency, and has lent Brazil's national oil company \$10 billion. They suggest that these deals largely focus on China's ability to protect its interests in natural resources (such as oil) for years to come. They also stress that China's trade with Latin America has grown quickly this decade, making it the region's second largest trading partner after the United States. But the size and scope of these loans point to a deeper engagement with Latin America, at a time when the influence of the US is eroding. Another significant development in global economics is the agreement to substitute the dollar with the Chinese Yuan in bilateral commerce between China and most Latin America countries. This is evidence of China's push to substitute the Yuan for the dollar as international reserve currency.

The fast growing developing economies of Brazil, Russia, India and China (baptized by Goldman Sachs (2001) with the acronym BRIC), are challenging the economic dominance of the US and the European Union (EU). On June 16, 2009, the leaders of the BRIC countries held their first summit in Yekaterinburg, and issued a declaration calling for the establishment of a multipolar world order. Particularly, these countries have requested a greater influence in the IMF and World Bank (WB), challenging the absolute US leadership and the imposition of its excessively liberal market economic model that generated the 2008 financial crisis. The IMF and WB (created during the Second World War) were traditionally dominated by US ideas and money, and have served to spread US influence and business interests over the developing world.

Implications for the US

The great challenge for the US is its large accumulated debt with China and Japan, and the need for additional borrowing to finance its massive economic stimulus plan. This problem began in the early 80s, when Americans began to consume more than they produced, and made up the difference by ever-increasing borrowing. At the same time the Chinese were saving almost half of their earnings instead of investing in their economy. With this ever-growing savings, the Chinese government financed consumption in the US to promote China's exports to American consumers.

The massive lending by China, Japan and other countries reduced interest rates in the US, and encouraged more and more borrowing and spending by the Americans. The excess of low cost financing encouraged Wall Street managers to create increasingly riskier financial innovations, in order to boost profits. The profits and risks of these financial innovations were carried by investors, who were happy to pay extraordinary bonuses for these profits to the Wall Street managers that created these financial innovations (at no risk for themselves). This encouraged Wall Street managers to create

even more profitable and increasingly risky financial innovations. This financial merry-go-round for investors and Wall Street managers ended with the burst of the real state bubble that started the 2008 financial crisis.

The Lehman Brothers bank is a good example of the 'moral hazard' that precipitates the financial crisis. This bank made losses in the two quarters before it collapsed, yet continued to accrue a compensation pot for its employees not far off the levels of 2007 (see Figure 2). Returns to shareholders over the entire cycle worsen when the failures of the bank are included. Lehman paid out \$55 billion to employees in the decade up to the end of 2008. Shareholders earned cumulative profits of zero, including the loss of all of their capital when the firm failed (The Economist, 2009, July 16).

The enormous economic stimulus package launched by the US government to restart its flailing economy has to be financed by more borrowing from China and other countries (Figure 3).

According to Bartlett (2010) Chinese ownership of Treasury securities is probably significantly understated. Parameswaran (2010) suggest that China may be using agents in London, Hong Kong and elsewhere to disguise some of their purchases in order to avoid political scrutiny. Economist Simon Johnson (2010) of MIT believes that the Chinese almost certainly own more than \$1 trillion in Treasury securities. Bartlett (2010) writes:

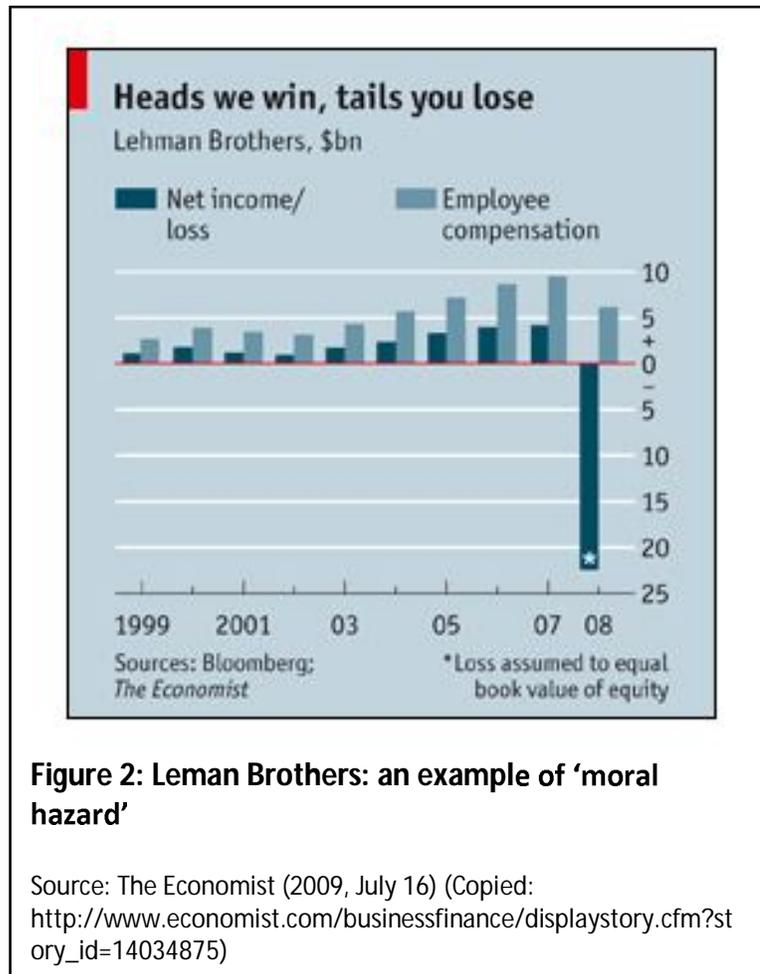


Figure 2: Leman Brothers: an example of 'moral hazard'

Source: The Economist (2009, July 16) (Copied: http://www.economist.com/businessfinance/displaystory.cfm?story_id=14034875)

“How the Chinese came to acquire all these securities and what they might do with them is not well understood. It is primarily the result of their exchange rate policy, which fixes the Chinese currency to the dollar below the value that would exist if it were allowed to float freely. The Chinese do this because it makes their exports cheaper in terms of dollars, and imports from the U.S. more expensive in terms of their currency, which is a key reason for our large trade deficit with China.”

However, the extent to which the Chinese are willing to continue to provide finance the US is now uncertain (Wolf, 2009, June 2). In the short term, the Chinese government has no choice but to provide finance to the US so that the US can continue importing from China. These Chinese exports to the US are vital to sustain China’s economic growth. Nevertheless, due to perceived lack of sustainability of China’s economic growth model based on exports to the US, it is likely that the Chinese government will gradually divert most of their resources invested in US treasury bills to develop new markets in Latin America and Africa, and to stimulate growth in consumption in their own economy.

Analyzing US debt and China’s accumulation of a vast pool of capital, Zakaria (2009, p. XX) has written in the preface to *The post-American world*:

“The best scenario would be for China and the United States to work together to slowly unwind their mutual suicide pact. China would benefit by having more money to reinvest in its domestic economy. The United States would benefit from being forced to make some hard decisions that will ultimately make it

Country	Billions of Dollars
China, Mainland	894.8
Japan	765.7
Oil Exporters*	207.4
United Kingdom	178
Brazil	169.3
Hong Kong	148.7
Russia	141.8
Caribbean Banking Centers**	128.2
Taiwan	116.5
Total Foreign	3,689.00

Notes:

* Includes Ecuador, Venezuela, Indonesia, Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, the United Arab Emirates, Algeria, Gabon, Libya, and Nigeria.

** Includes Bahamas, Bermuda, British Virgin Islands, Cayman Islands, Netherlands Antilles, and Panama.

Figure 3: Top Foreign Owners of U.S. Treasury Securities as of December 2009

Source: Bartlett, 2010:
<http://www.forbes.com/2010/03/11/treasury-securities-national-debt-china-trade-opinions-columnists-bruce-bartlett.html>

better off. Since at least the 1980s, America has recognized that it could spend with abandon, forever delaying the date of repayment. This has not been good for its foreign or domestic policy. It's made Washington arrogant lazy, and careless. But the free ride is coming to an end.”

US risks inflation and devaluation of its currency

The gradual drying up of the supply of low cost financing, previously available to the US from China and other countries, is likely to increase interest rates in the US. Shaky auctions of treasury notes in July 2009 reignited concerns as to whether the US government can continue to attract buyers from China and elsewhere (to repay trillions in new debt) without raising interest rates (Rappaport & Areddy, 2009, July 31). If interest rates have to be raised to attract buyers for the US debt, these will certainly discourage the American consumer from borrowing and spending. Additionally, the government may be forced to print money to pay for its economic stimulus package, without being able to finance this.

The consequence of this for the US could be a prolonged recession, inflation and the devaluation of the American dollar. The US will, after resolving consequences of the financial crisis of 2008, continue to be one of the most powerful nations in the world (the US GNP is still almost three times larger than that of China), but it will have to learn to share the world leadership with other countries, particularly with Europe (the EU GNP is slightly larger than that of the US), China, and the other BRIC countries. The US, China and the World have to learn how to work more effectively together, to learn to respect different ideas, to avoid excesses (such as those from Wall Street) and extremism (such as North Korea), and to provide a decent living to all people everywhere. This approach is the only way to avoid political unrest, wars and new financial crises.

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The United States Pharmaceutical Industry and Its Potential Economic Opportunities In the Chinese Pharmaceutical Environment

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Abstract: The current global pharmaceutical market is stagnant. In contrast the drug market in China is a strong growth area which is being fueled by its population of 1.3 billion, aggressive government spending on healthcare, and an increased demand for drugs to treat chronic diseases. China has been plagued with economic recession like the rest of the world, however many factors indicate that its pharmaceutical industry is evolving and has a bright future.

Under the theme of exploring the economic relation between the United States and China, this paper will focus on the opportunities of the pharmaceutical industry within these two countries. The emphasis will be on the potential economic benefits for the U.S. pharmaceutical companies' expansion into the Chinese pharmaceutical market and the considerations it faces in doing business there

Keywords: Chinese pharmaceuticals, global pharmaceutical industry, pharmerging markets, United States drug market, emerging market pharmaceutical growth, healthcare reform in China, healthcare reform in the United States

Reference: Reference to this paper should be made as follows: Beasley, K. (2010) "The United States Pharmaceutical Industry and Its Potential Economic Opportunities In the Chinese Pharmaceutical Environment ", The ISM Journal of International Business, ISSN 2150-1076, Volume 1, Issue 2

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Introduction

The current global pharmaceutical market is stagnant. In contrast the drug market in China is a strong growth area which is being fueled by its population of 1.3 billion, aggressive government spending on healthcare, and an increased demand for drugs to treat chronic diseases. China has been plagued with economic recession like the rest of the world, however many factors indicate that its pharmaceutical industry is evolving and has a bright future.

Under the theme of exploring the economic relations between the United States and China, this paper will focus on the opportunities of the pharmaceutical industry within these two countries. The emphasis will be on the potential economic benefits for the U.S. pharmaceutical companies' expansion into the Chinese pharmaceutical market and the considerations it faces in doing business there.

The Pharmaceutical Industry: Origins and Evolution

The modern pharmaceutical industry is a highly competitive non-assembled¹ global industry. Its origins can be traced back to the nascent chemical industry of the late nineteenth century in the Upper Rhine Valley near Basel, Switzerland when dye stuffs were found to have antiseptic properties. A host of modern pharmaceutical companies all started out as Rhine-based family dye stuff and chemical companies, for instance Novartis, Ciba-Geigy etc. Most of these companies are still around in today's global market place.

Over time many of these chemical companies moved into the production of pharmaceuticals and other synthetic chemicals and they gradually evolved into global players. The introduction and success of penicillin in the early forties, combined with the relative success of other innovative drugs, institutionalized research and development (R&D) efforts in the industry². The industry expanded rapidly in the sixties, benefiting from new discoveries and a lax regulatory environment. During this period healthcare spending boomed as global economies prospered. The industry witnessed major developments in the seventies with the introduction of tighter regulatory controls, especially with the introduction of regulations governing the manufacture of “generics”³. The new regulations revoked permanent patents and established fixed periods on patent

¹ Non-assembled industries are industries that do not rely on manufactured or component parts or materials.

² The importance of R&D was especially prominent due to the co-location of European universities and educational research institutes.

³ Generics are medicines manufactured after patent expiry by another pharmaceutical company and usually sold at a cheaper price.

protection for branded products, a result of which the market for “branded generics” emerged.

The U.S and Global Pharmaceutical Industry Today

Over the last thirty years large pharmaceutical companies have enjoyed unprecedented success. Some of the well known global industry companies for example are Pfizer, Merck, GlaxoSmithKline, and Novartis to name a few. Unfortunately, the almost effortless growth and profitability the industry experienced throughout the 1990’s cannot be expected to continue in a dramatically altered 21st century marketplace. To manage current challenges and ensure future success, the pharmaceutical companies are required to understand how the market is changing and identify new strategies to respond, compete, and grow. Strategies that guaranteed success during the past 20 to 30 years are anticipated to not guarantee success in the future⁴. There is widening belief that the rapidly evolving nature of this industry will result in new business models which will transform it.

Transitions in Global Pharmaceutical Marketing

Throughout the 1980’s and 1990’s a double-digit annual growth rate in the pharmaceutical market was the norm. Over the past 8 years, however, the growth rate has decreased to the low to mid single digits. Major markets have moderated, while growth has accelerated in the “pharmerging”⁵ markets of China, Brazil, Mexico, South Korea, Turkey, India and Russia. The U.S. remains the largest market (projected to be 39 percent of the total market in 2008), but its contribution to global growth has decreased significantly. Also in the past, the developed market was driven by primary care needs for drugs to treat conditions that affected large numbers of patients, for example, infectious diseases, high cholesterol and high blood pressure.

Now the momentum has shifted. The number of new product launches has decreased and the market is dominated increasingly by specialty driven products. In 2008, the primary care segment will decrease globally for the first time, and specialty categories will drive 70 percent of total global growth. The current market is driven by needs for innovative, molecularly targeted products designed to treat small groups of patients with more complicated diseases: cancer, rheumatoid arthritis and immune disorders for

⁴ Jerry Cacciotti, Richard Evans, Mary C. Tanner, “21st Century Pharma, Managing Current Challenges to Ensure Future Growth”, *In Vivo, the Business & Medicine Report*, June 12, 2008, p.1.

⁵ The term “pharmerging” coined by IMS pertaining to countries with emerging pharmaceutical markets.

example⁶. Contributing to this trend are the global dynamics of changing demographics, epidemiology and economic development, particularly in the pharmerging markets. These are the areas which are becoming the avenues for driving growth and revenue.

The decline of the blockbuster drug (an industry term referring to drugs with very large scales, generally in excess of \$1 billion) and the replacement by generic drugs (defined as copies of off-patent brand-name drugs that come in the same form and with the same intended use. They are then sold under their chemical names either over the counter or by prescription), represents one of the most dramatic transitions in pharmaceutical marketing. Ten years ago, blockbusters accounted for only 9.8 percent of growth but by the middle of this decade they accounted for 44.3 percent. The development of blockbuster drugs involved enormous costs that were justified by multi-billion dollar sales potential and favorable regulatory and pricing frameworks. That environment has changed. Favorable pricing has eroded, safety and regulatory oversight has increased the cost of bringing primary care therapies to market and keeping them there. There have been numerous examples of drugs taken off the market due to patient reports of harmful or questionable outcomes. It is anticipated that within the next five years, \$129 billion of branded pharmaceuticals will face generic competition.⁷

Global Changes in Key Fundamentals

The standard of care for all patients has risen dramatically, in part due to an increased focus on patient safety and the increased regulatory actions within many countries. New drug applications are scrutinized more closely, and the U.S. Food and Drug (FDA) approval process is becoming more demanding and more conservative. For many therapeutic categories, approval almost always requires data to show efficacy and safety. Clinical trials which are a requirement of bringing a drug successfully to market are becoming increasingly complex and expensive. Another key factor is the change in consumer behavior. Consumers now have pharmaceuticals marketed directly to them through many mediums including the internet. Consumers and prescribing physicians want more complete data about clinical trials and drug efficacy and safety. In the U.S., third-party payers such as Medicare and Medicaid, exert a high degree of influence over which drugs will be prescribed.

Additionally, other factors have emerged such as changes in intellectual property protection. Pharmaceutical companies in the U.S. and Europe are experiencing

⁶ Cacciotti, Evans and Tanner, p. 1.

⁷ Cacciotti, Evans and Tanner, p. 2.

increasingly aggressive patent litigation which is shortening the time of patent protection and accelerating the entry of generic versions of drugs. This becomes attractive to those politicians crafting legislation as generics reduce those required resources that impact on national budgets. In the pharmerging markets, intellectual property laws and regulations are nascent. The social contract that influences the major markets is being threatened by compulsory licensing, ineffective enforcement, and a more tolerant attitude toward intellectual property infringement.⁸

In contextual summary, the economics that drive the pharmaceutical industry are evolving into a different direction than what the industry has previously been used to. The increase in demand for the production of generic drugs is resulting in increased pressure on the growth potential of the major markets. This trend is coinciding with the increased costs of research and development, which includes clinical trials. The FDA in the U.S. and its European Union counterparts are scrutinizing the development and production processes more closely, both consumers and prescribing providers are more cautious after hearing about safety problems with marketed drugs. The expense generated by the large infrastructure required for the research and development of blockbuster drugs is not translating into sufficient revenues to cover the cost of capital expenditures. This contributes to an increasingly inefficient and costly product development process.

China: The Current Economic Macro-environment

Beside the United States, there is no more important single market than China.⁹ The economic and social changes occurring in China since it began actively seeking economic ties with the industrialized world have been dramatic. China's dual economic system, embracing socialism along with many tenets of capitalism, has produced an economic boom with expanded opportunity for foreign investment that has resulted in annual gross national product (GNP) averaging nearly 10 percent since 1970. Most economic analysts predict that 8 to 10 percent average for the next 10 to 15 years is possible. Thus, at that rate, China's GNP will equal that of the United States by 2015. These growth projections are dependent on China's abilities to deregulate industry, import modern technology, privatize overstuffed, inefficient state-owned enterprises (SOEs), and continue to attract foreign investment.

⁸ Cacciotti, Evans and Tanner, p. 3.

⁹ *The Economist*, "How China Runs the World Economy," July 30, 2005, pp. 11, 61-63.

Two major events that occurred in 2000 are having a profound effect on China's economy: admission to the World Trade Organization (WTO) and the United States' granting China normal trade relations on a permanent basis. China's entry into the WTO cut import barriers currently imposed on American products and services. The United States is obligated to maintain the market access policies that it already applies to China, and has for over 20 years, and to make its normal trade relation status permanent. China has begun to comply with WTO provisions and has made a wholehearted and irrevocable commitment to creating a market economy that is tied to the world at large.¹⁰

In the long run the economic strength of China will not be as an exporting machine but as a vast market. The economic strengths of the United States come from its resources and productivity and the vast internal market that drives its economy. China is a relatively poor nation going through a painfully awkward transformation from a socialist market system to a hybrid socialist/free market system, not yet complete and with the rules of the game still being written.¹¹

China's Pharmaceutical Industry and Regulatory Background:

Pharmaceutical Policy and Role in China

Presently in China, there exist contradictory goals which plague its pharmaceutical policies. The government wants to develop the domestic pharmaceutical industry and encourage innovation. Moreover, decreased government financing of public hospitals was replaced in the 1980's in part by cross-subsidization through drug sales. These goals push toward higher drug prices. Yet the government also aims to control drug spending to guarantee access even for poor and uninsured patients. Current government policy focuses primarily on trying to control drug spending through price regulations at selected levels of the supply chain. However, such a system has distorted market incentives, contributing to higher drug prices for consumers and questionable prescribing practices that undermine public health. Hence, drug policy reform is an essential component in the current efforts to create universal healthcare coverage for all of China's citizens¹².

¹⁰ N. Mark Lam, and John L. Graham, "China Now: Doing Business in the World's Most Dynamic Market". (2007). New York, McGraw-Hill. P. 44.

¹¹ N. Mark Lam. and John L. Graham, p. 56.

¹²Sun, Qiang, Santoro, Michael A., et al. (2008) "Pharmaceutical Policy in China". *Health Affairs* 27 (4): 1042

Current health care reforms in China seek to reverse the precipitous decline in effective health insurance coverage that arose from agricultural de-collectivization and the breakdown of the “iron rice bowl” for urban workers. As a share of total health spending, out-of-pocket payments by individuals increased from 20 percent in 1978 to approximately 50 percent in 2006¹³. Despite recent efforts to expand social insurance programs, health insurance coverage remains limited.

Drug spending represents 42.7percent of expenditure per inpatient episode and 50.5 percent per outpatient visit. Thus pharmaceutical policy looms large in any government effort to control health spending and keep healthcare affordable¹⁴.

Overview of the Chinese Pharmaceutical Industry

Prior to the economic reforms begun under Deng Xiaoping in the late 1970’s, the Chinese government, especially local governments, promoted the pharmaceutical industry mainly for industrial development and job creation. These industrial policies did spur rapid development but also resulted in production facilities that were small in scale, duplicative, and greatly uneven in quality. China’s drug manufacturing firms now number more than 5,000, and most are small producers of generic drugs. The sales revenue of the top ten pharmaceutical enterprises accounts for only 10 percent of total pharmaceutical sales, and the top 100 firms account for only 33 percent of total sales, compared to the top ten international pharmaceutical companies, which account for about 42 percent of global pharmaceutical sales revenue¹⁵. This industrial structure combined with the regulatory environment to encourage pharmaceutical manufacturers to focus on competing on price rather than quality and innovation. On average, research and development (R&D) spending accounts for only 2 percent of sales revenue, which is far lower than the 14-18 percent of leading global pharmaceutical companies. From 1986 to 2006 Chinese firms have independently developed only forty kinds of chemical medicines, most of which are not patented. Recent government initiatives aim to improve innovative capacity and quality, including through promotion of Good Manufacturing Practices.¹⁶

National pharmaceutical distribution is also not very concentrated in China. In 2005 the market share of the top three pharmaceutical distributors in China amounted to about 25

¹³ Sun, Q. p. 1043

¹⁴ Sun, Q. p. 1043

¹⁵ Sun, Q. p. 1044

¹⁶ Sun, Q. p. 1045

percent of the industry's total sales revenue, compared to market shares of 96 percent and 67 percent among the top three pharmaceutical distributors in the United States and Japan, respectively. At the regional and local levels, however, some wholesalers dominate specific provinces. There also is considerable market concentration at the final key link in the supply chain: the pharmacies owned by China's more than 19,000 hospitals, which account for about 80 percent of all retail pharmaceutical market share. Partly in response to concerns about increased retail prices stemming from multiple layers of intermediaries, in 2000 the State Food and Drug Administration (SFDA) established fifty interprovincial pharmaceutical retail chain enterprises. Still, there are usually six to nine supply-chain links from production to final sale to consumers and patients.¹⁷

Pharmaceutical Price Regulation

Pharmaceutical prices have long been regulated in China, except from 1992 to 1996, when the Chinese government let the market set drug prices and the pharmaceutical industry grew rapidly. However, in response to perceived problems of market-based pricing – including price increases, poor quality control, corruption, and kickbacks – the government recentralized much of pharmaceutical pricing in 1997. About 60 percent of pharmaceutical sales in China now occur at regulated prices.

The powerful former state planning commission, now called the National Development and Reform Commission (NDRC), has issued nine policies on drug pricing since 2000. These new policies set maximum retail prices for medicines included in the essential medicine list of the urban insurers, based on a mark-up above the average production cost declared by manufacturers. All other drug prices are market based.

When setting drug prices, the government aims to cover manufacturer's production costs as well as profit margins, to help cover the general operational costs of drug distributors and drug dispensers such as hospitals. Firms that market medicines with higher quality and safety or with shorter treatment cycles and lower overall treatment expenses (compared to other medicines with the same chemical composition) can apply for higher regulated prices. However, because of corruption in the SFDA's supervision of the drug registration process, manufacturers have been able to obtain so-called new drug status for existing generic drugs simply by changing the dosage or the packaging.¹⁸

¹⁷ Sun, Q. p. 1046

¹⁸ Sun, Q. p. 1047

Critics of China’s pharmaceutical industry, like those of the global industry, often accuse manufacturers and distributors of reaping above-normal profits through high prices. In response to such concerns, between 1997 and 2007 the NDRC introduced extensive and substantive price reductions for many drugs, which resulted in reduced sales revenue for purveyors and reduced costs for purchasers.

Part of the perception of high drug spending appears attributable to the relatively lower prices for professional health care services. In other words, drug prices may be higher in China than elsewhere in the world, but that is inextricably linked to the industry’s cross-subsidizing the rest of the health care system. Patients may object to high prices for pills, but they also are paying less for doctor visits, therapies, and surgeries. Such economic transfers make it difficult to sort out just how much drug price levels reflect inefficiency.¹⁹

Healthcare Reform and its Implications for the Pharmaceutical Industry

There is currently great debate in terms of just how to reform and change the healthcare system in China. There are numerous government sponsored committees and think tanks producing studies and reports addressing the crucial challenges facing the country. The government in particular, is challenged to provide basic healthcare to the population in a way that is affordable and comprehensive, without resorting to unilateral price control. The number of persons covered and the depth of the coverage in the government insurance – LIS and GIS- and more recently, the new consolidated Basic Medical Insurance (BMI) scheme, has declined over the last year.²⁰ It has been cited in various directives issued by the World Health Organization (WHO) and other agencies, that the potential unraveling of the healthcare system would pose a threat to domestic tranquility in the country. Most importantly, as Asia begins to play a more prominent role on the world health stage with diseases like severe acute respiratory syndrome (SARS) and avian flu taking flight, as well as the recent H1N1 epidemic, the pressure on China will mount from the world health community to address the failings of the country’s current healthcare infrastructure.

According to IMS the pharmaceutical industry is well-positioned to help support necessary reform in China. Specifically this can be done by leveraging global experience in developing sound, successful cost containment strategies. In lending this

¹⁹ Sun, Q. p. 1047

²⁰ Raymond Hill, Stephen Walter, and Mandy Chui (2006) “All Roads Lead to China: Traversing the Next Frontier”. IMS Global Consulting, IMS Health www.imshealth.com accessed June 15, 2009.

expertise, companies can hope to gain a foothold in this vast, complex market. This presents enormous opportunity for both indigenous Chinese and U.S. pharmaceutical companies to create effective partnerships which may result in accelerated growth in quality, technology and consumer market expansion.

The Future Environment for Industry Growth and Investment

China formally permitted the participation of foreign investors in 1979. Presently, the Chinese pharmaceutical industry has become one of the first groups of industries that established enterprises using foreign investment by the majority of large multi-national pharmaceutical groups from North America. This is one of the key ways that these companies are seeking in their efforts to create a localized infrastructure to ensure new avenues of growth and to create competitive advantage. With foreign cooperation and the successful introduction of foreign investment, China's pharmaceutical industry has expanded at a fast rate with annual market growth posting an average double-digit growth for the past two decades. Analysts anticipate that China will be the world's largest pharmaceutical market by the year 2020. In 2005, it was recorded that 20 of the 25 largest transnational pharmaceutical corporations have set up manufacturing enterprises in the form of either sole investments or joint ventures, and more than 1800 joint ventures have been established. The economic development and huge market potential of China's pharmaceutical market are highly recognized by many international corporation groups such as Bristol & Myers Squibb, Pfizer and Novartis which have been expanding their business in China steadily.²¹

For instance, AstraZeneca, one of the global leading pharmaceutical corporations, has made significant investments in its sales force in preparation for expansion into new city markets. An estimated 2,000 hospitals in 120 cities are being covered by a growing army of sales representatives, costing an industry average of USD \$30,000 per year, per person. Investments such as this are offset by the additional revenue generated each year per rep. In larger cities this could be as high as USD \$200,000 per person or as low as \$50,000 in smaller urban areas. The company also has invested over \$100 million USD in research and development in China and will open the doors to the AstraZeneca Innovation Center China later this 2009 calendar year. This is in addition

²¹ Hu Yuanjia, Carolina O.L. Ung et al. (2007) "The Chinese pharmaceutical market: Dynamics and a proposed investment strategy". *The Journal of Medical Marketing* 7 (1) p. 23.

to the \$134 million already invested in a manufacturing plant in Wuxi and a clinical research unit in Shanghai created in 2002.²²

Geographic and Demographic Considerations

The pharmaceutical opportunities are only going to increase with time. The incidence of chronic disease is rising in China as the society becomes more affluent. Greater prosperity often leads to lifestyle changes for example; richer, less healthy diets result in increases in diseases such as diabetes, cancer and heart disease. By 2025 it is projected that China will have 46 million diabetes patients, almost double what is projected for the United States, and about 13 percent of the global diabetic population²³. Couple this with the dynamics of an aging population and the migration from the rural areas into the urban, where the population becomes increasingly sedentary. The potential requirements for access to a multitude of chronic pharmaceutical therapies can be predicted.

In terms of the best regions for pharmaceutical company investment, market research has shown that China's southeastern zone with two well-developed areas and the three sub-developed areas have shown prosperous development of the pharmaceutical industry and the majority of pharmaceutical sales have originated from these regions²⁴. Market research has shown that 86 percent of the Chinese market will be outside the larger cities after 2008. Pharmaceutical sales in tier two cities like Hangzhou, Shenyang, Jinan and Tianjin, for instance, have grown by 2.5 times since 2000 and are likely to continue on this trajectory until 2010. These regions were chosen as the priority areas for the Chinese government to initially practice the policy of opening to the outside world for foreign investment and were given policy preferences. Under special adjustment and organization by the central government, the investment environment has been relatively advantageous over China's other areas. These regions and the cities therein also serve as a special channel for China to use foreign investment, to import advanced technology and management skills, and to enter international markets²⁵

This population shift has a significant strategic impact on how pharmaceutical companies can access the opportunity to be mined in China. Sales penetration and productivity in these markets is one of the leading growth drivers, but also a significant

²² Hill, Walter, and Chui, p. 5

²³ Hill, Walter, and Chui, p. 6.

²⁴ The Zhejiang and the Guangdong provinces, and the Hebei, Heilongjiang and Sichuan provinces respectively.

²⁵ Yuanjia and Ung et al. p. 24

investment. Companies will need to expand field sales forces and extend their reach into new geographic markets and new areas where drug coverage is needed and the market is not saturated.

The key for companies to achieve success in doing business and gaining competitive advantage in this market will be in their abilities to execute. In other words, companies which have well thought-out human resources (HRO) programs that can attract retain and train top talent will be better positioned to accelerate market penetration. Those companies that succeed in the Chinese market will not necessarily be the companies with the best products. It will be the companies that have finessed execution by going to market with a consistent, cohesive plan and with ground forces in place to execute that plan. Senior management will be stable and the strategy informed by market-specific intelligence and guidance, and a willingness to forge alliances with the government.²⁶

Pharmaceutical Market Segmentation: The Generic Drug Market

As previously discussed, pharmaceutical sales in China are projected to almost double in the next four years. China's pharmaceutical market which was the world's tenth largest in 2006 is projected to climb to fifth by 2012 according to research performed by IMS. A large opportunity exists in the area of generic pharmaceuticals.

Multi-national pharmaceutical involvement in China has continued to evolve since first allowed in 1979. Since 2000 multinational branded products have gained major market positions in the larger cities and have captured leading market shares among the top 10 corporations in the Chinese hospital market. Yet while the number of multinationals has increased, from 294 in 1999 to 329 in 2008, they are outnumbered by local Chinese companies, which have grown from 1,281 to 2,424 in the same period.²⁷ This is primarily due to the abilities of the local companies having wide distribution networks and more intimate knowledge of local governments and hospitals. By contrast the larger multinationals have made better inroads with the larger medical centers located in the largest cities with only minor penetration into the rural areas.

One of the key drivers in the exponential growth of pharmaceuticals in China is the generic drug sector. According to the IMS China Hospital Audit sales of generics have increased above the overall pharmaceutical market growth with the generics share of sales from 54% in 1999 to 62% in 2008. It is worth noting that local companies

²⁶ Hill, Walter, and Chui p. 8

²⁷ IMS China Hospital Audit, 1999 and MAT, June 2008 as cited in Chui 2009.

dominate the Chinese generics market and account for over 99% of sales.²⁸ The Chinese domestic industry has expanded rapidly and companies have improved their manufacturing processes to become quality certified and have made major investment in R&D activities. Their goals are to expand their product portfolios beyond traditional areas such as anti-infectives into the more lucrative areas of cancer drugs, cardiovascular and other chronic diseases. Most notably, systemic anti-infectives, which accounted for 41% of generic sales in 1999, have seen their share erode to 29% in 2008. This trend has produced a great deal of merger and acquisition activities within the local firms which has led to more consolidation.

Foreign companies' penetration into the promising generics market has been slow. They are impeded by the competitive advantage of the local players. The low-cost manufacturing capabilities of the domestic firms enable them to compete on price. At the same time, their close government relations, a commission-based business model, and heavy investments in their sales forces and distribution networks have contributed to their stronghold. Maintaining this market share in a highly competitive environment is a challenge. For instance, while JS Yangzijiang Fty has retained its leadership in the rankings of China's top local pharmaceutical companies for the last 5 years, its position is vulnerable due to competition from Hengrui and Shandong Qilu, which rose to the number two and three slots respectively, in 2008.²⁹

Implications for the Generic Sector under Healthcare Reform Initiatives

As previously discussed, there are wide disparities in the provision of healthcare services across China as a whole.

These exist across provinces, regions, and across income groups as well as between the urban and rural areas. China has set a goal of redressing the inequities of the current situation by providing an affordable healthcare system that will cover all urban and rural residents by 2020. The accelerated development of a multi-level insurance system has become a government priority as part of this health reform program. The government has set an ambitious target of bringing virtually all the population within the healthcare insurance framework by 2010. This will further boost demand for drugs, particularly generics.³⁰

²⁸ Mandy Chui (2009) "Rivalry, Risk and Reward in the Generics Market" IMS Health Incorporated, p. 2

²⁹ Chui, p. 3

³⁰ Chui, p. 4

The Factors for Success in the Generics Sector

Both foreign and domestic companies that are based primarily on a generics model stand to prosper over the coming decade in the Chinese market. Some of the factors which should be considered for success are as follows. First, is the ability to adapt to demographic market trends. That is to be able to take advantage of the upcoming healthcare reforms, and to be able to provide the right drug at the right price at the right place for the increasingly affluent Chinese consumer base. Secondly, the appropriate selection of generic products according to different commercial models will be critical for the success of any joint venture. For example, being the first to market with copies of patent-expired products in high-growth and high-value categories would give companies a head start in penetrating key sectors such as hypertension and diabetes. Thirdly, local generic companies and U.S. pharmaceutical companies will gain together if they pursue and forge strategic partnerships. Specifically for the local Chinese companies they can foster cooperative relationships to broaden their portfolios and to upgrade their manufacturing and technological capabilities. They can also become an integral part of the value chain of foreign companies.³¹

For foreign, specifically the U.S. companies, they can benefit from strategic alliances as well and further gain a foothold in China's complex generic drug market place. Partnerships with and investments in local manufacturers will enable cost efficiencies for these companies. Product differentiation and the establishment of strong brands will also help overcome some of the obstacles foreign players have encountered in penetrating the Chinese market. Bottom line is that the relatively untapped Chinese generics market could help bolster the international generics industry as access to healthcare in China increases exponentially over the next five years.³²

Conclusion

The current trends cited in this paper all point to a future where the Chinese pharmaceutical market will be at least one of the top five in the world in the relatively near future. U. S. pharmaceutical companies which are now in their mature growth stages will find opportunities for rapid product growth if they make significant investments there. There are definite challenges to doing business in China however the potential rewards are equal if not higher. Conversely, China is in an excellent position to capitalize on improving its own pharmaceutical industry infrastructure by

³¹ Chui, p. 6

³² Chui, p. 6

effectively partnering with U.S. and other Western pharmaceutical corporations. They need to utilize these partnerships to invest in new innovation, technology and to learn quality improvement processes which will allow them to compete their products in Western markets.

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Is Guanxi Social Capital?

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Abstract: Are Chinese concepts of guanxi different from social capital? Or is guanxi a more historical, philosophical, codified version of social capital? Would understanding guanxi better help businesspeople practice social capital in the west? This paper describes both guanxi and social capital, compares them, and analyses their similarity. Comparing guanxi to concepts of social capital will help companies do business in China, but it will also help better explain and put social capital into action in the west.

China, by virtue of its size, its dynamic economy, and its unique form of capitalism, is changing the world. While guanxi is changing, close personal relationships are still very critical in China. And yet guanxi is not that different from concepts of social capital. If anything, understanding guanxi clarifies social capital in a western concept. The greater historical root of guanxi and the Confusion philosophical base help explain why personal relationships and trust are so important. Information-sharing, resource acquisition and trust in business relationships are the key to both. We in the West would be a lot more successful in gaining social capital if we treated it more like the Chinese do guanxi.

Keywords: guanxi, social capital, China.

Reference: Reference to this paper should be made as follows: Crombie, B. (2010) "Is Guanxi Social Capital?" The ISM Journal of International Business, ISSN, Volume 1, Issue 2, March 2011.

Biographical Notes: Brian Crombie is a DBA candidate at ISM. Crombie has a 20 year corporate career including CFO of a specialty pharmaceutical company, Managing Director of a private equity company and has worked in Canada and the United States for major corporations. He has a Harvard MBA and an HBA from the University of Western Ontario Ivey Business School. He is currently Principal of Crombie Capital Partners, a venture capital investor and consultant in Finance / Strategy / M&A and co-chair of the Mississauga Summit.

Introduction

Just prior to boarding our Vancouver to Taipei flight for a Canadian Trade Mission to Taiwan last December, we were taken aside and given an important briefing by our Taiwan government official on *guanxi*. Bill informed us that we needed to buy 20 gifts to present at our upcoming meetings. They couldn't be over \$50 so they wouldn't be misinterpreted as a bribe or an inducement, but instead be gratefully accepted as a gift. These tokens of appreciation needed to be Canadian, preferably something personal, and they should be practical, not something that would likely be disposed of. Maple leaf cuff links, a Canadian pen set or maple syrup were ideal; expensive cross pens were too expensive, while a Canadian moose doll might be viewed as a throw-away gift. Chinese *guanxi* necessitated personal gift giving to establish close personal relationships we were told.

Our official advisor then asked if we had an extra bag to bring back all the gifts we would likely get on our trip. We organized our gifts by meeting and recipient to ensure that the most expensive went to the most senior attendee at each meeting and the best gift received was saved for the most important meeting with the President of Taiwan. We were instructed on how to give and receive business cards (like presenting a favourite photograph), the proper way to walk into a reception room (by seniority), the protocol for sitting at meetings or meals (one side of the table only and by seniority), and how best to speak and respond at these meetings (only when addressed). While they also did a great job briefing us on economic, trade and political issues, it was almost as if they believed the success or failure of our trade mission would depend more on our proper *guanxi*, or business etiquette and relationship building, than on any scintillating issue discussion we might have. *Guanxi* – the approach to and conducting of relationships – are critically important to the Chinese we were told again, and again.

"Guanxi reflects delicate fibres woven into every person's social life and all aspects of Chinese society. It is deeply embedded in China's culture, with a history of more than 5,000 years... Confucianism is a social philosophy, rather than a religion, the main concern of which is to establish harmony in a complex society of contentious human beings through a strong and orderly hierarchy. It is based on the principle that human beings are fundamentally relation-oriented..." (Park & Luo 2001: 456).

When I started my Doctorate in Business, I was interested in studying innovative clusters and economic development. I thought I would come up with a new concept of

the importance of venture capital or the critical mix of government policy with financial capital and an entrepreneurial spark. I read about the importance of human capital and social networking, how economic decisions were embedded in social interactions and relationships, and how clusters became critical because they became “scenes” like music scenes or theatre scenes or art scenes, where interaction between people led to accelerated metabolism within the cluster (Florida 2008). I read about comparisons of Route 128 around Boston, where interaction was limited in silos and hierarchical, while Silicon Valley has an extensive dynamic, non-siloed and flat ecosystem (Saxenian 1994). And finally I read a series of reports by the World Bank analysing economic development world wide leading to a series of papers on social capital with the final paper entitled, “Social Capital: The Missing Link!” (World Bank 1998).

In Shanghai for a two weeks of classes this spring, we came back to guanxi on several occasions and I got to wondering; was guanxi really all that different from social capital or social networking as it is understood in the West, or is it just a more historical, philosophical, codified version of social capital? Would understanding guanxi better help practitioners of social capital practice it in the west? This paper, will describe the roots of both guanxi and social capital, compare them, and come to conclusions on their similarity. There are 224 youtube.com videos on guanxi, 355 books on Amazon and 395,000 hits on google about guanxi. It is my belief however that understanding guanxi and how it is similar to concepts of social capital will help individuals and companies do business in China, but more importantly, could also help people interested in economic development and entrepreneurship better explain and put social capital into action in the west. Too often we try to understand guanxi as purely a Chinese cultural aspect we need to understand to do business there and don't look at it as similar to concepts often discussed in the west such as social capital and social networks. At the same time, social capital seems to be a confusing misunderstood concept in the west; understanding guanxi will help our understanding and our practicing of social capital here.

As an important but side issue, better understanding of guanxi and social capital will also be important for Canada, and other countries, in understanding the importance of its senior political relationships with China. After being the first major western democracy to recognize the People's Republic of China in 1970 (Emerson 2009), Canada in recent years has neglected its relationship with China. Canada's Leader of the Opposition, Michael Ignatieff observed that the current Canadian Prime Minister Stephen Harper “snubbed China for four years, and was rebuked when he finally showed up”. According to Sullivan (2010), “Prime Minister Stephen Harper has seen the light. He finally followed

Mr. Emerson’s numerous entreaties to visit China personally, which he did in December, remaining stoic as Chinese Premier Wen Jiabao upbraided him in public, complaining that five years is too long between visits for the heads of the third and 11th largest economies in the world. As the engine of global economic recovery, China is too important to alienate” (Sullivan 2010: 1). “The nature of Canadian-Chinese trading relationship is nothing more than transactional, going against the logic behind Chinese protocol, which requires personal, sustained and respectful relationships” (Dhaliwal 2010: 1). These observations underscored the important role that Canadian and other foreign political leaders need to follow in order to develop social capital and guanxi with senior Chinese officials. Guanxi is important in business, politics and life, as is social capital.

Guanxi

Guanxi is the personal connection between people in Chinese society or the “friendship with implications of a continual exchange of favours” (Wong 1998). English translations of guanxi would be connections or relationships, but that doesn’t adequately describe guanxi. Guanxi is made up of three parts: *ganqing* – the depth of a relationship; *renqing* – the moral obligation to the connection; and *mianzi* or face – which in China means social status and prestige. In comparison, some have negatively viewed guanxi as just pursuit of personal self interest, or worse, as “under the table” corruption.

Guanxi is described in a Business Week article “You Say *Guanxi*, I Say Schmoozing” as:

“Guanxi. It’s the first word any businessperson learns upon arriving in China. Loosely translated, guanxi means “connections” and, as any China veteran will tell you, it is the key to everything: securing a business license, landing a distribution deal, even finding that coveted colonial villa in Shanghai. Fortunes have been made and lost based on whether the seeker has good or bad guanxi, and in most cases, a positive outcome has meant knowing the right government official, or a relationship nurtured over epic banquets and gallons of XO brandy” (Balfour, 2007: 1).

Fan (2010) refers to guanxi as based on strong ties of family or social relationships such as classmates. Outsiders can enter the network via mutual friend recommendations. “*Guanxi* networks facilitate economically efficient exchanges in a fragmented, weak-rule-of-law society. They have enabled China’s rapid transition from a command to a market economy since 1978. Chinese culture views the *guanxi* obligation to reciprocate as ethical behaviour, not as a “using” relationship” (Fan 2010: 8). Chinese sometimes see

Americans as “aggressive, impersonal and excitable”, while Americans see Chinese as “inefficient, indirect and even dishonest” (Graham and Lam 2003: 1).
Fan provides a fascinating comparison of relationships in the west versus China:

*“To Westerners, relationships help the individual;
To Chinese, they also define the individual”* (Fan 2010: 12).

Sheida Hodge, an American business women, who lives in China and works as a lecturer there, says in “Guanxi: The Art of Building Relationships in China” that many from the West see guanxi as “forced socialization – complete with lavish dinners, gifts, and maybe even an invitation to the US for more socialization – often perceived as a waste of valuable time by American businesspeople who want to focus on the task at hand of completing projects and making deals” (Hodge 2008, page 1). However, guanxi is the assurance of trustworthiness in a business climate where historically the Chinese legal system may not have protected business contracts and dealings as effectively as in the West. Therefore, people do business with people they know personally, or who are recommended to them by trusted relationships. Chinese businesspeople are very protective of their reputation since it impacts future business opportunities. “The heart of guanxi is building a relationship of trust and credibility. This is not necessarily accomplished by mere socialization, but by communicating substantive information about you and your company – proving to your Chinese counterparts that you are a reputable source with which to do business. Viewed through this lens, guanxi seems less like a time-wasting practice, and more like good common business sense” (Hodge 2008: 1).

A more comprehensive and academic description of guanxi is:

“Guanxi is a cultural characteristic that has strong implications for interpersonal and inter-organizational dynamics in Chinese society. It refers to the concept of drawing on a web of connections to secure favours in personal and organizational relations. Chinese people and organizations cultivate guanxi energetically, subtly, and imaginatively, which governs their attitudes toward long-term social and personal relationships. Guanxi is an intricate and pervasive relational network that contains implicit mutual obligations, assurances, and understanding. The practice of guanxi stems from Confucianism, which fostered the broad cultural aspects of collectivism manifested in the importance of networks of interpersonal relations. Guanxi

has been the lifeblood of personal relationships and business conduct in Chinese society" (Park & Luo 2001: 455).

Guanxi – Its Importance

There are four main differences between Western and Chinese management according to Arias (1996): the need to take a long-term time horizon, a desire to for risk reduction, a consensus oriented decision making approach, and the importance of guanxi or personal relationships. Guanxi is much more than just knowing someone; it is:

- Continuing reciprocal relationships with banked favours;
- Building a network wider than just the two at the middle; and
- Individual-oriented, not firm-oriented, social-oriented, status-oriented.

All of the above is as a prerequisite to a building a productive long-term business relationship. I once worked for Jimmy Pattison, a great Canadian who is a self-made billionaire that started off as a used-car salesman. Mr. Pattison often repeated the maxim "Remember, people do business with people", which was his way of reminding us that while good products, low prices, quality service were all important, but in the end, you needed to have a good personal relationship to get a sale or a business deal consummated.

Arias (1996) put forward a concept that relationship marketing is very similar to guanxi. He argued that during the 1990's a paradigm shift occurred as typical western marketing evolved from a concept of exchange or rational transactions to one where the focus was to "establish, maintain, and enhance relationships with customers and other partners, at a profit, so that the objectives of the parties involved are met. "This is achieved by mutual exchange and fulfilment of promises" (Arias 1996: 147). He goes on to argue therefore that while not identical, westerners can understand guanxi far better if they think of it as relationship marketing.

People and companies in China use guanxi to establish, maintain and organize relationships with other people and firms. Academics have described both horizontal guanxi with suppliers, buyers and competitors and vertical guanxi with government and regulatory institutions. The similarity here to concepts of bonding, bridging and linking social capital is stark. Guanxi is transferable – with a common connection and a recommendation; it's reciprocal – a favour needs to be returned; and it is intangible – the tie is "an invisible and unwritten code of reciprocity and equity" (Park & Luo 2001: 457).

Guanxi networks help a company survive and grow through resource acquisition, shared knowledge and legitimacy.

Why do Chinese people and companies feel they need to develop Guanxi networks? An institutional theory perspective would suggest they do it because others do. A resource-based view would say it's a good way to access needed resources, including human, financial, knowledge and management expertise, including legitimacy. Transaction cost theory would say that the guanxi network reduces the cost of doing business because you would do business more quickly, cheaply and without legal documentation with people you know and trust. The reality in China may be that with poor application of legal rules and property rights, together with ineffective market allocation of resources, guanxi allocates resources better than the pure market or the bureaucracy. The guanxi network substitutes for the court system and government allocation (Park & Luo; 2001).

The key to a guanxi relationship is the establishment of trust between two people. Trust, according to several academics, is the willingness to rely on another with confidence because they are reliable, have integrity, are consistent, competent, honest, fair, responsible, helpful and benevolent (Wong 1998). Firms and people are reliant on others for some needed resources, and guanxi fosters a trusting relationship that helps firms acquire them. According to Wong “westerners usually employ the Equity rule, which encourages individuals to allocate resources in proportion to their contributions. However, the Chinese generally employ the Need rule, which dictates that dividends, profits or other benefits should be distributed to satisfy recipients legitimate needs, regardless of their relative contributions (Wong 1998: 26). Wong developed a conceptual model to help understand guanxi. He broke guanxi and its overall relationship quality down into four constructs, ranging from weakest in guanxi to strongest in guanxi:

Adaptation	Dependence	Favour	Trust
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The strongest relationship quality is characterized by the following:

- 1) Trust – Benevolence, righteousness, propriety, wisdom and fidelity. Fidelity is loyalty, the repayment of a debt of gratitude and favours. Non-repayment is considered immoral.
- 2) Favour – a humanised obligation, combining social cost, quality and relationships.
- 3) Dependence – The Chinese desire for internal harmony is achieved by compromise, social conformity, non-offensive strategies and submission to social expectation. There is a Chinese saying “Before turning down your request, one should have a look at the Buddha’s face”.

- 4) Adaptation – Simply the customization of products or services by suppliers to the requests of others.

Source: Wong 1998.

Wong (1998) then tested the four levels of guanxi, or the strength of the relationship, through both a quantitative and qualitative survey of Chinese firms, by analysing firm performance, the formalization of the relationship and the cost of termination of the guanxi relationship. He found that the stronger the relationship, leading to achieving a high level of relationship or trust, produced the strongest firm performance and the highest cost of any termination of the guanxi relationship. These were described by the participants as win-win partnerships; difficult to achieve, but the best to have if they can be attained. Interestingly, trust and formalization were not correlated, suggesting that if one thought a relationship needed to be formalized, then something might be wrong in the relationship and trust didn't exist. A parallel in Western society exists in how some view those who want prenuptial agreements. Dependence was also not correlated with either trust or performance, suggesting that if you are dependent on someone, it's not a two-way relationship but just a one-way one. From a sociological perspective, while more positive than negative interaction is best, all positive and no negative is an unrealistic 'Pollyannaish' world akin to subjugation. Adaptation was positively correlated with performance, but negatively correlated to relationship termination, which is logical since if you adapted your product or service to cement a relationship, and then your partner terminated it, you would be significantly harmed.

In the present-day, fast-changing Chinese environments, guanxi has become even more entrenched with strong and direct implications for social attitudes and business practices. Guanxi is a critical factor in firm performance in China, affecting the flow of resources and a firm's interaction with the task environment. As China continues its economic reform, and property rights remain ambiguous, guanxi has become more important to manage uncertainties and external dependency. (Park & Luo 2001: 455).

Park & Luo (2001) explored the importance of guanxi by comparing both its vertical and horizontal application with sales and profit growth for a sample of Chinese companies in multiple industries in Shanghai and Jiangsu between 1996 and 1997. It's interesting that they found a strong correlation between guanxi and sales growth, but not with profit growth, suggesting that guanxi helps to position a firm in its market, establishing external relations, acquiring resources and establishing legitimacy, but does not help to improve its own internal operations. "In a transition economy with ambiguous property rights and weak legal constraints on market competition, guanxi provides an opportunity to

enhance market share through improved competitive position and other applications of collaboration with competitors and government authorities” (Park & Luo 2001: 473). Through guanxi, Chinese firms acquire and build social capital, and broker structural holes or gaps with key stakeholders. Chinese firms build guanxi networks to gain needed resources, and overcome strategic and institutional weaknesses.

“Repeated interactions in a guanxi network lead to a socially embedded relationship that demands continual commitment from all parties. Such attachments make the guanxi sustainable, transferable and intangible... Guanxi in China represents two distinctive applications of a single networking skill: one horizontally applied with competitive forces, and the other vertically applied with government authorities. It reflects highly complex social phenomena that are embedded in every aspect of personal and organizational interaction” (Park & Luo 2001: 473 - 474).

Snell and Tseng (2001) looked at the darker side of guanxi, and investigated the ethical dilemmas of relationship building in China and corruption. They put forward the paradox that some believe it's impossible to do business ethically in China, that corruption is so endemic that an attitude prevails that “business ethics...is an oxymoron”. Others believe that guanxi is important, helpful and an important part of “the intricate and pervasive network of personal relations which the Chinese cultivate with subtlety and imagination” (Snell and Tseng 2001: 172). Some Hong Kong business people in an early 1990 survey reported that 5% commissions or grease payments were inescapable, with 70% admitting participation in these questionable practices (Snell and Tseng; 2001).

Confucianism, Leninism, the absence of rule of law and guanxi are all connected parts of the Chinese moral order (Snell and Tseng 2001). The four ideals of Confucianism are: 1) loyalty and reciprocity; 2) selfishness is a sin; 3) an eastern golden rule that says do not treat your parents as you would not wish your children to treat you; and, 4) proper conduct and orderly relationships. Leninism added industrial feudalism or networked capitalism where the party hierarchy organized and controlled society through networks of relationships. The absence of the rule of law was filled by a moral code that championed the needs of family and clan not individual rights like in the west. Guanxi re-emerged after the Cultural Revolution as a way to obtain information, resources and opportunities. “Guanxi proceeds by building, maintaining, and using networks of trusted, reciprocal contacts, connections, and long term relationships” (Snell and Tseng 2001: 177). A recommendation letter or letter of introduction, a system for checking credentials, technical information exchange, friendship, banquets and gifts are all part of

the process. "Among Mainland Chinese, gifts may not be considered as bribes if they are understood as integral to the relationship rather than impersonal means to attain immediate instrumental goals" (Snell and Tseng 2001: 177).

The roots of Chinese culture are based on four roots: 1) their agrarian history which stresses the virtues of rural life, 2) Confucius and morality which stresses hierarchy and an organized society as well as Taoism and the yin (feminine, dark and passive) which needs to be reconciled with the yang (masculine, light and active) 3) Chinese words which are really pictures which train them to think in big pictures not the details and 4) a wariness of foreigners (Graham & Lam 2003). In negotiations Graham & Lam (2003) argue that in addition to guanxi Westerners need to take into account the importance of intermediaries that transmit trust, the importance of social status, interpersonal harmony, holistic thinking, thrift, persistence and the importance of saving face. They urge against impatience in deal making and company building and stress the importance of investing now in China and Chinese relationships that will pay off in the long term. They compare Western and Chinese attitudes with the following table:

Their basic cultural values and ways of thinking:

American	Chinese
Individualistic	collectivist
Egalitarian	hierarchical
Information oriented	relationship oriented
Reductionist	holistic
Sequential	Circular
Seeks the truth	seeks the way
The argument culture	the haggling culture

Source: Graham & Lam 2003: 4.

However, guanxi is changing, based on several case studies detailed by Snell and Tseng (2001) conclude that:

"Guanxi now is permeated by instrumentality, self-seeking opportunism, and dishonourability rather than by trust relationships based on mutual warmth, loyalty and respect. Given the absence of civic traditions and the networked nature of Chinese society, relative deprivation appears to have found expression in egoistic, acquisitive forms, rather than, as Party ideologues

would urge, altruistic rallying to improve both material and spiritual civilization among mainland compatriots” (Snell and Tseng 2001: 196).

Tse (2010), in his recent book *The China Strategy*, thinks business has changed dramatically in China over the past two decades. Originally from China, Tse immigrated to the US, and then spent 20 years in western education and within a global consulting company. He came back to China expecting government involvement in every aspect of business and was warned that ‘the key to any kind of progress was guanxi, the Chinese word for connections’ (Tse 2010: 25). Yet he found that what companies really needed in many markets now was a good product, marketing, brand strategies and distribution, and that competition was just as fierce as anywhere else in the world, if not more so. Also, government was no where to be seen, and he had a nuanced conclusion on guanxi:

“In America and Europe, contracts form the heart of any business arrangement; in China, relationships are still the most important factor. True guanxi (personal connections) don’t have the same importance as they did twenty years ago, when getting almost anything done seemed to need a “fixer” of one kind or another. But because of the way Chinese business culture operates, turning on the intricate play or the ties among a host of people an organizations, the cultivation of connections and relationships will remain an important factor for decades to come. Superficially, this isn’t so different from elsewhere. ... Official China, for both traditional cultural reason and ideological ones, sees its self as standing at the core of all important decisions to do with the running of the county in general and the economy in particular” (Tse 2010: 188).

Fan (2010) describes the difference between guanxi and corruption well when he provocatively states: “Guanxi is not corruption as it is relation-focused, whereas *corruption is transaction-focused*. Guanxi apparently can not be bought” (Fan 2010: 28). An even more provocative statement about guanxi is made by Fan (2010) in the opening to his presentation, “Guanxi – is it still important?” when he shows a spider’s web to depict the guanxi network and asks “How to be the spider, not the fly!” (Fan 2010: 4). He argues that we should all endeavor to be the architects and builders of our social networks, like the spider, and not just the flies that get stuck in others webs.

Social Capital

Social capital in the west is based on a thesis that neo-classical economics fails to explain the social reality in which economic transactions take place where the level of

network fragmentation or cohesion, the ties an actor has to financial, political and technical networks, and the ability to bridge traditionally closed areas, all work together to determine economic outcomes (Granovetter 1992). McCraw (2007) points out that Schumpeter was the first, in 1928, to argue that economics needed to move beyond pure economic theory to “Sozialökonomie” or “social economics”. The neo-classical economic model disregards three classic sociological assumptions: decisions are influenced by non-economic factors such as sociability, approval, status and power; economic action is embedded in social networks; and institutions/organizations are socially constructed (Granovetter 1992).

Sociologists in the late eighties considered the necessity to add social capital to human, physical and financial capital as an influence on economic development (Lin & Kuo 2006). Social capital accelerates information flow, establishes social credentials to increase community cohesion, encourages collaboration (Lin & Kuo 2006), the coordination of activities, and collective decision making (Grootaert 1998). Social capital is:

- the “goodwill that is engendered by the fabric of social relations and that can be mobilized to facilitate action” (Adler & Kwon 2002: 17);
- “the norms of reciprocity and trustworthiness” (Beinhocker 2006:435); and
- the institutions, relationships, attitudes and values that govern interactions among people (Hjerppe 2003).

It entails intensive interaction – “social capital is a contact sport” (Beinhocker 2006:435). Key to the term “capital” is the idea that an investment in it produces a gain (Lin & Kuo 2006).

Social ties in closely integrated networks impact personal needs for survival, comfort and intimacy (Putnam 1993). Loose or diffuse ties across different social boundaries are more effective for creativity and risk-taking (Burt 2000). Connections across ‘vertical’ social boundaries of social class or political power may be effective for leveraging information and resources as well for resolving conflicts (Woolcock 2001). The literature has distinguished three types of social capital: bonding (ties to people that are “alike”); bridging (ties to people that are “not alike”); and linking (ties to people in different hierarchical levels of society) (Healy 2005). The World Bank (2004) had a similar description of bonding (ties to people with similar demographic characteristics), bridging (ties to people with different characteristics) and linking (ties to positions of authority, such as public and private institutions). However, Stam & Elfring (2008) argue that little research has focused on how different types of social capital function and are used in

different economic situations, where all types may be needed but to different extents. Finally, Stuart & Sorenson (2005) argue that bonding social capital is for the encouragement to strike out as an entrepreneur, bridging is to find new opportunities and linking helps to access different resources.

Bonding social capital

Bonding social capital, the tie one establishes with a close-knit homogenous group within a family, or company or group, is the adhesive or glue in a community that leads to trust and a sense of identification (Putnam 1993). This tie establishes norms, trust, shared values and vision which build cooperation and collaboration, and it provides discipline against inappropriate behaviour. As Putnam (1993:3) describes it, bonding social capital “...is akin to what Tom Wolfe called the favour bank in his novel, *The Bonfire of the Vanities*” (Putnam 1993: 3). Conversely, the absence of close bonding social capital is intuitively seen as a negative as people fear “being left out of the loop” (Woolcock 2000: 2).

Coleman (1988) discussed the concept of closure observing that a closed homogeneous system in a community reinforces the status quo and leads to better performance. Similarly, people and companies in a cluster with bonds can learn through frequent interactions, share knowledge and capitalize on opportunities, and transact business more quickly because they do not need the protection of contracts (Lin & Kuo 2006).

However, Taylor (2005) noted that much of the empirical cluster work on bonding social capital has been conducted in successful clusters and therefore the role of profit and price may have been neglected. Trust and loyalty are important only so long as the price is right: “In a period of economic buoyancy, embedded ties may seem paramount, but in recession, when the chips are down, the primary role of price becomes clear” (Taylor 2005: 5). Putnam (1993) and Woolcock (2000), in contrast, argue that to manage shocks, communities need to be able to generate consensus via strong bonding social capital.

Bridging social capital

Bridging social capital is the tie one establishes with different communities or heterogeneous groups, and it is the lubricant in community interaction (Lin & Kuo 2006). Bridging social capital is typified by the ideas, knowledge or best practices that one can acquire from interacting with different groups, domains, functions or industries, as well as the benefit of acquiring disparate resources, and discovering new technologies and

innovation (Lin & Kuo 2006). Burt's (2000) concept of structural holes describes the benefit to individuals of relationships that bridge gaps in society. Bridging social capital facilitates access to information and resources from diverse individuals in different functions, companies or industries. Several workplace studies performed by Burt have shown that employees with the most bridging ties enjoy the highest compensation and most rapid promotions (Burt 1997).

Entrepreneurs who build loose networks with complementary firms outside their own firm or industry facilitate access to knowledge and resources that are not readily available within the immediate industry but are critical for innovation (Stam & Elfring 2008). The ties that form these networks provide exposure to a diversity of approaches, perspectives and ideas, and they bring together different product offerings or technologies from various industries to create new opportunities. Bridging ties provide a unique brokerage opportunity to see information asymmetries and create novel combinations (Burt 2007). Bridging ties also provide contacts to providers of marketing expertise and strategic knowledge that may not be available within the firm's own industry. Connection with leading companies in other industries also provides legitimacy (Stam & Elfring 2008).

Empirical network studies were performed in Italy and found that bridging social capital was positively associated with economic development (Sabatini 2006). Reminiscent of Putnam's early work comparing geographical distinctions in social capital in Italy, Sabatini (2006) found that southern regions there still exhibit the higher levels of bonding social capital and the lower levels of development than northern communities where bridging ties are prominent. Similarly, comparing two high tech clusters, Route 128 in Massachusetts and Silicon Valley in California, Saxenian (2004) distinguished the former as a tight, closed and unproductive network, while the latter is characterized as a loose, well-connected and extremely productive network that works well by bridging social capital.

Linking social capital

Linking social capital, a variant of bridging social capital, connects individuals with political power, or financial resources or community authority (Woolcock 2001, Lin & Kuo 2006). People who exhibit high linking social capital can access financial resources more quickly, influence government policy, and acquire people and ideas from universities and other research institutions (Woolcock 2000, 2001). Linking social capital in business, government and civic society has been shown to be important in the

development of good economic policy in knowledge and innovative clusters (Wolfe & Nelles 2009).

Shane and Cable (2002) showed that economic-only explanations for early-stage financings are naïve as they do not take into account social relationships, trust, reputation and third party references which are critical to the financing decision. Venture capitalists rely on ties to provide information and on references from trusted people about abilities, reputations and the social obligation felt by the entrepreneur (Florida & Samber 1999). Studies also found that geographic proximity, whereby the firm and the venture capitalists operate in the same cluster, were important to attaining financing (Florida & Samber 1999, Shane and Cable 2002). Sorenson & Stuart (2005) found the importance not only of clustering and the geographic proximity of the lead venture capitalists and the tech company for venture capital, but also the importance of unusually popular events that would attract and motivate players to interact.

Wolfe & Nelles (2009) present case studies where local communities/clusters with linking networks formulate economic development plans to alter economic prospects and respond to economic shocks. In comparison, incentive programs instituted by many governments trying to foster economic development are typically top-down, bureaucratic and without links (Wolfe & Nelles 2009). Rodrik (2007) concludes that what is needed for economic development is more flexible forms of strategic collaboration between public and private sectors. His argument that industrial policy-making has to be embedded within a network of linkages with private groups echoes Putnam's (1993:7) pronouncement that “Social capital is not a substitute for effective public policy but rather a prerequisite for it...” (Putnam 1993: 7). According to the World Bank (2000), linking relations with public institutions are vitally important, as are bridging relations with different socio-economic and demographic groups, however, the poor are left instead to draw upon their intensive bonding relations (family, friends, neighbours) to manage high levels of risk and vulnerability.

Collier (1998) investigated social capital in Third World countries and concluded that it is economically beneficial because it generates three externalities: the transmission of knowledge about behaviours of others; knowledge of technology and markets; and a reduction of free riding and fostering of collective action. One study of 29 countries comparing economic growth with measures of trust and civic cooperation found that each had a significant positive impact on growth when controlling for other variables (Grootaert 1998). According to Bartkus & Davis (2007) social capital addresses many of the central strategic questions of our era: cooperation and collaborative advantage;

strategic knowledge processes; strategy making under uncertainty by providing insights into the ways in which social networks and relationships provide both flexibility and strategic options; and the link between strategy and organization.

A balance of each type of social capital – bonding, bridging and linking - is probably desirable (Healy 2005). Bonding social capital aids in risk reduction when innovating, bridging social capital facilitates the inspiration of new ideas and innovation, and linking social capital contributes to setting the general direction of the cluster’s economic development (Lin & Kuo 2006). Too much bonding can lead to insularity and cultural ghettoization, while too much bridging can leave people vulnerable and without close friends and social support; yet, without linking, communities can be isolated from centres of power and influence (Healy 2005).

British Prime Minister Tony Blair in a key note address in 1999 stated, “We have always said that human capital is at the core of the new economy. But increasingly, it is also social capital that matters too – the capacity to get things done, to co-operate, the magic ingredient that makes all the difference (Halpern 2005: 284).

Is Guanxi Social Capital?

“Guanxi is by no means culturally unique to China. It exists to some extent in every human society, at least in terms of the norms of reciprocity” (Park and Luo 2001: 474). Western concepts of social capital characterise it as almost commercial, transactional and impersonal. The same applies in organization theory and strategic planning management literature that define networks in similar manners. However, guanxi is very personal – it’s about close relationships built over time and many events, and the exchange of favours. Guanxi is social capital – both guanxi and social capital are based on reputation or face, trust, and reciprocity of favours.

Guanxi has numerous similarities to bonding social capital, in explaining how a dense community sticks together and helps each other with resources, information and business. Guanxi starts with the family, the extended family and tight groups like classmates and the Party. The need for reciprocity is a comparable constraint on bad behaviour or not compliant behaviour as trust is within the typical definition of bonding social capital. The bonds stop self serving opportunism. While the bond may be similar, the process is very different. China and guanxi may have it more right because in China, transactions often follow successful relationships or the establishment of guanxi, while in the West, where we are too focused on transactions, a relationship comes about only after successful transactions. Maybe if Western businesspeople focused first on the

relationship and then afterward on what benefits might come from it, we'd be better off. There is a parallel here to that old adage which states that men want sex to feel good, while women want sex when they feel good.

Guanxi is also very similar to bridging social capital as a common reference person can introduce one person to someone new as a way to access resources and information. Cultivating new people as part of your guanxi network is well accepted. Developing a relationship, gifts, sharing social occasions are all prerequisites to doing business together. In the West we too often have this “Great Man” attitude where we believe it's better or more heroic if a person can do it on his or her own. But then we find that we still need a team – others to help our access to financial capital, human capital and physical capital – in order to achieve an objective. Once again, we in the West are too transactional-oriented. We establish the relationships to get the resources or information when we need them. In China, one establishes a guanxi network with a long-term objective so that, sometime in the future when you may need help, you'll have the network established. But often in China, you're required to, very willing to and even desirous to be seen as providing the favour first.

With the lack of a rule of law and the uncertainty in the Chinese transitional economy, guanxi also is established with government officials and officials in other institutions such as banks and regulators. This is very similar to concepts of linking social capital.

Conclusion

China, by virtue of its size, its dynamic economy, and its unique form of capitalism, is changing the world. The historical application of guanxi is going through some changes as the economy matures, but the close personal relationships that are necessary for good business are still critical. And they are not that different from concepts of social capital in the west. If anything, guanxi and an understanding of it, clarifies the practitioner's knowledge of what exactly social capital is in a western concept. The greater historical root of guanxi and the Confusion philosophical base help explain what exactly personal relationships and trust are all about. Information-sharing, resource acquisition and trust in business relationships are the key to both social capital and guanxi. We in the West would be a lot more successful in gaining social capital if we treated it more like guanxi by:

- working on relationships first and transactions second;
- building trust first and business deals second;
- giving small, respectful and thoughtful gifts;

- spending time together and getting to know who it is we're doing business with.

This approach to guanxi in the West offers sharp contrast to our typical practices of hiring corporate lawyers first to go about drafting detailed shareholders, management, non-disclosure and non-compete agreements instead of spending time getting to know the people we are planning to have a business relationship with. Relationships matter most, but legalese and due diligence is too often our first overture.

Relationships are also crucial within senior political interaction. I was impressed by a recent press release from the Liberal Party in Canada on a Global Network Strategy which sounds like worldwide guanxi to me.

"Canada is networked with the world. Restoring Canadian global leadership requires a 'whole of Canada' approach that will harness our unique advantages as a country: our global diasporas, our linguistic and ethnic diversity, our geography, our resources, our technology. The Global Networks approach requires a new kind of federal leadership to set Canada's overall priorities. Acting in partnership with business and government, colleges and universities, civil society organizations and private citizens – and especially our youth – we will leverage our relationships with the world" (Ignatieff 2010 b: 1).

After reviewing papers on guanxi, and relating them to social capital and my own personal experiences, several lessons came to mind which I summarize for business people in China as well as in the West, in order to be better practitioners of guanxi or building social capital:

1. **Net sharing not networking.** Don't just try to collect contacts or business cards; instead establish strong personal relationships by openly sharing information and resources.
2. **People do business with people.** Never pass up an opportunity to spend time truly getting to know a key contact, whether it be over lunch, golf or during a social occasion.
3. **There is no free lunch.** If someone promises you great access for nothing, be grateful but also suspicious; increased transparency everywhere ensures equal access.
4. **Remember the reciprocity** of Don Corleone in the movie "The Godfather". If you ask for a favour, the Godfather will ask for a favour back sometime.

5. **It takes a community with social capital to build knowledge.** Knowledge comes from a group of people, whether in a classroom discussing, a work team strategizing, or a group of businesspeople interacting.
6. **Your reputation, your face, is your key.** Your reputation can unlock many doors, but if it gets rusted or broken, many doors will be locked shut.

My son, watching BBC earth's current best-selling wildlife documentary "Life", tells me that the documentary has a conclusion summarizing well my belief in the importance of relationships, social capital and guanxi. "Life" takes a biological perspective on human success and the narrator Oprah Winfrey states,

"The key to their (mammals) success, our success, lies not so much in the size of our bodies or our brains, but in the strengths of our relationships – relationships among the many or between just the two" (BBC 2009, volume 3).

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Blue Frogs and Dragonflies: The Challenge of Multicultural Branding in China

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Abstract: This paper analyzes the challenges of building brand identity for foreign-run businesses in China whose target market includes both a diverse community of expatriates living in China as well as westernized local Chinese. This multicultural approach to marketing in China is examined through an exploration of the branding strategies of two successful Shanghai-based businesses, Dragonfly massage and Blue Frog restaurants, both of which are foreign-run businesses that serve the two target markets of expatriates and local Chinese.

The design for this paper is based on primary research through several first-hand interviews with the Vice-President of Dragonfly, Randal Eastman (see figure 1), and the founder of Blue Frog Restaurants, Bob Boyce (see figure 2). The information culled from these interviews is then compared to the current academic literature on multicultural marketing for the sake of analyzing best practices in this unique marketing environment.

Keywords: Multicultural branding, global marketing, brand icons, branded ambiance, Shanghai, China, expatriate entrepreneurship, restaurant industry, spa industry.

Reference: Reference to this paper should be made as follows: Strother, B. (2010) "Blue Frogs and Dragonflies: The Challenge of Multicultural Branding in China", *The ISM Journal of International Business*, ISSN 2150-1076, Volume 1, Issue 2, March 2011

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Figure 1: Randal Eastman,
Dragonfly



Figure 2: Bob Boyce, Blue Frog.

The Challenge of Multicultural Branding in China

Introduction

Global marketing and branding are often most effective when localized to the specific culture of the target market. The maxim to "think global, act local" has been promulgated for the last two decades, and often the company that best understands and meets the needs of the target customer within their specific culture is the company that wins over their competitors (deMooij). Marketing, and specifically branding, are highly sensitive to cultural differences and therefore should work within the cultural context to appeal to the local consumer rather than assuming mass convergence of consumer behavior across cultural demographics (deMooij, Zambuni).

This cultural approach to marketing becomes extremely complex when the target consumer group includes a mixture of cultural backgrounds. For example, M. Pullman, R. Verma and J. Goodale (2001) have written about this complexity in the context of restaurants located in international airports that serve customers from around the globe. This complexity also plagues companies that serve diverse expatriate populations in cities around the world with large foreign populations.

As China has increased its prominence over recent decades as a prime target location for foreign businesses, Chinese cities have dramatically multiplied their foreign populations. Following this increase in foreign residents has come an increase in businesses to meet their needs. The city of Shanghai is a prime example, where the foreign community has grown from an approximation of 30,000 to 300,000 in less than

two decades, and the urban landscape is now dotted with foreign restaurants and other service businesses to cater to the growing expatriate consumer needs (Mark Secchia, personal communication, May 26, 2009). These foreign-targeted businesses typically do not cater to an exclusively foreign customer base, as many firms have found their local Chinese consumer demographic growing with China’s economic tide. Foreign-focused businesses must therefore consider a broad diversity of cultures in their approach to marketing and branding, starting with the diverse cultures represented in the expatriate community but extending to the cultural considerations of the local Chinese target market.

Blue Frog restaurants and Dragonfly spas are two examples of highly successful and growing foreign-run firms that target the expatriate consumer but also enjoy considerably increasing business from prosperous local Chinese. Both have grown from initial humble beginnings in Shanghai to opening multiple locations throughout the P.R.C. and beyond. Both are companies that are well-loved by their target demographic and enjoy considerable brand loyalty that drives their profitability and growth. We will therefore turn our attention to these two firms for successful branding efforts in face of the complex multicultural marketing environment in which they function.

Introduction to Case 1: Dragonfly Spas

The concept for Dragonfly spas was created by Georgie Yam of Singapore in 2001. The premise was to bring an upscale spa atmosphere to the world of traditional Chinese massage at an economical price point, an alternative to the typically dismal surroundings of cheap Chinese massage parlors as well as an alternative to the expensive and pretentious 5-star international hotel spas (see figures 3, 4). Initially the primary target consumers were expatriates and foreign tourists in Shanghai, those with a fair amount of disposable income, time, and perhaps some experience with the Western concept of a luxury spa but not willing to regularly spend the exorbitant rates of international hotel spas.

Starting with its first location in the French Concession, Dragonfly has met with much success. There are now dozens of locations across six Chinese cities and international franchise locations in Oslo and Dubai, plus regular requests for more franchises both domestically and abroad.



Figure 3: Dragonfly in Beijing, China



Figure 4: Dragonfly in Hangzhou, China

Introduction to Case 2: Blue Frog Bar & Restaurant

The idea for Blue Frog restaurants came to Bob Boyce in Shanghai in the late 1990s when the city's international food choices were limited to pretentious restaurants at five-star international hotels. Boyce wanted to create the kind of establishment where expatriates could go after work for a relaxed happy hour and a filling burger in an atmosphere that felt like an American pub. It didn't take long for the foreign community to latch on to the new establishment, and Blue Frog quickly became a favorite hang-out. Due to Shanghai's wealthy and westernized Chinese population, there has been a growing percentage of the Blue Frog clientele that are local Chinese. Since opening his first site, Boyce has expanded to 10 restaurant locations in Shanghai, Beijing, Suzhou and Macau, with more soon on the way (see figures 5, 6).



Figure 5: Blue Frog in the Biyun area of Pudong Jin Qiao, one of the most premier expat hot spots in Shanghai.



Figure 6: a typical Western meal at Blue Frog in Shanghai

Branding considerations

Much of the success of both Dragonfly and Blue Frog are due to customer loyalty, and that loyalty is driven by the successful establishment of the respective brand names. When those who have experienced Dragonfly or Blue Frog in Shanghai find one while traveling in Macau or Beijing, they are delighted. In fact, based on multiple opportunities for observation by the author of this paper as a frequent study tour leader in China, when Blue Frog and Dragonfly customers travel to new locations, they are often eager to specifically search out the Blue Frog or the Dragonfly in the city they are traveling in. Using these two successful firms as examples, we can see how foreign-run firms successfully build brand identity in China as a marketing strategy towards a diverse market of multinational expatriates and key demographic segments of the local Chinese community.

Brands incorporate multiple images and experiences in the minds of consumers, symbolizing a unique promised benefit or value that customers can depend on (Keegan & Green, 2008). The key components involved in building a brand's image such as color scheme, name, logo, symbols, and other thematic elements including packaging, store design, and unique brand-exclusive customer experiences, all come together to create recognition and emotional response to the promised benefits of the brand. In multicultural marketing environments, these brand components must be examined for strategic branding initiatives vis-à-vis culturally symbolic color associations, choosing a name that has positive connotations, designing logos and mascots that have appealing

associations or avoiding ones that have negative symbolism, and other culturally-significant elements that can work against the brand’s attempt to build those positive emotional responses in culture-specific consumers (deMooij).

Creating a successful business strategy in China starts with identifying the specific target market (Fernandez & Underwood, 2009), a critical choice that dictates the product and marketing mix. As Tian (2007) explains, “When a TNC [transnational corporation] deals with many country markets simultaneously ... it may think more about the need for standardization. When a TNC deals with a single foreign country market, on the other hand, it may think more about the need for customization/localization. In the case of marketing in the Chinese market ... TNCs should pay most attention to the specific local consumer preferences and particular marketing practices of the country.” (p. 181). Unfortunately expat-focused businesses in China do not have the luxury of so clearly defining their market. Not only does the branding need to cater to the broad primary consumer target of expatriates, but it must also be accepted by the host country, the secondary consumer target of local Chinese. In addition there is further complexity in that neither expatriates nor Chinese are homogenous groups. Expatriates hail from multiple nations all with their unique cultural values (Hofstede). And the Chinese are also not a homogenous group, but can be distinctly divided by income, regional preferences, class, education level, age, and more (Tian). For businesses like Dragonfly and Blue Frog that cater to expatriates in a foreign land, the branding becomes even more complex due to its multiple layers.

Target Markets

It is not uncommon for the entrepreneurial efforts of foreigners living in China to focus on the expatriate community. According to Fernandez & Underwood (2009), discovering the unmet needs among expatriate families in China is the easiest and most logical choice for expats with entrepreneurial vision, and is a common model among suppliers of high-end services and products.

It is also a trend for such expat-focused businesses to eventually grow beyond the expatriate market into targeting Chinese customers as they gain experience (Fernandez & Underwood). This trend has become even more prominent in the recent months of global economic recession as expatriate communities in China with predominant ties to multinational business have suffered more than the Chinese community who are strongly tied to the domestic Chinese market which has comparatively not seen as much damage from the global crisis as most western nations. As Fernandez & Underwood

explain, “Some of our interviewees have made a good business out of selling surprisingly ‘foreign’ products and services to local clients.... Other foreign business founders were surprised by the interest from Chinese consumers in relatively high-priced, Western products or services.” (2007, pp. 89- 90). They contribute this growth in opportunity into the Chinese market to the way local Chinese consumers are becoming more sophisticated with their growing wealth and greater exposure to the global world.

With a growing number of Chinese consumers of what was created to be an expatriate business, branding takes on new meaning. In recent years much has been written on the importance and role of branding to the Chinese. As the Chinese are growing in their consumer sophistication and disposable income, they are seeking out brands to bond with that meet their unique emotional and actual needs (Hollis). Some studies show Chinese consumers to be more brand-aware and brand-loyal than the typical Westerner (Lane, Dyckerhoff & St.-Maurice, 2006; Hollis). Part of the Chinese culture that encourages such brand focus is the value of face. Those that want to increase their face may choose to do so by purchasing products and using services that are known as established and famous brands (Hexter & Woetzel).

The Chinese consider foreign brands to be particularly more credible and often preferable to Chinese equivalents (Keegan & Green). This societal preference, though perhaps waning in light of the growing quality of China’s top domestic producers, helps to add to the brand equity of foreign firms operating in China. Blue Frog, for example, will likely be perceived as serving a higher quality meal experience because it is known as an American brand. Dragonfly, though its product is essentially Chinese, is also perceived as a foreign brand due to its name branding in English. Both are seeing perpetual increases in the percentage of their domestic customers.

Branding by Name

Because logos, names, and non-word symbols build brands by creating visual representations of the brand that become key elements in the marketing and brand-building process (Keegan & Green), choosing a business or brand name is a delicate step in the process that can have profound long-term impact on the success of the brand. In a multicultural marketing environment, picking a name that is appropriate and appealing to the diverse market is both more important and more complicated, requiring a thorough understanding and/or sufficient research to understand the latent associations with the words chosen for the name.

When Bob Boyce decided to open his first solo restaurant with a hip vibe and good American pub grub, he was taxed with the task to find a good name. His restaurant was created to cater to the cravings of expatriates and therefore needed a somewhat China-neutral name. This would be a place to sit and sip with foreign friends and forget about the hardships of living in a foreign culture. Therefore the name, like the atmosphere, should not be a strong reminder of China. However, Boyce knew his customers would not be limited only to expatriates. Though they were his first target customer, invariably they would bring Chinese friends, who would then pass the recommendation along to other locals with deeper pockets than average. So Boyce had to consider the Chinese sensitivity to word and name associations. He wanted a name that was not unlucky according to Chinese standards, but on the other hand wasn't strongly lucky, either. There were plenty of red dragons and gold phoenixes; what Boyce chose instead was a simple blue frog.

The idea for the name Blue Frog came to Boyce from a story his friend told of being given a small blue frog figurine in another Asian country as a token of appreciation and luck. But Boyce did his research before he settled on the name. Blue, to the Chinese, is mostly a positive color, indicative of pleasant blue skies but not superstitiously lucky like red or gold. Blue is also not unlucky like white's association with death. Blue could be accepted by foreigner and local alike since few cultures hold a negative association with the color. This cultural approach to the color blue gives the restaurant the opportunity to stand out from all the other establishments and advertisements in China that blend together in masses of red and gold. The blue of his blue frog also became the signature color for the restaurant décor and merchandising, helping to contribute to brand identity and brand recognition.

The name for Dragonfly was also based on a desire to both fit in with the local Chinese ideas of lucky creatures without being too superstitious. Dragonfly was chosen because it was a way to tap into the Chinese fondness for dragons without actually choosing a dragon; the dragonfly was a hint at the lucky dragon without being too strong of an association. Again, this provided a way for Dragonfly to have its own identity in the midst of the many businesses in China that use dragons in their names and logos. Based on informal research foreigners perceive dragonflies as an elegant Chinese design element associated with peaceful environments, and Chinese have no strong like or dislike for the insect. Since the name is given predominantly in English, the Chinese that read the English who are not familiar with the insect's name will think of flying dragons, which appeals to the Chinese penchant for dragons without being directly associated with them.

Logos: Branding Icons

Logos create brand recognition and personality through the icons that symbolize the establishment. In multicultural marketing environments, visual aesthetics in the colors, shapes, and icons of a brand are as important as in single culture markets but much more complex for the variety of approaches to aesthetics that exist in different cultures (Keegan & Green).

Bob Boyce's little blue frog is a good figure to the Chinese without being overly good; informal research proved to Boyce that the Chinese like frogs but the amphibians do not carry the same symbolism as more mythical creatures. While every street corner advertised a restaurant with dragon or phoenix in its name, Blue Frog was guaranteed to catch eyes for its uniqueness both for choosing an uncommon mascot as well as giving the mascot a curiously unnatural color. Today the growing restaurant chain uses logos of a svelte male and female blue frog that are both thin, tall, and as sexy as a frog can be, drinking martinis in casual stances (see figure 7). The color, logo, and branding icons have opened up secondary revenue streams for selling branded products in the restaurant stores, including t-shirts, hats, coasters, shot glasses, and umbrellas. Boyce's customers identify with the sophisticated branding image of Blue Frog and wear it proudly.



Figure 7: An ad for Blue Frog shows the chain's male and female frog mascots.

Similar to Blue Frog, Dragonfly's clientele also identify with the brand logo of a dragonfly in traditional Chinese art form (see Figure 8), but in a much more committed way than Blue Frog's simple branded products. Dragonfly's brand-loyal customers have gone so

far as to literally and permanently brand themselves with the logo – with tattoos (see Figure 9). Founder Georgie Yam explains:

People relate to the products they buy and the services they use, so branding is important. I was honoured to see the picture of a Japanese woman in a local magazine with our logo tattooed on her shoulder. We placed ads in the magazine to find her and were surprised when five women responded. They all had a tattoo of our logo, but we looked on this as free advertising, rather than an infringement of our trademark. (Taylor, 2006)

Customers so relate to Dragonfly as a lifestyle brand that they are drawn to make the permanent association with the brand through a tattoo of their logo, the ultimate in customer brand loyalty.

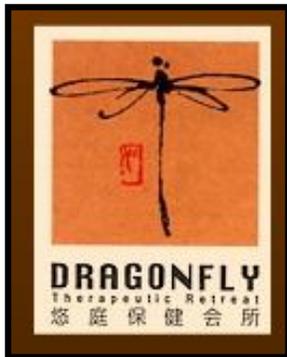


Figure 8: Dragonfly Logo



Figure 9: Dragonfly tattoo

Atmosphere as Brand: Branded Ambiance

Blue Frog offered a product that was distinct at its time (a good authentic American burger that wasn't McDonalds); today there are many options of places to go to eat American grub in Shanghai. On the other hand, few of these competitors offer the atmosphere that Blue Frog provides. Each Blue Frog is decorated in hip and modern ways with significant accents in the signature color of blue. According to Blue Horizon Hospitality Group, "Blue Frogs are easy to spot around town because of their visual appeal. Common design elements help to define the Blue Frog dining and drinking experience: friendly, relaxed, and fun" (Blue Horizon Group, 2007). The Blue Frog brand is, therefore, as much about the ambience as the American food, and this provides much of the restaurant chain's competitive advantage.

Dragonfly similarly offers a product that is quite easy to find at other establishments: foot massages. However, very few competitors have tried to recreate the core element that makes Dragonfly what it is: its incredibly elegant and relaxing atmosphere. It is this experience, not the foot massage in itself, which draws consumers to be brand loyal to Dragonfly.

Though Dragonfly does not carry a specific color in its name brand like Blue Frog does, the massage establishments do carry a standardized color scheme of muted nature-inspired colors in all locations, typically matching the logo of soft browns with touches of red. This, too, is part of building brand identity for Dragonfly. Though competitors can, and do, copy the natural color palette of Dragonfly such that you cannot tell you're in a Dragonfly parlor by color alone, you will know when you're *not* in one if the colors are not 100% peaceful, muted tones. The small use of red as an accent, both in the logo and in store design, plays into the Chinese affinity for the color without over-committing to a color that is already commercially over-represented within China. It represents Dragonfly's product of massage that is first and foremost relaxing (symbolized in the natural browns) and secondarily Asian (symbolized in the red accents).

In both cases, there is a commitment to a level of quality that is rare among local competitors – the quality of the experience as well as the actual product. Even among the price-sensitive Chinese, studies show that the top reason for brand preference, regardless of whether it is Chinese or foreign and across every category, is quality: having a superior product or delivering a superior performance (Hexter & Woetzel).

Branding by Price

Differentiating a brand from the competition is the critical factor that allows room for a premium price point (Hollis), but the flip side of this maxim is also true: premium pricing is critical to establishing brand differentiation for those products and services that can authentically back up the price with a higher-value consumptive experience. Setting a higher price than competitors, therefore, is a pricing strategy that builds brand equity.

It is easy to get a cheaper burger in China: McDonald's provides authentic American sandwiches for six RMB, less than a tenth of the cost of a Blue Frog burger at 70-80 RMB. And massages can also be easily found for a quarter of the Dragonfly price. Both organizations, however, understand not only their customers willing-to-pay level (and price to take advantage of the high consumer surplus), but also understand that their clients want a higher class experience, and therefore prefer a high price that matches their high status (or the status they want to be associated with). The sense that what

they are experiencing is a luxury good, fueled by the luxury price, adds value to the experience for their consumers, both expatriate and Chinese.

Advertising & Public Relations

Choosing an advertising campaign is another culturally-significant choice for businesses that crosses cultural barriers. Fortunately for both Blue Frog and Dragonfly, the firms do not have to do much print or similar advertising, finding that they primarily gain new customers through word-of-mouth recommendations from friends. Though both do some advertising in publications that reach the foreign communities, both have through experience concluded that this standard method of promotion has limitations in its efficacy to bring in new clients.

The efficacy of word-of-mouth promotions is especially true for tapping the local Chinese market. Studies have proven that the number one motivation for Chinese to try new products is through recommendations from friends or family members (Hexter & Woetzel) much more so than the independent buying practices of developed markets, perhaps due in part to the collectivistic Chinese society rather than individualistic (Hofstede). To this end, Blue Frog in particular relies on regular in-store promotions in place of advertising to reach new clientele. Examples include price promotions and special events that are designed to encourage customers to bring friends. Similarly, Dragonfly's massage rooms typically can accommodate groups of 3 or even 6, making it a social destination for a small group of friends, unlike typical spas in the West where the massage rooms are more likely to only hold 1 or at most 2 for intimate couple sessions.

Sponsorships are another key tool in the branding toolbox for foreign-run firms like Dragonfly and Blue Frog. Sponsorships and similar public-relations efforts in China add to the sense of brand credibility in the same way as a friend's recommendation or other word-of-mouth from a trusted source (Hexter & Woetzel). In the Chinese marketplace which is highly sensitive to patriotism and national pride, a product "may sell well simply because the company that produces it enjoys a good public image, or sell poorly simply because it has a negative public image." (Tian, p. 195). To create that sense that Dragonfly is a trusted and solid member of the local Chinese and expatriate communities in China, Dragonfly supports Shanghai Sunrise, Roots and Shoots, Hands on Shanghai, and a long and diverse list of other charities and partnership efforts (Dragonfly Therapeutic Retreat, 2008). Blue Frog is also an active sponsor of local initiatives that prove solidarity and support of China and the expatriate community,

including Operation Smile, Roots and Shoots, Shanghai Sunrise, tsunami relief, and frequent promotions that benefit charity efforts (Operation Smile China, 2007; Blue Horizon, 2009; Shanghai Municipal Government, 2005). These sponsorships promote the quality of the Blue Frog and Dragonfly business brands to both the expat and local Chinese communities.

Conclusion

Branding is complex and tricky in any culture, but for businesses like Blue Frog and Dragonfly, the complexity is multiplied by the diverse cultural backgrounds of the expat and local Chinese community. Branding decisions, therefore, must be carefully considered in order to effectively execute marketing strategies that will build the brand and the business for long-term growth. Choosing appropriate and appealing logos, colors, symbols, store elements, and other organizational practices to build a consistent brand image must be done in a way that will both appeal to core customers without interference from possible cultural stereotypes or superstitions.

For firms like Dragonfly and Blue Frog, building a brand is what drives their growth since there are a growing number of competitive options for customers to find similar products elsewhere, but not with the same brand quality and brand finesse. An adept combination of understanding core consumers, meeting unmet needs within the target market, and doing ample research among secondary markets for appropriateness of brand elements is key to continual success. And as the market shifts from a predominant focus on foreigners to one that increasingly includes the sophisticated Chinese consumer market, having a strong brand that can appeal equally to both foreign and domestic customers will open doors for firms to maximize profitability with their expanding customer base.

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Reform of RMB Exchange Rate Regime and the Banking System in China: The Problem with Asset Bubbles

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Abstract: China experienced almost three decades of high economic growth. While China's quickly urbanizing and modernizing, its recent asset market boom triggered worries amongst many economists and financial professionals. What we see the asset market situation in China today is eerily similar to that in Japan in 1980s and to that in Hong Kong in 1997 during Asian financial crisis. If the asset bubble burst, it will bring severe consequences to the country. The origin of China's asset boom is excess liquidity caused by weak dollar and strong exports. China has to adopt a proactive and pragmatic way and be extremely cautious about adopting monetary policy to confront excess liquidity as reflected in high level of foreign exchange reserves and low loan deposit ratios.

Keywords: China, asset bubbles, bubble economy, reform of RMB exchange rate, Chinese banking system, inflation,

Reference: Reference to this paper should be made as follows: Song, E. (2010) "Reform of RMB Exchange Rate Regime and the Banking System in China: The Problem with Asset Bubbles", The ISM Journal of International Business, ISSN 2150-1076, Volume 1, Issue 2

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1. Introduction

China's economic development in last two decades is simply phenomenon. While China is quickly urbanizing and modernizing, the real estate boom since 2002 has been followed by a crazy rally in stock prices over the last eighteen months with Shanghai Composite Index was up 130% in 2006 and another 50 % rise in the first 6 months in 2007¹. With average domestic Chinese share trades prices at 40 times of earnings² and prices of downtown apartment in Shanghai costs more than \$300,000, many economist and financial professionals are concerned about the emergence of asset bubbles in China's economy.

What we see the asset market boom in China today is eerily similar to Japan's 1980's asset bubbles³. When the bubbles eventually busted, it was like an immeasurable blow to Japan's economic development and social stability and the boom-bust cycle cost Japan almost "a lost decade" to recover. Could the same happen in China?

There have always been heated debates over whether monetary policy is effective to curb or reduce asset price bubbles as to alleviate its adverse consequences on the economy when the bubbles burst or is it being both impractical and unproductive given real-world uncertainties about the nature or even existence of bubbles. For China, one of largest and the most complicated developing economy, it seems that there is no one simple solution. China has to take a proactive and pragmatic way and be extremely cautious on adopting monetary policies to confront with the emergency of asset price bubble.

This paper discusses the following: 1) The definition of bubble economy and asset bubbles; 2) With an overheating economy driven by investment, problems of surplus liquidity, and ever increasing trade surplus and bulging foreign reserve, are there asset bubbles in Chinese economy right now? 3) Cause of China's 'stock' and "real estate" market exuberance. 4) If the bubbles burst, what are the possible consequences to China's economy? 5) An analysis of Japan's 1980s asset bubble burst and the lesson we could learn from Japan. And 6) Why the central bank People's bank of China should take a proactive way and adopt monetary policy to prevent the asset bubbles from growing?

¹ USA today, 01/01/07, Shanghai composite index surges 130% in 2006
http://www.usatoday.com/money/world/2007-01-01-china-market-usat_x.htm?csp=34

² Speculative Trading and Stock Prices: Evidence from Chinese A-B Share Premia_
Jianping Mei, Jos'e A. Scheinkman, and Wei Xiong, December 8, 2005
<http://www.princeton.edu/~wxiong/papers/china.pdf>

³ China's new exchange rate policy: will china follow Japan into a liquidity trap? Ronald I. McKinnon, The Singapore Economic review, Vol. 50, Special Issue (2005) 463-474

2. The emergence of Stock market and Real Estate bubbles in China

While China is quickly urbanizing and modernizing, rising real estate prices are fuelling a massive nationwide building boom and they are radically steadily moving beyond the reach of ordinary citizen, particularly in sizzling markets like Shanghai, perhaps the epicentre of the boom, with an average annual income of about \$2,500, apartments downtown sell for more than \$300,000 - far beyond the reach of the average citizen⁴. No matter what, prices have jumped nearly 80 percent since 2002 and speculators purchase three, four and five or even six apartments. It is reported that modest-looking apartments are selling for more than \$1 million apiece.⁵

The real estate boom since 2002 has been followed by a crazy rally in stock prices over the last eighteen months. Shanghai Composite Index was up 130% in 2006 and another 50 % rise in the first 6 months this year. The Consumer Price Index, a key measure of inflation, hit a two-year high of 3.4 percent in May⁶ and average domestic Chinese share trades prices at 40 times of earnings. Many economist and financial professionals are concerned about the emergence of asset bubbles in China's economy and the impact on the future of Chinese economy and the world economy in a whole. Financial luminaries, including former U.S Federal reserve chairman Alan Greenspan and Asia's richest tycoon, Hong Kong property magnate Li-Kashing, all stepped up and warned a Chinese stock crisis in the making⁷.

So whether there are bubbles in current Chinese asset markets and how serious the situation is? Despite the warnings, it seems that not everyone is too much concerned about the bubbles and they pointed to the facts that: 1) Chinese economy is keeping going strong with double-digit growth; 2) if we compare the parabolic rise in Chinese stocks to the Nasdaq bubble of the late 1990s, the Nasdaq's P/E was well in excess of 100 at its peak, so a valuation comparison suggests there may still be some upside for Chinese stocks; 3) the profits of listed companies are ever improving, even with recent two 6% and 7% corrections in Shanghai market, investors are confident that the Chinese stock market will keep going up-trend, at least for another year till the 2008 Olympic

⁴ China takes step to deflate an impending property bubble, By David Barboza The New York Times, MAY 13, 2005 <http://www.iht.com/articles/2005/05/12/business/yuan.php>

⁵ China Acts to Curtail Property Speculation, By DAVID BARBOZA, Published: May 13, 2005, <http://www.nytimes.com/2005/05/13/business/worldbusiness/13yuan.html?ei=5088&en=d470984ab417f3c2&ex=1273636800&adxnnl=1&partner=rssnyt&emc=rss&adxnnlx=1153562827-TOfR/bVpvh2+Fhz+asXZA>

⁶ The consumer price index, a key measure of inflation, hit a two year high of 3.4 percent in May. <http://www.chinapost.com.tw/business/113771.htm>

⁷ It's not just Greenspan who is wary of China's casino-like market. Greenspan last week joined the governor of the People's Bank of China, Zhou Xiaochuan, and the wealthiest man in Asia, Li Ka-shing, in warning of a bubble in the Chinese stock market.

<http://www.iht.com/articles/2007/05/28/bloomberg/bxyuan.php>

Games. The latter might be a political bet that Chinese authorities' unwillingness to upset the good times ahead of the 2008 Beijing Olympics and the crash of the stock market and the real estate would be a public embarrassment for China.

I will make no pretence of being able to say that Chinese economy is de facto asset-bubble based or predict when the bubbles will burst soon; I simply want to point to the facts that there are definitely signs of asset bubbles currently forming in China. If we take no action at all and let the bubbles keep growing big, we might eventually have to face serious and devastating consequences when the bubbles burst. The central bank People's bank of China should take a proactive way and adopt monetary policy to prevent the asset bubbles from growing.

To understand the current situation and what could lie ahead in the future, I will start with the brief on the concept of bubbles and bubble economy; the causes of asset bubbles; and the consequences that we will have to face when the bubbles are going to burst eventually? These backgrounds will provide us with a better understanding of the importance of balancing asset bubbles and monetary policy, the responsibilities of China's central bank PBOC and lessons should be learned from Japan's similar bubble bust experience in the late 1980s.

2.1. Bubble economy and Asset bubbles

The definition of asset bubbles or asset-based economy refers to "a post-industrial macroeconomic state of capitalism in which growth is based largely on appreciation of equity assets, typically financial instruments such as stocks, as well as real estate".⁸

"In asset bubble forming economy, it occurs when speculation in the underlying asset causes the price to increase, thus encouraging even more speculation. The prices can rise to absurd or unsustainable levels (that no longer reflect utility of usage and purchasing power) and it become impossible to predict from supply and demand alone. The bubble is usually followed by a sudden drop in prices, known as a crash or a bubble burst."

"In an asset-based economy, manufacturing, as well as perhaps services, no longer provide the engine for growth. Rather the appreciation of assets leads to an increased net worth among individuals which, in the direct sense, can serve as collateral for borrowing, which in turn creates greater demand for goods and services."

⁸ Asset based economy, Wikipedia, the free encyclopedia, http://en.wikipedia.org/wiki/Asset-based_economy

As a consequence, the appreciation of assets stimulates greater demand for assets, which in turn raises asset prices yielding even greater equity. Asset-bubble economy usually depends on the continuation of low interest rate to stimulate the borrowing which helps financing the purchase of assets at a rate sufficient to sustain the upward trend in asset prices. Thus, if an economy is doomed as “asset bubble economy”, it is highly vulnerable to the perhaps inevitable decreases in the real estate and financial markets.

2.2. The cause of the forming of China’s ‘stock’ and “real estate” bubbles?

The cause of asset bubbles in any economy is in many folds and people have all different ways to look at it. Some regard bubbles as related to inflation and thus believe that the causes of inflation are also the causes of bubbles. Others take the view that there is a "fundamental value" to an asset, and that bubbles represent a rise over that fundamental value, which must eventually return to that fundamental value. There are chaotic theories of bubbles which assert that bubbles come from particular "critical" states in the market based on the communication of economic factors. Finally, others regard bubbles as necessary consequences of irrationally valuing assets solely based upon their returns in the recent past without resorting to a rigorous analysis based on their underlying “fundamentals”.

Looking at China’s current market and economic condition, I believe that it is a combination of facts that causes the bubbles forming in the asset market:

2.2.1. Cause 1: Low interest rate & excessive money supply

One of the causes of asset bubbles is excessive monetary liquidity which occurs while financial system is flushed with excessive money supply in the financial system.⁹ There are several explanations for excessive monetary supply in Chinese asset market, but of all of them, 1) a high rate of savings; 2) more disposal income of urban and rural residents; and 3) low interest rate with limited alternative investment instruments available; have been the most important factors.

China’s current one-year deposits carry an interest rate of 3.06 percent, below May's inflation rate of 3.4 percent as measured by the consumer price index (CPI) which makes the real interest rate negative. Therefore when Chinese people’s disposal incomes are increasing and the interest rates are kept low, investors tend to avoid putting their capital into savings accounts. Since the general population is still largely prohibited from exchanging yuan into foreign currencies, the domestic stock market and the property market appears much more lucrative and have become the two most viable options for investments.

⁹ Asset price bubbles and monetary policy, Speech by Jean-Claude Trichet, President of the ECB Mas lecture, 8 June 2005, Singapore. <http://www.ecb.int/press/key/date/2005/html/sp050608.en.html>

Excess liquidity has been circulating in China's real estate market and has been blamed for hot-investment and the emergency of real estate bubbles for years. A lot of people made fortunes by buying and flipping properties for a quick profit. Hot money, including that coming from overseas, is pouring into the market, particularly sizzling markets like Shanghai, where prices have jumped nearly 70 percent in the past two years. Although the government is very concerned that housing prices are steadily moving beyond the reach of ordinary citizens and is taking various measures to crack down on speculation to rein in soaring housing costs, new housing prices continued to rise on average 5.6% despite recent imposition on property tax to cool down the real estate market.¹⁰

Now not only the real estate market but also the stock market that is characterized by excess liquidity; especially when China's two main stock markets have been doing so well with 130% increase in 2006 and another 50% increase so far this year, everyday average people (many of them first time investors) are jumping on the wagon hoping investing in stock market would bring them higher-yield returns on investment. According to official statistics, because of the magnitude of stock market effects, household deposits posted the largest recorded drop in a month in May 2007. Shanghai branch of the People's Bank of China estimated more than 70 billion yuan (9.1 billion U.S. dollars) was transferred from savings accounts in Shanghai to stock trading accounts in the first four months of this year. In April alone, RMB-denominated savings deposits with Chinese banking institutions decreased by 8.5 billion yuan (1.1 billion U.S. dollars). There are drastic investors who use all their savings or even pawn their apartments for loans to invest in stocks.

Simply put, asset bubbles occur when too much money is chasing too few assets (first real estate and now stock market), causing both good assets and bad assets to appreciate excessively beyond their fundamentals to an unsustainable level.

2.2.2. Cause 2: Speculation on RMB appreciation

As China's trade surplus with its major trading partners continues swelling; the country's foreign exchange reserves reached \$1.2 trillion (which is the biggest in the world) at the end of March 2007, up 37.36 percent year-on-year¹¹. The large trade surplus pushes China to buy more foreign currency, mainly US government bonds and treasure notes.

¹⁰ Beginning June 1 2006, a nationwide tax will be imposed on all properties sold within two years of being purchased and occupied. The government also imposed a tax on land that was not developed within a year of being acquired and that it would revoke land-use rights if nothing is built on a parcel of land more than two years after those rights were acquired. Shanghai recently imposed a 5.5 percent capital gains tax on properties sold more than once in a year.

¹¹ China's trade surplus in the first quarter of this year has soared to \$46.5 billion, almost doubling that of the same period last year. Meanwhile, the country's foreign exchange reserves reached \$1.2 trillion at the end of March, up 37.36 percent year-on-year. http://www.chinadaily.com.cn/opinion/2007-05/09/content_868369.htm

This would give rise to the depreciation of foreign currencies while at the same time, the anticipation of RMB appreciation would actually stimulate speculation for profit on RMB appreciation.

Chinese authorities are now facing more and more external pressures from its major trading partners, either economic or political, on taking action on revaluation of RMB. No matter whether it is a big one-off appreciation or gradual appreciation; everyone is speculating that RMB is going to appreciate. More international "hot money" has been pouring into the Chinese market. The most likely pools for this "hot money" are financial services sector, real estate market¹², and commerce which are 1) all dominated by RMB; 2) quick to cash in; 3) relatively have easy access to comparing to other fixed investment. The result of which has spurred further asset-price appreciation and exuberance. Although the Central Bank tried to "sterilize" the impact of capital inflows and limit the growth of domestic money, money supply grew rapidly.

2.2.3. Cause 3: Psychological effect

Psychological effect is that when psychology has become more important than fundamentals and it is often explained by experts as the "greater fool's theory." According to the Wall Street Journal,

"In a frenzy that recalls the late-1990s dot-com boom in the U.S., the (Chinese stock market) rally has drawn in a new generation of investors. In fact, the Journal describes scenes more reminiscent of the roaring 20's in the U.S. prior to the crash of 1929 and the Great Depression: There were over 160,000 new accounts being opened daily in China's two main stock exchanges (over 35 times more than the year before). Normal average people from taxi-drivers to pensioners even to Buddhists are rushing to pull money out of bank savings and deposits into the stock market despite the governments' warning of speculative bubble forming in the stock market."¹³

Surely, there is psychological effect in the play.

¹² Sources from the Ministry of Commerce show that in the first half of 2006, 1180 foreign capital housing companies were newly registered, 25.4% more than the same period in 2005. The overseas capital actually used amounted to USD 3.22bn, an increase of 27.9%. Housing has become the second biggest industry for overseas investment in China.

¹³ China Securities Regulatory Commission (CSRC) urged stock exchanges, securities dealers and related authorities to educate investors about the risks of stock market investment. CSRC issued a notice says that the institutions must make investors understand that stock markets are risky and they should be cautious in entering the market, especially those who use all their savings or pawn their apartments for loans to invest in stocks.

People might argue that Chinese economy is keeping going strong with double-digit growth; the profits of listed companies are improving so might be their future earnings. However, if we look at the P/E ratios -- a standard measure of valuation -- prices in Shanghai and Shenzhen are now trading at close to 50 times 2006 earnings, compared with 16 times in Hong Kong¹⁴. Although stronger than expected corporate earnings growth reduces prices to around 35 times 2007 earnings, but this still leaves the market looking decidedly overvalued.

High-risk investment or speculative gambling? No matter what, investors are perennially optimistic and keep pouring money into the stock market in anticipation of selling it to another rapacious speculator at a much higher price. The bubbles continue as long as one investor can find another to pay up for the overvalued asset. The bubbles will end “only when the greater fool becomes the greatest fool who pays the top price for the overvalued asset and can no longer find another buyer to pay for it at a higher price”.

2.2.4. Cause 4: Political factor

In China, nearly everything can be easily politicized. The stock market and real estate are no exception. As the bubbles continue to inflate, some people are now tempted to make political interpretations. Mistaken interpretations or not, people attribute almost mystical powers to upcoming 2008 Beijing Olympic Games. They believe that the government won't take harsh measures and allow a market crash just before the Olympic Games, which would be a public embarrassment for China. Therefore, despite recent two 7% and 9% corrections in Shanghai market, investors remain confident that the Chinese stock market will keep going up-trend, at least for another year till the 2008 Olympic Games. This is a pure political bet on that Chinese authorities' unwillingness to upset the good times ahead of the 2008 Olympics. As long as investors remain optimistic, the asset market boom will last for a while at least till the Games and the foaming of bubbles will as well continue.

¹⁴ Morgan Stanley's MSCI China index, which tracks Chinese firms listed overseas, has a forward price-to-earnings (P/E) ratio of around 16 times.

2.3. Consequences of asset bubble in the economy – A lesson from Japan’s 1980s asset bubble burst

2.3.1. Japan’s 1980s asset bubble burst

In the decades following World War II, Japan implemented stringent tariffs and policies to encourage the people to save their income. With more money in banks, loans and credit became easier to obtain. Like China today, in 1980s, Japan was running an increasing huge trading deficit with the US. Under US pressure, Japanese yen was appreciated against the dollar so to ease the trade deficit with the US. An appreciated yen coupled with excess savings and easily obtainable credit drove both real estate and stock markets to ludicrous valuations.

At the peak, the value of the land in metropolitan Tokyo was supposedly greater than that of all the US. In the stock market, price-to-earnings valuations soared to unheard of levels.¹⁵ To cool off high-inflation, Japanese central bank BOJ moved aggressively to raise interest rates. When the crash came, it hit particularly hard as investors sold stocks to cover losses in the real estate market and vice versa, plunging prices to more-than-a-decade trough from which they are only now starting to recover.

Losses from the burst bubble have led to a lost decade of growth that has crippled the banking and insurance sectors (due to all the bad debts) and depressed the economy. Japanese economy was hit so hard that even the government’s decade-long zero interest rate policy couldn’t bail it out from the deflation spiral.

2.3.2. A lesson from Japan’s asset bubble burst

Japan’s ‘80s asset bubble is eerily similar to the asset bubble that we see today in China (See table1). We have seen the consequences when the bubble burst, which cost Japan “a lost decade” in economic development. Could the same happen in China?

I think Japan’s experience contains many warnings to China’s current asset prices boom and it could be a great lesson to learn from it.

1) Japan’s experience teaches us that price will not keep rising forever and the bubble will be burst eventually. When the bubble burst, China might face severe and devastating economic and social consequences.

¹⁵ Asset Bubbles, Market Crashes, and the Dilemmas for Policymakers, “At the peak, the value of the land in metropolitan Tokyo was supposedly greater than that of all the US. In the stock market, Japan’s system of corporate cross-holding artificially restricted share supply, causing price-to-earnings valuations to soar to unheard of levels.” Asset Bubbles, Market Crashes, and the Dilemmas for Policymakers. Asian Development Bank
http://www.adb.org/Documents/Periodicals/ADB_Review/2002/vol34_6/viewpoint.asp

2) In the real estate market, homeowners (especially those working classes purchased the property by mortgage) will be among the biggest victims. Millions of homebuyers will have to continue to make the mortgage payment while the “real value” of their property continues to decline. It will be killing for them to take substantial losses on the largest purchase of their lives. Clearly, when there's little incentive to hang on to one's home when values are going down, millions of frustrated homeowners will have no choice but simply leave the sinking ship and vamoose. This will increase the numbers of unoccupied property and put the market in an even deeper coma.

Table: Comparison of China now and Japan during the bubble era

Japan (Fiscal year)	Foreign reserves (billion dollars)	Money supply M2+CD (Year-on-year change, %)	Real estate price (land)		Stock price TOPIX
			National average (Year-on-year change, %)	Tokyo (Year-on-year change, %)	
84	26.5	7.8	2.5	2.6	999
85	27.9	8.7	2.0	3.2	1266
86	58.4	8.6	2.7	10.4	1871
87	84.9	11.2	9.7	57.5	2148
88	99.4	10.8	7.4	22.6	2469
89	73.5	10.3	7.2	3.5	2227
90	69.9	10.2	13.7	10.5	1971
91	68.2	2.6	3.1	-0.6	1419
China	Foreign reserves (billion dollars)	Money supply M2 (Year-on-year change, %)	Real estate price (land)		Stock price SSE Composite
			35 major cities (Year-on-year change, %)	Shanghai (Year-on-year change, %)	
02	286.4	16.8	3.7	7.3	1358
03	403.3	19.6	4.8	20.1	1497
04	609.9	14.6	9.7	18.8	1267
05	818.9	17.6	7.6	9.7	1161
06	875.1	19.1	5.5	-1.3	1606
(Latest)	(March)	(May)	(1st quarter)	(1st quarter)	(June 23)

Note: The stock prices listed above are end-of-year closing prices.

Sources: Compiled from data provided in "Todofuken chika chosa" [Survey of land prices by prefecture] of Japan's Ministry of Land, Infrastructure and Transport, the Annual Report on Japanese Economy and Public Finance as well as from data provided by China's State Administration of Foreign Exchange, the Shanghai Stock Exchange and CEIC Data Company.

(source: <http://www.rieti.go.jp/en/china/data/060628.gif>)

3) In the stock market, the small investors who can't shun the sorts of temptation and appear in the stock market just before the crash will be hit the hardest. Especially for those retiree who used one's pension to invest in the stock market and those who borrow beyond one's means (use collateral on the house or other exotic loans to borrow money to invest in the market) will have a really miserable story to tell.

4) In the banking sector, we are likely to see bank failures when both real estate and stock market start reeling. By the time the bubble burst, collateralized mortgage debt has been integrated into the real estate market, stock market and banking business. The downturn in the asset market coupled bad-debt or non-performing loans caused by easy credit will inevitably ripple through the entire state-owned banking sector.

5) Inflation then deflation. When the stock and real estate markets continue to boom, the positive wealth effect is very likely to support an increase in private consumption, further fueling inflation. We can see it from the newly published CPI (consumer price index) by National Bureau of Statistics (NBS), inflation in China rose by the highest monthly level to 3.4% in more than two years in May 2007.¹⁶ But when the bubble burst, China might face long period of deflation. The possible deflation in China has serious ramifications for other industrial commodities, including copper and steel, but it goes a lot further than just that.

3. Asset prices and monetary policy

There are always arguments on whether monetary policies are proper for curbing the asset bubbles. Some have argued that monetary policy should be used to contain or reduce an asset price bubble in order to alleviate its adverse consequences on the economy, while others have argued that such a policy would be both impractical and unproductive given real-world uncertainties about the nature or even existence of bubbles.

If we look at asset pricing equation, we will understand that both views could be right.

$$DPV = \sum_{t=0}^N \frac{FV_t}{(1+d)^t}$$

Asset price is determined by discounted future cash flows and we have to make two variables estimation before calculating the asset price. First is market expectation of the future payoff which is linked to future developments in the economy; and second is the future economic fundamentals. The stochastic discount factor is again determined according to the economic condition by the PBOC. An alternative empirical approach, also frequently pursued in the literature, is to directly analyze asset prices along with fundamentals. That is, given the information content of asset prices, if a high likelihood of sharp misalignment has been identified in a particular market, whether and how

¹⁶ According to National Bureau of Statistics (NBS) May 2007 statistics, inflation in China rose by the highest monthly level in more than two years in May; food price hikes were still the leading driver of inflation, rising 8.3% from May last year. The rise in consumer prices was higher in the country's rural regions at 3.9%.

should policymakers use short-term interest rates and derivative financial instruments to interfere market expectations in these markets?

Given the imperfections of the asset pricing model, policymakers might choose between alternative courses of action when confronted with a possible asset price bubble. We learned from the course of reform of RMB exchange rate regime and banking system in China by Dr. Zhang that there are basically three different views¹⁷:

The rightists are pessimistic on the effectiveness of using monetary policy to curb asset prices. Advocated by U.S. Federal Reserve chairman Bernanke, rightists believe that monetary policies (especially the short-term interest rate) are not proper for curbing the bubbles; inflation pressure can be compensated by responding to expected inflation in the Taylor's rule; direct response to the bubbles will lead to fluctuation of inflation; empirical tests show stock prices do not response to the change of interest rates; and market psychology is uncertain and market response if unpredictable.

The leftists believe that most bubbles grow with expanded easy credit; collapse of bubbles will lead to instability of financial systems and the recession of economy; there should be proactive monetary policy response to asset price; the purpose is not to compensate the pressure on inflation, but to prevent the bubble from growing; pricking not-so-big bubbles may be necessary to avoid large negative effects.

Those who are in the middle believe that monetary policy's responding to the asset prices bubbles is a trade off between the short-term cost and long-term cost. In the short run, ignoring bubbles lead to financial instability. In the long run, responding to bubbles lead to the deviation of long-term objective. Monetary policies should be more proactive because the lag of the effects and the market expectation will change during the lag period.

4. Strategy and Recommendation

In my view, no matter rightist, leftist, Chinese economy is not only the largest but also the most complicated developing economy different from any economy in the world. There is no one simple solution. China has to take a proactive and pragmatic way and be extremely cautious on adopting monetary policies to deal with its bubbling asset markets.

Take China's stock market as an example, China's policy makers have been trying to revive the stock market for 5 years until recent boom, the last thing that China's policy makers want to see is to overdose monetary policy and drive the stock market to a hard-landing. Therefore, any hard-lined monetary policy like a drastic interest rate hike will do

¹⁷ Course handouts Page 79-81

more damage to the economy than do any good. On the other hand, if China's policy makers do not implement tightening measures at all, the unrealistic asset inflation expectation of individual investors may lead the market even more dangerous and results a hard landing, which policy makers do not want to see it either.

Right now the fundamental challenge for Chinese policy makers is how to keep the asset market developing healthily while not to jeopardize the growth on the economy. I am personally in favor of combine multiple monetary tools at the same time by increasing interest rate, deposit reserve ratio and exchange rate simultaneously in a prudent way, which would be proven more effective on cooling the overheating asset market than any single move.

The central bank recently raised the one-year deposit rate by 0.25% to 2.75 percent and the loan interest rate to 5.81 percent in Dec 2010. Looking into the future, I expect the monetary authority would take further tightening measures at a moderate pace and raise interest rates 2-3 times before the end of 2011. After all, raising interest rate still remains as a classic and relatively effective method in tackling overheating economy. In an effort to rein in excessive liquidity and cool the booming economy, PBOC had required banks to set aside more money as reserve and raised deposit reserve ration 6 times in 2010 to 18 percent. The PBOC authority might continue to raise the reserve ratio 0.5% a further couple of times this year to 20%. At the moment, RMB daily trading range against the US dollar is 0.5% positive or negative. When China's trade surplus continues to enlarge and if such a situation cannot improve, the trade frictions between China and the United States, between China and European Union and between China and other nations will possibly further intensify, and will give rise to a negative impact on the Chinese trade and economic growth. Consequently, it is essential for China to increase its flexibility with RMB exchange rate.

In all, looking into the future, I expect the government to take further tightening measures prudently to combat inflation pressure and keep the economy from overheating.

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The Chinese Financial System and Its Impact on Economic Growth in China

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Abstract: This paper examines the Chinese financial system and its impact on China's economic growth during the period 1988 to 2008. It begins by reviewing the literature on the theoretical and empirical links between the two variables of financial system and economic growth, also with specific reference to China, and introduces the key notion of sustainability of economic growth as an important additional qualitative factor in assessing these. It then reviews the Chinese financial system from the perspective of the principal financial intermediation institutions. It focuses in the contribution to economic growth in China of each of these institutions, by examining each institution's presence as a provider of financing for economic growth, and by assessing the allocative efficiency of each as a measure of both economic optimality and sustainability. It also reviews the situations of specific users of financing in the Chinese economy, including large public and private companies, small- and medium-sized enterprises (SMEs), and the rural and agricultural sectors. Finally, it presents conclusions on the past, and recommendations for the future, concerning China's financial system and its contribution to economic growth.

Keywords: China, financial system, economic development, banking system, regulation, state-owned enterprises, SOE, state-owned banks, SOB, SME, rural finance, agricultural finance, sustainability

Reference: Reference to this paper should be made as follows: Presber, J. (2010) "The Chinese Financial System and Its Impact on Economic Development in China", *The ISM Journal of International Business*, ISSN 2150-1076, Volume 1, Issue 2, March 2011.

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Introduction

Since its gradual opening up since 1978, China has slowly but surely integrated itself into the global economy, including both its productive and financial sectors.¹ In the past 10 years, its economic growth rate in real terms has average 9,56% per annum.² Urban employment has grown from under 25% of total employment in 1978 to over 33% in 2005.³ Private expenditure as a percentage of GDP has progressed to between 50 and 66%.⁴ Its population has grown from just over 1bn in 1982 to just over 1,3bn today⁵; per capita income has grown from USD 1 192 to USD 2 010 in the period 1982 to 2006.⁶

To support this growth, China has developed an array of public, and private-public, domestic institutions in economic, scientific and cultural fields of activity, of which many are active in parallel international forums. However, economic growth and institutional change have followed the policy of “gradualism”, consistent with the principles of Confucianism and an approach mandated by the government, which prescribes change at a measured pace, so as to avoid wrenching collateral impacts on society and also to provide scope to ensure that the change brings about the desired effect.

China’s financial institutions, and its financial system, have undergone similar change under the policy of gradualism. In adapting its financial system to support the needs of its ever-more market-oriented economy, multiple reforms have been implemented. These have introduced institutional change and have liberalised both the banking and broader financial system. However, the transformation of the financial system to achieve an effective and efficient recycling of national savings to finance capital investment for sustainable economic growth, has only been partially achieved.

This paper will review the Chinese financial system in terms of its impact on China’s economic growth. It will begin by reviewing the literature on the theoretical and empirical links between these two variables, and introduce the key notion of sustainability of economic growth as an important additional qualitative factor in assessing them.

It will then review the Chinese financial system from the perspective of the main intermediation institutions. It will focus on the contribution to economic growth in China of each of these institutions, by examining each institution’s presence as a provider of

¹ Zhicheng LIANG, [Banking Sector Development and Economic Growth in China: Why Does the Quality of Legal Institutions Matter?](#), Paper prepared for the International Conference on Opening and *Innovation on Financial Emerging Markets*, Beijing, 27-28 March, 2007, CERDI, University of Auvergne, Clermont-Ferrand, France, p3

² China National Bureau of Statistics

³ China Statistics 2005, www.allcountries.org

⁴ Zhicheng Liang, *Op. Cit.*, p3

⁵ Asia for Educators, Columbia University, <http://afe.easia.columbia.edu/china/geog/population.htm#2b>

⁶ World Bank, China Data and Statistics

financing for economic growth, and by assessing the allocative efficiency of each as a measure of both economic optimality and sustainability.

It will also review the situations of specific users of financing in the Chinese economy, including large public and private companies, small- and medium-sized enterprises (SMEs), and the rural and agricultural sectors.

Finally, it will present conclusions on the past, and recommendations for the future, concerning China’s financial system and its contribution to economic growth.

Finance and Economic Growth

There is an established and growing body of interest and literature on the relationship between finance and economic growth.⁷

The literature provides an established classical theoretical framework of the link between finance and growth, which posits a positive correlation. However, it also posits that in countries with soft budget constraints, a weak legal system may lead to banking credit misallocation and investment inefficiency. In the absence of a credible expectation of liquidation, due to a weak legal system, moral hazard on the part of company managers will result in refinancing expectations even in the face of unprofitable projects, combined with low exertion to render projects profitable. Weak legal systems also render the proceeds of liquidation lower than they would otherwise be and costly to realise.⁸

Thus, the theoretical model constructs a link but interposes the determining variable of the legal system.

Considerable literature exists on the actual role of the Chinese financial, and more specifically, its banking system, in China’s economic growth. While much of the literature finds a positive correlation between finance and economic growth, significant studies also contend that, given China’s relatively high economic growth levels, even by the standards of developing countries, and its immature banking and legal systems, the example of China serves to challenge this correlation.

Allen et al. (2005) finds that the Chinese legal and financial systems are underdeveloped and inefficient and that China represents a counterexample to the findings in existing literature supporting a link between finance and growth. The authors explain this by distinguishing between the formal economy, defined as state and publicly-traded companies, and the informal economy of non-traded private companies. They conclude that the informal sector’s faster growth rate than the formal sector must be attributed to a well-functioning informal mechanisms and institutions, and that these act as substitutes

⁷ Zhicheng Liang, *Op. Cit.*, p4

⁸ Zhicheng Liang, *Op. Cit.*, p4

for standard corporate governance and financial channels. Examples of such mechanisms are implicit contracts and reputation. The authors argue that these non-standard mechanisms are country-specific and culturally determined, and that during early economic stages, these are crucial for a transition to latter stages of growth. Thus, the paths of developing legal and financial systems should not be uniform across countries.⁹

Other studies challenge the conclusions of Allen et al. (2005) and support the idea that China's banking system has played a positive, or indeed a central, role in its economic growth.

In one deep empirical study using provincial-level data in China, Liang (2005) establishes a link between credits to the private sector and enhanced banking competition on the one hand, and the stimulation of economic growth on the other. The study also finds that credits allocated to the state-owned sector are ineffective and fail to accelerate growth. Thus, without a mature legal system, China's banking sector only partially contributes to China's economic growth. Liang further states that a further strengthening of China's legal and financial systems is critical for *sustainable* growth (emphasis added).¹⁰

The sustainability of growth appears intuitively to be a key qualitative variable that must be considered when considering growth measures in their own right, or in relation to other variables.

Rousseau and Xiao (2007) conduct an econometric study to establish a statistically causal relationship between China's banks, financial markets and real sector, based on measures taken between 1995 and 2005.¹¹ They conclude that the increase in size and sophistication of China's banking sector had positive significant effects on both output and fixed investment, and that stock market development did not.

Demetriades et al. (2008) used a large micro dataset of Chinese firms during the period 1999 to 2005, to examine the contribution of bank finance to the growth of firm value-added and total factor productivity (TFP). The study found a strong link between finance and growth. It found that access to loans is strongly positively correlated with future value-added and TFP growth, and that the population of firms with access to bank loans was able to grow faster in regions with greater banking sector development. It found that the effects of bank loans on firm growth were more pronounced in the case of privately

⁹ Franklin Allen, Jun Qian, Meijun Qian (2005), Law, Finance, and Economic Growth in China, Journal of Financial Economics, Volume 77, Issue 1, July 2005, pp57-116

¹⁰ Zhicheng Liang, Op. Cit.

¹¹ Rousseau, Peter L. and Xiao, Sheng, Banks, Stock Markets, and China's 'Great Leap Forward', Working Paper Series, July 21, 200, available at SSRN: <http://ssrn.com/abstract=918900>

owned and foreign firms, but these were also positive and statistically significant in the case of state- and collectively-owned firms.¹²

On a related and subject relevant to the present paper, Sapienza (2002)¹³ examines the effects of government ownership on bank lending. Although the sample observed was Italian, its conclusions could be relevant to any country. The study found that state-owned banks favour state-owned companies in applying lower interest rates than private companies. The principal causal factor found was of a political nature, and supported the political theory of state ownership. Essential, the theory postulates the influence of party-political patronage. Although there is only one party in China, other forms of political patronage could certainly exist. This view implicitly accepts that a correlation between economic growth and banking activity, in this case credit, can be suboptimal in terms of its allocative effect, if it is granted to projects for reasons not related to economic merit, or mispriced.¹⁴

Financial Intermediaries in China

The Chinese Banking System

It is relevant to focus first on the banking sector's role as the main venue for household savings. The banking system plays a pivotal role in financial intermediation; in 2005, 85% of funds lent to enterprises have been from banks.¹⁵ This figure remained over 80% in 2008.¹⁶

The big four state-owned banks (SOBs) are the prime savings repositories for households due to the implicit deposit insurance provided by the government, and their extensive domestic branch networks.¹⁷ They dominate absolutely the banking market, although their market share has fallen steadily from 88% of banking assets in 1997 to 51% in 2006.¹⁸ Households themselves are prone to high savings ratios due to the limited availability of financing for large-ticket consumer purchases, and the lack of international portfolio diversification possibilities.¹⁹

¹² Demetriades et al., Does the Chinese Banking System Promote the Growth of Firms?, February 2008, World Economy & Finance Research programme, Working Paper Series, WEF 0036

¹³ Sapienza, Paola (2004), The Effects of Government Ownership on Bank Lending, *Journal of Financial Economics*, May 2004, 72(2), pp357-384

¹⁴ Ibid.

¹⁵ Michael K. Fung, M. K. Leung, X-Efficiency and convergence of productivity among the national commercial banks in China, Hong Kong Polytechnic University, Hong Kong, p7

¹⁶ Research and Markets, China Banking Industry 2008, www.researchandmarkets.com

¹⁷ International Monetary Fund, Modernising China's Growth Paradigm, IMF Policy Discussion Paper prepared by Eswar S. Prasad and Raghuram G. Rajan, 2006, PDP/06/3, p5

¹⁸ Kent Matthews, Jianguang Guo and Nina Zhang, Non-Performing Loans and Productivity in Chinese Banks: 1997-2006, Cardiff Business School Working Papers Series, E2007/30, p4

¹⁹ International Monetary Fund, Op. cit., p5

(Other banking groups include three official Policy Banks, Joint Stock Banks and City Commercial Banks. The latter two are generally backed by private capital with links to companies.)

This effective repression of domestic household savings in the financial system provides the SOBs large pools of liquidity, allowing great balance-sheet scope for the extension of credit. Much of this liquidity is used to finance investment by state-owned enterprises (SOEs). SOEs are not required to pay dividends, even when profitable, and reinvest their earnings back into investments.

A further factor exacerbating the surfeit of liquidity has been investment inflows speculating on renminbi revaluation and the policy of keeping the renminbi pegged (and potentially undervalued). This reduces the scope of the central bank to use the interest rate mechanism to guide credit growth. The renminbi pegging also perpetuates a heavy set of administrative measures to control capital flows, impairing efforts to render the banking system more commercially oriented. A flexible exchange rate would also drive the development of financial products related to foreign exchange and interest-rate risk, stimulating broader financial market development, and potential tilting the engine of growth more towards domestic demand, and hence private consumption, and away from investment.

These combined factors have fuelled an investment boom driven by the availability of cheap credit and overoptimistic expectations of future demand growth in certain sectors.²⁰ Further factors driving credit creation have been a lack of credit expertise, political influence at various levels of government, and implicit social imperatives.

Banking assets as a percentage of GDP have strongly supported this investment activity, rising from 125% of GDP in 1997 to 205% in 2006.²¹ The investment boom explains in part the large proportion of GDP driven by investment as opposed to household demand, now at over 40% of GDP.²² In recent years, investment has accounted for more than half of nominal GDP growth.²³

Political influence and social imperatives predominate especially in the context of state-owned enterprises (SOEs). Since the gradual modernisation of the Chinese economy, thousands of SOEs have been subject to restructuring, privatisation or closing down. By 2004, the number of industrial SOEs fell to below 32 000 and employment dropped by 17m workers to 20,5m. However, many loss-making SOEs still exist and provide an

²⁰ Zhicheng Liang, *Op. Cit.*, p6

²¹ Matthews et al., *Op. Cit.*, p7

²² 9 International Monetary Fund, *Das (Wasted) Kapital: Firm Ownership and Investment Efficiency in China*, IMF Working Paper prepared by David Dollar and Shang-Jin Wei, January 2007, WP/07/9, p3

²³ 7 International Monetary Fund (2006), *Modernising China's Growth Paradigm*, IMF Policy Discussion Paper prepared by Eswar S. Prasad and Raghuram G. Rajan, PDP/06/3, p6

important social buffer against unemployment.²⁴ Although their numbers have decreased steadily, many are still considered to provide an essential social safety net. Many are insolvent, inefficient, unprofitable or saddled with politically directed social constraints.²⁵ Dollar and Wei (2007) find that “SOEs have lower marginal and average returns to capital than either domestic private or foreign firms by 11 to 54 percentage points, representing an inefficient allocation of capital that is economically and statistically significant.”²⁶

For borrowing firms, this represents a distortion of the cost of capital, as this cost is implicitly subsidised by depositors through lower real interest rates, and by explicit or implicit government subsidies to the state-owned banks. Viewed in classical economic terms, such distortions lead to misallocations of investment and lower economic welfare.

Furthermore, as the theoretical model predicts, when combined with the additional factors of weak liquidation threats and moral hazard on the part of borrowing firms’ managers, firms will be prone to take risks that go beyond what a prudent banking credit mechanisms would allow, and expect to be obtaining financing for these risks. In particular, when projects turn sour, there is a greater likelihood that additional financing will be sought, and provided, to maintain and even extend the project. In other words, good money will be thrown after bad.

This constellation inevitably acutely heightens the risk of non-performing loans for SOBs, the principal lenders to SOEs. The build-up of non-performing loans (NPLs) in public banks is not new to China or to developing countries. Kornai et al (2003) observed that many command economies transforming themselves into market economies saw inefficient state-owned banks lending to unprofitable state-owned firms.²⁷ A similar situation in Japan happened during the economic rebuilding after World War II. In China, the major reforms of 1994 included fresh capital for the four SOBs, the creation of three new policy banks for the problems of specific sectors, and the creation of a “bad bank” to take on the existing NPLs of the SOBs. Regulatory and institutional reforms were introduced to transform the four SOBs into commercial banks.²⁸

Indeed, in the past few years, there have been increasing fears of a resurgence of nonperforming loans and the problems such resurgence could generate.²⁹ Previous NPL bailouts occurred 1994, 1998-1999, and in 2004 in preparation for public listings. When

²⁴ 8 Dobson, Wendy and Kashyap, Anil K., The Contradiction in China's Gradualist Banking Reforms, August 15, 2007), University of Chicago Graduate School of Business Working Paper No. 4, p3

²⁵ find

²⁶ 9 International Monetary Fund, Das (Wasted) Kapital: Firm Ownership and Investment Efficiency in China, IMF Working Paper prepared by David Dollar and Shang-Jin Wei, January 2007, WP/07/9, p3

²⁷ Kornai, Janos, Maskin, Eric and Roland, Gerard, 2003, Understanding Soft Budget Constraints, Journal of Economic Literature, 41(4), pp1095-1136

²⁸ 8 Dobson et al. Op. cit., pp2-3

²⁹ 7 International Monetary Fund (2006), Modernising China's Growth Paradigm, IMF Policy Discussion Paper prepared by Eswar S. Prasad and Raghuram G. Rajan, PDP/06/3, p6

combined, these bailouts are estimated to have amounted to between 10,8 and 19,4% of 2005 GDP.³⁰

The burden on the government, and ultimately the taxpayers, of NPL bailouts, highlights the key variable of sustainability in assessing any link between finance and economic growth. If the credit mechanism is used systematically for projects whose return on investment, on a risk adjusted basis, is either negative or significantly below what other projects could return, economic welfare will not be optimal. However, finance and economic growth during the period in question will still show a positive correlation.

Furthermore, where credits cannot be repaid, the loans amount to a one-time transfer payment, supporting an activity that has insufficient demand and is ultimately doomed to liquidation or restructuring, with attendant dislocation or bankruptcy costs or both.

Consequently, sustainability is an important variable in any meaningful study of the causal links between the financial system and economic growth in China or elsewhere. Unsustainable economic growth is at best a short-term indicator of welfare; by definition, it affects the current cycle but will disappear from some future cycle. Its positive correlation with finance in a current period has no bearing on future growth or future finance-driven growth and does not guarantee that the economy is on a sustainable path. Indeed, the dislocation and bankruptcy costs associated with non-sustainable growth resulting in NPLs will negatively affect future economic growth.

The measurement of sustainability of growth during an observed economic period necessarily requires a qualitative evaluation. Alternatively, quantitative measures of actual parameters that are a proxy for sustainability can be sought from a period subsequent to the observed period.

In a widely cited essay on China's banking reforms, Dobson and Kashyap (2006) provide a detailed qualitative and quantitative assessment of the Chinese banking system based on an extensive survey. The survey seeks to ascertain the existing, and likely future, level of efficiency and commercial orientation of China's SOBs, and the likelihood of their continued transformation in this direction.

They specifically avoid drawing conclusions based on aggregate bank lending data and economic growth. Given the robust economic growth, they consider it difficult to use aggregate data to demonstrate misguided lending. They thus acknowledge that misguided lending, economically suboptimal, can occur in a simultaneous constellation of increasing lending and economic growth, and that other measures are required to assess the extent of such misguided lending.³¹

³⁰ Dobson et al. *Op. cit.*, p4

³¹ *Ibid.* p9

They note that the government’s involvement in bank ownership and decision-making reflects a basic trade-off between greater efficiency in state-owned institutions, of which the banks are an important part, on the one hand, and stable employment growth, and rural-urban and regional equality on the other.³² As a result, the banks have been directed to provide policy lending for investments in infrastructure and export platforms, and to provide sustenance to SOEs in the form of working capital and loans, while at the same time transforming themselves into commercial viable corporate entities.³³

Such an approach has been characterised, and rationalised, as an example of China’s policy of gradualism. Let us examine both sides of this trade-off, starting with desire to transform the SOBs into more efficient, market-driven, commercial entities. The Chinese government has introduced a three-pronged strategy to underpin this transformation.

The first prong is the already-mentioned bailouts of the SOBs to remove the burden of the NPLs from their balance sheets. These were undertaken in successive stages, beginning in 1994. The instruments used included bad banks, capital restructurings, Ministry of Finance equity write-offs, large capital injections, and the purchase or exchange of NPLs at book value by the PBOC.³⁴

The second is to attract foreign strategic investors who can contribute directors, provide improved governance and management skills, and new products. An example of this was Bank of America’s purchase of a 9% stake in China Construction Bank in 2005. This and other sales of strategic stakes in the Big Five (the Big Four plus Bank of Communications) totalled \$14,8bn for the period 2004-2005.³⁵ However, the ownership is limited to 19,9% for any single investor, and 25% for foreign investors combined, limiting the effect. It is possible that strategic investors have had a very beneficial impact on management and products, but on key policy questions around lending policy and relationships with SOEs, the impact has been limited.³⁶

The third is to obtain listings for the banks on foreign stock exchanges, for the purpose of exposing their performance in terms of efficiency and profitability to the power of market forces, and ensuring that directors and managers to improve transparency and accuracy of their reporting to international standards. All except the Agricultural Bank of China have listed on Hong Kong; ICBC listing representing the largest IPO ever and a much publicised simultaneous dual listing on the Hong Kong and Shanghai A exchanges.

A qualitative assessment by Dobson and Kashyap, based on interviews with managers of the listed banks, found that the effects of these listings were starting to take hold.

³² Ibid. p1

³³ Ibid. p1

³⁴ Ibid. p4

³⁵ Ibid. p4

³⁶ Ibid. p12

Exposure to analysts and published reports are pressuring management to shift from its traditional goal of increasing the asset ledger and market share, towards emphasising return on assets and profitability.³⁷

Thus, reforms in the right direction have been introduced and have begun to take effect. Whether they enjoy sufficient momentum in their implementation to bring about sustained transformation ultimately depends on whether they have achieved sufficient changes in actual practices, particular in the discipline of extending credit.

This brings us to the second half of the trade-off, that of the SOBs' role as agent of the government in terms of policy-lending to SOEs and the social welfare of SOE employees. Ultimately, the test of whether the state-owned Chinese banks have truly been transformed into efficient and market-oriented banking organisations lies in whether they are able to cease misdirected lending : their political freedom to extend credit on commercial bases rather than responding to political, administrative, social and other pressures, and their ability to do so in terms of competencies - credit and risk skills, risk-based pricing and balance-sheet management. According to Dobson and Kashyap (2006), “the critical question regarding the long-run health of the banking system and success of the current reforms [...] is whether it is likely that the burden and responsibility of policy lending will be decisively lifted from the banks.”³⁸

An assessment of progress towards this transformation can be made on the basis of both ex-ante and ex-post data. Ex-post variables include the quality of their loans assets, the size of their non-performing loan assets, and their profitability. Ex-ante variables indicating the likelihood of progress include current management policies and practices, the availability of the required competencies, and factors related to ownership and governance, all of which can be assessed qualitatively.

Dobson and Kashyap (2006) use an array of both ex-ante and ex-post measures to assess the likelihood of success of the reforms.

First among these is the unwillingness of the government to allow majority foreign ownership in the SOBs. One interpretation of this is that the government wishes to retain the possibility of directing credit for policy reasons, not wishing to quicken the pace of SOE restructuring and requiring directed credit channels for their continued support.

The failure of the government to encourage the development of the bond market³⁹ supports such an interpretation – a domestic bond market would allow at least some profitable companies to substitute bonds for bank loans, resulting in a reverse “cherry-picking” situation where healthy companies were able to find other sources of financing,

³⁷ Ibid. p5

³⁸ Ibid. p6

³⁹ See further analysis of the bond market on p. xxx

leaving SOBs with only unprofitable companies, mostly SOEs, requiring directed credit. Such a situation would deprive SOBs of the profitable, market-oriented parts of their clientele, and would relegate them once again to the role of a funding agency for the government. This would represent an enormous setback in the attempt to render them market- and commercially oriented.

Dobson and Kashyap (2006) discuss three aggregate indicators of policy-directed bank lending: the continued policy imperative to absorb surplus labour, high rates of government and enterprise investment for the purpose of creating jobs, and continued SOE restructuring.

Employment creation to absorb surplus labour has been a keystone of the government's economic policy. This has been one of the driving forces behind the government policy to sustain China's rapid economic growth and if possible to increase the pace of job creation. The policy has taken on greater urgency due to the increasing difficulty in preserving jobs in non-urban areas, and has been strongly supported by local government and party officials.⁴⁰ This in turn has driven fixed-asset investment to unsustainable levels in the mid-2000s and created excessive demand for lending.⁴¹

As could be expected from such a policy, it has come at the price of a decline in the marginal productivity of capital investment, as measured by the Asian Development Bank.⁴² As a result, without an improved allocation of capital, even higher investment ratios will be needed to create the capital accumulation required to create the requisite new jobs. Dobson and Kashyap (2006) show that SOEs accounted for a major share of the investment boom. They also cite studies that demonstrate that SOEs are particularly unproductive. Allowing for industry differences, SOE productivity was roughly 30% lower than privately owned competitors up to 2004, with no evidence that this has changed in later years.⁴³

Thus, these aggregate indicators reveal that the scope for continued government policy pressure is large, and that and even greater pressure may be required to maintain the same levels of investment-driven growth and job creation.

The third aggregate indicator, SOE restructuring, reveals trends related to SOE losses and economic presence. Since 2005, SOE losses as a percent of all banking losses have become higher than their share of assets. Also that year, aggregate SOE losses began climbing as a percentage of SOE assets, with 2006 the worst in the current decade.⁴⁴ These are not reflected in the banks' balance sheet ratios for the simple reason that

⁴⁰ Ibid. p7

⁴¹ Ibid. p7

⁴² Ibid. p7

⁴³ Ibid. p7

⁴⁴ Ibid. p7

government continues to absorb much of them through its bailouts. Indeed, official numbers show a decrease in NPLs from 52,7% in 1997 to 9% in 2006.⁴⁵

Other data showing aggregate SOE profit rising sharply since 2005 are attributable to the concentration of a small number of large and highly profitable SOEs. It seems likely that such firms would finance themselves at least in part through retained earnings rather than through borrowing. Thus, the average profitability figure does not reflect SOBs' wider exposure to more representative SOEs with much more uncertain profitability.⁴⁶

Thus, this indicator reveals that, while there was some improvement from 2000 to 2004, the years subsequent showed a clear resurgence of NPLs.

Further evidence that bank lending has been misguided is provided by Dobson and Kashyap in looking at a range of bank-level data.

An examination of the client portfolio of the three publicly listed SOBs reveals that corporate customers still account for over 70% of their lending, increasingly concentrated in the sectors targeted by government policies such as housing, energy and telecoms. Moreover, there is some evidence that their corporate customers are those who previously received policy loans from them, and that shareholding companies, in which governments have significant ownership shares, absorbed up to two thirds of new bank lending. They also cite a World Bank report describing the flow of loans to local governments, perceived as low risk, for infrastructure projects. This prompted the central government to invalidate its guarantees of such loans and to call on the banks to cease granting them.⁴⁷

This echoes distinctly similar to events earlier this year (2009). In a replay of this scenario, the Chinese banking regulator, CBRC, ordered a comprehensive assessment of lending to local governments, including their fiscal capacity, the scale of their liabilities, and their credit ratings, warning trust companies and banks of future credit risks and calling for prudence in financing local-government-led projects. This action came against backdrop of rapid credit expansion, this year in the context of the government's 4-trillion-yuan fiscal stimulus programme, and rising concerns over bad debts.⁴⁸

The data on the distribution of loans shows provides further evidence of possible misallocation. There is a high correlation between the distribution of loans by province and each province's government share of industrial production, indicating a bias towards lending to SOEs. Companies owned by members of the CPC are significantly more likely

⁴⁵ 10 Matthews et al., Op. Cit., p7

⁴⁶ 9 International Monetary Fund, Das (Wasted) Kapital: Firm Ownership and Investment Efficiency in China, IMF Working Paper prepared by David Dollar and Shang-Jin Wei, January 2007, WP/07/9, p9

⁴⁷ 8 Dobson et al. Op. cit., p10

⁴⁸ The Economic Observer Online, Mitigating Debt Bomb for Chinese Local Governments, http://www.eeo.com.cn/ens/finance_investment/2009/06/01/138892.shtml

to obtain credit from SOBs than others. A survey undertaken in 2000 on the difficulty on the part of entrepreneurs to obtain loans revealed that members of the Chinese People’s Congress believed that access to credit was significantly easier than did other entrepreneurs.⁴⁹

Measures of efficiency of banks, by comparing putative profit taking input and output prices as given, reveal that SOBs are far less efficient than other banking groups.⁵⁰ This is supported by Matthews et al. (2007), whose econometric analysis of banks reveals that larger banks had lower productivity growth than smaller banks.⁵¹ This could be explained by political and social resistance to efforts to rationalisation efforts.

Pricing data also indicates a bias towards mispricing and therefore possible credit misallocation. Since 2004, banks have been largely free to set their own lending rates. This is reflected in loan-pricing data in 2004, showing a sudden break. However, since then, the range of rates charged by SOBs to borrowers is compressed in comparison to the range of rates made by US banks, implying inadequate risk adjustment in loan pricing. The reasons for this could be the abundance of liquidity, slowness to change and reluctance to impose higher prices on the weakest customers.⁵² By contrast, regional commercial banks and co-operatives are much more likely to charge rates above the benchmark.

Thus, the various bank-level data reviewed reinforces what the aggregate indicators show, that there has likely been considerable suboptimal lending for political, social and other reasons, and that these practices have been very difficult to eradicate despite reforms in this direction.

The fast pace of bank lending growth and economic growth in China shows a correlation, confirmed in numerous studies. However, suboptimal lending practices were, and remain, pervasive. This will reduce, over time, the aggregate marginal productivity of capital. This in return requires a greater level of new investment to achieve the same level of growth. Ultimately, sub-optimality is only sustainable at the margin; if it represents a major part of the lending by the group of banks, SOBs, responsible for over half of aggregate bank lending, it is not sustainable and growth will sooner or later falter.

It can be expected that the worldwide financial crisis will lead to increased pressure on the SOBs to fulfil their political and social roles, potentially further delaying their progress towards commercially oriented banks and exacerbating the problem.

Other banks – Joint Stock Banks

⁴⁹ 8 Dobson et al. *Op. cit.*, p11

⁵⁰ 8 Dobson et al. *Op. cit.*, p11

⁵¹ 10 Matthews et al., *Op. Cit.*, p25

⁵² 8 Dobson et al. *Op. cit.*, p11

There are 13 Joint Stock Banks JSBs in China. They are both publicly and privately owned, listed or not, and players in both lending and deposit-taking functions. Although the government is a part-owner in all but one, the extent of government ownership is far less than in the SOBs. Their existence dates back to the 1995 Law on commercial banking, implemented to allow a profit objective in the banking sector and to foster competition in it.⁵³ Foreign ownership is permitted up to 15%.

In contrast to SOBs, JSB have considerable freedom to choose their customers and meet their needs with new products, to recruit and reward staff, and to define their business strategy and their organisational structure.⁵⁴

JSBs have advantages in attracting foreign investors due to more limited government interference, stronger governance, better asset quality, a greater willingness to accept the introduction of risk management strategies, and other factors.⁵⁵ They have been more profitable, earning higher margins. They have been steadily gaining market share, mainly at the expense of the Big Four. On average, their productivity growth has been markedly higher than SOBs, although there are significant variations between them. Their profitability has been much stronger than the SOBs and the Policy Banks, even excluding any profitability drag from NPLs.⁵⁶ This is in turn correlated with higher x-efficiency.⁵⁷

JSBs have also had a significantly lower NPL ratio, 2% in 2006 compared to over 10% for the SOBs⁵⁸, with much less in the way of government bailouts, indicating better credit allocation. Moreover, they have a more consistent record in provisioning NPLs, indicating higher levels of governance, transparency and balance-sheet management. This is also conducive to better credit allocation.

However, JSBs are susceptible to policy-driven credit expansion, such as the rush this year to extend credit to fund local government projects as part of the central government's fiscal stimulus package. The range of loan recipients has been extended to second- and third-tier cities, and banks are competing with each other to provide these loans to local governments.⁵⁹ These are now the object of a CBRC review.

⁵³ 11 Fung et al., Op. Cit., p6

⁵⁴ Ibid. p6

⁵⁵ 12 Abotsi, Kodjo, Foreign Investment in Chinese Joint Stock Banks: 1996-2006, March 2997, Munich Personal RePEc Archive, MPRA Paper No. 2894

⁵⁶ 13 Garcia-Herrero et al., What Explains The Low Profitability Of Chinese Banks?, Banco De Espana Working Paper Number 0910, 2009, p27

⁵⁷ Garcia-Herrero et al. Op. cit., p27

⁵⁸ KPMG, China's city commercial banks: Strategic Options, 2006, Hong Kong

⁵⁹ 11bis The Economic Observer Online., Mitigating Debt Bomb for Chinese Local Governments, 2009-06-01, eeo.com.cn

Thus, while many factors support the correlation of China’s economic growth with the growth of its banking sector, some, but not all factors indicate that the economic growth that this banking activity has supported has achieved a degree of sustainability.

Other banks – Policy Banks

Three Policy Banks have been primarily mechanisms for the state to transfer public savings into loans for investments in targeted sectors and projects. This is not unlike the SOBs. Unlike the SOBs, however, the policy banks have a policy orientation as an explicit objective. They are thus public policy implementation vehicles and cannot be meaningfully regarded as banking activity in a commercial sense. Their NPLs are in the same league as the SOBs.

Nevertheless, it has been the government’s intention to transform over time also the Policy Banks into commercial banks. The China Development Bank has been the first to receive a large capital injection at the end of 2007 for this purpose.

As “banks”, they have contributed significantly to the development of China’s infrastructure, agricultural and regional development. Thus, their contribution to the economy goes beyond the intrinsic value of the activity they have supported, but includes a strong supply-side multiplier effect, that being the economic activity that has been rendered possible, or made more efficient, by virtue of the projects and regions supported.

Other banks - City Commercial Banks

City Commercial Banks (CCBs), formed in many cases from the merger of city credit co-operatives, are an increasing force in China’s banking system. They are principally owned by municipalities they are associated with, and several have listed domestically through IPOs. Their geographical presence is varied, with a few having a presence beyond a city or region. They have grown faster than other banking groups and their market share of assets, although still relatively small, stands at 5%. Performance in terms of NPLs, at near 4% of in 2007 has been better than the SOBs but less good than the JSBs. It has been decreasing steadily since 2002, when it stood at over 18%.⁶⁰ Profitability indicators of CCBs as a group have increased steadily across the board, with a 50% CAGR from 2003 to 2006, an increase in ROA from 0,7 to 1% over the same period, and a significant decrease in the number of CCBs recording a loss, down to two in 2006.

Thus, as a group, CCBs’ participation in the growth of the Chinese economy is increasing.

CCBs have been a primary mechanism for the funding of local government projects, providing a relatively cheap funding base in deposits. They have thus been, theoretically

⁶⁰ KPMG, China’s city commercial banks: Strategic Options, 2006, Hong Kong

at least, susceptible to directed lending by their municipal owners for local political and social priorities, similar to SOBs at national or provincial levels. However, they have been the particular object of CBRC scrutiny concerning their capital ratios, and by extension the level of their NPLs. To meet these concerns and to sustain the CCBs as a financing mechanism for local projects, many municipalities have made significant capital injections and undertaken to strengthen the banks' balance sheets and achieve required capital ratios.

CCBs face many of the same problems as SOBs. They lack risk management and credit expertise, and rely heavily on lending business for nearly all of their income, fee-based business representing a tiny fraction of their revenues.⁶¹ They lack scale, and many bear credit portfolios that are highly concentrated around cities or sectors. However, CCBs also have important differences with SOBs. They offer high upside for foreign investors in terms of potential value-creation through scale and geographic expansion. Their dynamism may render them more receptive to new products, improved governance, and expertise, leading to further potential for value-creation.

A crucial test will be whether CCBs can withstand the pressure for directed lending to local governments in the current environment of reduced growth. This year, the China National Audit Office conducted a survey of the mandatory local government contribution of 2,82tr yuan to the central government's stimulus programme of 5,17tr yuan. It found that a majority of the amount already disbursed came from policy-driven bank loans.⁶²

Thus, as with JSBs, CCBs have become much more dynamic and more commercially oriented organisations. Their contribution to the Chinese economy appears to have strong elements of sustainability. They have strong growth potential. However, they are not yet free from policy-driven actions that could jeopardise their balance sheets and retard their transformation to commercial organisations.

Foreign banks

Foreign banks were permitted an unrestricted geographical presence and full banking license in December 2006, as per the terms of China's entry into the WTO five years earlier. Their growth has been measured; they face large barriers to entry principally from extensive branch networks and sectoral reach of competitors. In 2007, they achieved a market share of 2% in terms of assets and were geographically concentrated in a small number of large cities.⁶³ They face limitations in growth due to their limited funding reach

⁶¹ Ibid.

⁶² 11bis The Economic Observer Online., [Mitigating Debt Bomb for Chinese Local Governments](#), 2009-06-01, [eeo.com.cn](#)

⁶³ China Knowledge, [Chinese Banking System](#), <http://www.chinaknowledge.com/Business/CBGdetails.aspx?subchap=4&content=15>

and capital base; in the past two years, capital has likely become even scarcer and more expensive in international banking groups.

Nevertheless, by targeting niche business and cherry-picking customers, products and geographies, foreign banks are contributing to the development of competitiveness, efficiency and innovation of the banking system in China, and put increasing pressure on other banking groups to move in the same direction. This will, in turn, contribute to more efficient capital allocation in the banking sector and hence more growth for every unit of investment.

General issues across all banks

Several factors remain hindrances to banks' ability to drive sustainable economic growth. The lack of a credit system, including a central credit registry and a central registry for property subject to collateral pledges, creates an information asymmetry problem for banks in evaluating the performance and potential of lending clients. This has been recognised by the Chinese central bank as a major source of risk in the banking system.⁶⁴ In addition, this limits growth in particular economic groups with little negotiating power due to their lack of concentration, in particular small- and medium-sized enterprises. This also reduces the potential consumption of lower-income individuals, creating a drag effect on domestic demand.

Related to this issue is the lack of personnel resources with sufficient expertise in banking, and credit assessment and risk management in particular. The opening-up of renminbi operations to foreign banks in 2007 has added to this pressure.

Various reforms have been introduced by the authorities, including improved supervision, requirements for corporate governance, systematic application of financial performance indicators at bank level, and the adoption of international best practices in risk management, in particular in terms of supervision.⁶⁵

Many practitioners in the market today maintain the view that, although these and other reforms have begun to bear fruit, the central problems of a lack of integrated credit risk infrastructure, and the lack of credit and risk expertise, remain.⁶⁶ The current environment of economic slowdown amplified risks in this regard. In the first trimester of 2009, a record of 5,2tr yuan of new loans have been extended by banks, encouraged by

⁶⁴ People's Daily Online, [Three risks exist in China's banking system: expert](#), April 27th, 2005

⁶⁵ Shi Jiliang, Vice Chairman of CBRC, [Development and Trend of Banking Risk Management in China](#), Forum on Asian Insolvency Reform 2004, Conference : "Insolvency Systems and Risk Management in Asia", November 2004

⁶⁶ China Daily, [Expert: Nation can avoid banking risks despite fast loan growth](#), May 25th, 2009

the government.⁶⁷ If these were not extended with strong credit and risk assessments, there is the potential for large numbers of defaults in the future.

Domestic Bond Market

China's domestic bond market is underdeveloped, even when measured against other developing countries in Asia. Its size is small relative to GDP and it is dominated by SOEs; end-2005 the corporate bond financing stood at only 13% of GDP, far below Malaysia, Korea and Thailand.⁶⁸ Prior to 2002, it was under 5%, with countries such as Korea exceeding 25% and Indonesia in 10% in 2002.⁶⁹ The government bond market offers only a narrow range of instruments with a limited secondary market.⁷⁰ Annual traded volume is roughly equivalent to the par value of bonds outstanding, for both government and corporate bonds. The comparable Hong Kong ratio is 22 for government bonds.⁷¹

Several factors underlie such an underdeveloped bond market in such a large economy. The lack of a mature credit or debt-rating industry, the only recent progress of bankruptcy legislation regarding bondholder rights, the lack of retail investor sophistication, and the strength of bank branch networks as a competing source of funds, as some. Moreover, the lack of speculative currency convertibility and the fixing of deposit interest rates hinder the creation of debt instruments across a yield curve, restricting the creation of a yield curve and liquidity in debt markets to support it. Related to this is the absence of an offshore renminbi market where such a yield-curve could be created.

The government has taken measures to foster the creation of a simple debt market and large companies, mainly utilities and developers, have issued bonds. However, banks have not been allowed to trade in bonds, removing the principal source of liquidity.⁷²

The underdeveloped bond market means that companies are much more reliant on other means of self-financing, in particular the more speculative and volatile stock market, or intermediated financing, such as banks. This deprives them on a stable source of funding that is a pillar of developed economies. Chinese companies finance themselves only to 10% with bonds, in contrast to 70% for firms in the United States.⁷³

⁶⁷ Ibid.

⁶⁸ Dobson et al. *Op. cit.*, p6

⁶⁹ Allen et al., *Op. Cit.*, Figure 3-B, p 57

⁷⁰ 14 Moskow, Michael H., Lemieux, Cathy, [China up close: Understanding the Chinese economy and financial system](#), Chicago Fed Letter, 1 February 2008

⁷¹ Asian Development Bank, [Asia Bonds Online](http://asianbondsonline.adb.org/regional/data/bondmarket.php?code=Bond_turn_ratio), http://asianbondsonline.adb.org/regional/data/bondmarket.php?code=Bond_turn_ratio

⁷² New York Times, [China's slow advance towards a domestic bond market](#), 10th September, 2007,

⁷³ China Daily, [China must develop its bond market](#), 8th March, 2007.

The absence of a large domestic bond market, as an alternative source of funding to the banks, prevents the situation of the SOBs from being exposed as unsustainable, allowing more time for their transformation into truly commercial banks. A bond market would provide companies with direct access to investors; this would result in attrition from the SOBs of profitable companies, resulting in a decrease in their overall asset quality and a potential vicious circle. Such a development would undermine the efforts of the government to transform the SOBs into commercial banks, and it would render them less attractive for foreign investors.

Whatever the merit of these policy considerations, the absence of a bond market is suboptimal for companies whose credit rating would provide access to non-intermediated funding, and suboptimal to the extent that the economy does not benefit from market interest-rate signal spanning a yield-curve. Such interest-rate signals would not only serve as a macro-economic indicator, but would provide better pricing decisions for borrowing and lending at a micro-level, resulting in a more optimal allocation of credit.

Domestic Equity Market

The domestic stock market is divided into two-tiers, one (A market) for domestic residents and Qualified Foreign Institutional Investors, primarily buy-side institutions such as investment funds, pension funds, and insurers. Another (B Market) for foreign residents.

The relevance of the stock market to the economy could be assessed in terms of the following criteria :

- measures of activity: market capitalisation in relation to GDP, IPO activity, and measures of economic penetration, as a proxy for importance to the economy;
- beta behavior of stocks, as a measure of the stock market in terms of allocative efficiency on a risk-adjusted basis;
- turnover ratios, as a measure of investor maturity and possible indicator of allocative efficiency;
- measures of market efficiency in relation to the efficient-market-hypothesis, as a measure of information-related efficiency.
- Attractiveness as an IPO for domestic firms, as opposed to the Hong Kong market.

Let us examine each of these.

Although market capitalisation in relation to GDP is small compared to developed markets, the importance of the stock market to the national economy has increased steadily over time. From 1992 to 2002, market capitalisation as a ratio of GDP increased from 3,93 (Shanghai and Shenzhen combined) to 37,43.⁷⁴ This contrasted with ratios in 1996 of 100 to 300% in developing countries such as the US, Germany and Japan, and

⁷⁴ Shiguang Ma (2004), The Efficiency of China's Stock Markets, Ashgate Publishing Limited, p36

up to 100% in developing countries such as Taiwan (100,4%), Thailand (55%) and Mexico (38,8%).⁷⁵

Listings on China’s two exchanges is dominated by local small- to medium-sized players in terms of market capitalisation.

In contrast to the bond market, up to 2002 IPO activity was higher as a percentage of GDP than all countries in Asia except Korea, where it is incrementally higher.⁷⁶ It reached a climax in 2006 and 2007, involving hundreds of companies preparing IPOs. Many did not see the light of day. The collapse of the stock market, regulatory caution, reduced growth, resulted in a sharp reduction in activity since 2007, which is only now starting to pick up again.

Almost all large Chinese companies, including SOEs, choose to list first on foreign exchanges, reflecting their greater liquidity and maturity. This allows the SOEs to benefit fully from earnings multiples available from foreign capital. Examples are China Mobile, CNOOC, and Bank of China.⁷⁷ Some, such as CNOOC, are said to be planning to open a second listing on one of China’s domestic exchanges⁷⁸. Such an approach is far from widespread, indicating that firms with access to foreign capital do not also require access to domestic capital, at least not via the stock market.

Other measures underline the limited role of the stock market in the wider economy. In 2002, only 1 223 large and medium-sized companies in China were listed, out of over 400 000 enterprises fitting this description, only 5,38% of residents invested in the stock market. In 1997, only 23,2% of new capital flow was funded by new share issuance.⁷⁹

Turnover ratios have been extremely high for A-shares. In 1997, the average number of times A-shares in Shanghai and Shenzhen were transacted annually was 7,6 times and 11,35 times respectively.⁸⁰ By contrast, average share turnover in developed markets is 50%, of ½ times per year. In the same period, turnover in B-shares, in contrast, was on average one tenth to one fifth of that in A-shares, in most years. In 2004, turnover in A-shares was 308,31% on tradable shares, in B-shares it was 58,29%, indicating reduced churning in A-shares from those of 1997, and B-shares turnover in line with developed markets.

In terms of market efficiency, the research documented in the literature suggests that there are informational asymmetries in both A- and B-markets, but that the B-Market is less weak-form-efficient than the A-Market, possibly due to language barriers, differences

⁷⁵ Ibid. p38

⁷⁶ Allen et al., *Op. Cit.*, Figure 3-C, p 57

⁷⁷ Business Week, *Where China’s Top IPOs List: Offshore*, January 9th, 2006

⁷⁸ The Economist, *Chinese IPOs resume*, June 25th, 2009

⁷⁹ Ibid.

⁸⁰ Ibid.

in accounting standards, and difficulties in gaining access to local company information, on the part of foreign shareholders.⁸¹ Prices in the B-market have been at a discount to the A-market; generally the opposite is the case in other markets with segregated segments based on residence. Foreign exchange regulations prevent arbitrage between the two markets. However, since 2001 domestic Chinese investors have been permitted into the B-share market, after which time the difference between the A- and B-prices decreased considerably. The research suggests that the increase in B-market efficiency is attributable to the entrance of domestic investors into the market in 2001, possibly due to a resulting reduction in the informational disadvantage of the foreign investors due to a more rapid diffusion of information by domestic investors.⁸²

Both A- and B-markets have become more efficient over time, likely as a result of improved legislation over the past years with respect to market management, informational transparency and informational transmission.⁸³ Insider trading has been the subject of rigorous laws, although imperfections and loopholes still exist and require remedy.⁸⁴

China's two stock exchanges pricings exhibit no consistent beta value for firms. In other words, the slope of the Securities Markets Line is zero.⁸⁵ If one accepts the universality of the Capital Asset Pricing Model (CAPM), then this would indicate a market not yet mature enough to be bound by the CAPM. This, in turn, would indicate systematic mispricing across the entire market and extreme allocative inefficiency, with attendant suboptimal impact in the real economy.

Two factors mitigate such a conclusion.

First, a cursory examination of the Shanghai and Shenzhen in the tumultuous periods of 2008 and early 2009 reveals a significant similarity of market movements with other major equity indices. This indicates that, even in an environment with an unclear SML slope, Chinese stocks have factored into their market valuations a systematic global volatility factor. This would further indicate that the Chinese stock markets are not isolated from the remainder of the world's equity markets, and that there is at least a basic systemic-risk factor being applied in the market affecting all securities.

Secondly, while much of the literature on valuation of the Chinese stock exchanges does indeed conclude that beta is an unreliable predictor of valuations in China, some literature

⁸¹ 15 Fifield, Suzanne G.M. & Jetty, Juliana, 2008, Further evidence on the efficiency of the Chinese stock markets: A note, Research in International Business and Finance, Elsevier, Vol. 22(3), September, p359

⁸² Ibid. p360

⁸³ Ibid. p360

⁸⁴ Huang, H 2005, Insider trading law in China: regulations of insider trading in China and proposals for reform, PhD Thesis, University of New South Wales, Sydney.

⁸⁵ Classroom notes, ISM Course 748 EXBS, Fudan School of Management, Shanghai, April 10th, 2009

finds more complex correlations in the form of multi-factor beta relationships, including macro-economic and market variables and the Fama Three-Factor model (Chengjian Su (2006)⁸⁶, Xiao-yan Zhao (2007)⁸⁷). Other Beta-factors identified were book-to-market ratio, firm size and idiosyncratic volatility.⁸⁸

A further interesting variable is the degree of integration (as opposed to segmentation) on the part of the Chinese stock exchanges in relation to each other, and to world markets. Integration of Chinese (including Hong Kong) exchanges with each other, and between Chinese exchanges and world markets, would promote pricing efficiency and hence sustained allocative efficiency.

Applying the CAPM model and testing for common risk-related determinants of pricing, Wang and Iorio (2007) found that the A-market was a segmented market from the world stock markets. At the same time, there is increasing integration between the A-share and B-share markets, and the A-share and H-share markets.⁸⁹ This may reflect the opening up of the B-share market to domestic investors in 2001, as well as a higher level of integration between Hong Kong and mainland China. The study could not find evidence of increasing integration of the B- and H-share markets with world markets, although both markets were designed to attract foreign investment.⁹⁰

Special segments dependent on financing

Of interest in studying the relationship between the Chinese financial system and economic growth is the distribution of banking services, in particular credit, to segments of the economy that are either physically remote from the main economic sectors, or that comprise players who are not concentrated and therefore do not enjoy natural economic leverage. In the former segment is the rural economy, including both the agricultural economy and remote regions. In the latter are small- and medium-sized enterprises (SMEs).

SMEs

⁸⁶ Chengjian Su (2006), An Empirical Investigation of the Multi-factor and Three-factor Pricing Model in Chinese stock market, School of Business at Shantou University, Shantou City, Guangdong Province, China

⁸⁷ Xiao-yan Zhao, Pricing factors in capital market and investment strategy: Evidence from Chinese listed companies, Journal of Modern Accounting and Auditing, Vol.3, No.11, (Serial No.30), Nov. 2007

⁸⁸ Drew et al., Pricing of Equities in China, Evidence from the Shanghai Stock Exchange, Queensland University of Technology, Discussion Paper No. 174, March 2004

⁸⁹ Wang, Yuenan & Iorio, Amalia Di, 2007, Are the China-related stock markets segmented with both world and regional stock markets?, Journal of International Financial Markets, Institutions and Money, Elsevier, vol. 17(3), pages 277-290, July

⁹⁰ Ibid.

SMEs make up 98% of the Chinese non-public⁹¹ economy, and 98% of SMEs operate in the non-public economy.⁹² They account for 59% of GDP and occupy more than 75% of employment in urban areas, and have been a major driver of productivity growth in the economy.⁹³

Although SMEs have benefited from the government's initiative⁹⁴ to reinforce the private economy's access to capital markets and bank loans, and to government procurement markets, financing continues to represent a bottleneck in their development.⁹⁵ Scale thresholds and issuance requirements in the domestic bond and equity markets, and the lack of a developed private equity sector, have restricted the alternatives for SMEs find financing.

Even profitable SMEs have found it difficult to obtain credit from Chinese banks.⁹⁶ They lack sufficient profits, in absolute terms, and mortgageable assets to obtain loans. The lack of a developed credit system, including central repositories of credit information and pledged collateral, creates an information asymmetry faced by banks in evaluating lending customers. The lack of credit assessment tools and expertise renders exacerbates the information asymmetry problem. Small credits represent higher control costs, providing a further disincentive for banks, in particular large banks, to grant credit to SMEs.⁹⁷ There are local banks specialising in local financing to SMEs, however, these are not sufficient in numbers.⁹⁸

Research in 2006 showed that SMEs as a group were financed 56% with own funds.⁹⁹ Only 30% of credits requested by SMEs with a good record were satisfied.¹⁰⁰ In a CBRC study in covering Shanghai, it was found that only 28,2% of all SMEs had obtained credit, and that 45% of the refusals were due to the lack of formal collateral in the form of property.¹⁰¹

The removal of restrictions on interest rates on bank loans in 2004 allowed banks to price loans to SMEs based on their risk profile, creating an incentive for banks to expand their to SME loan portfolio. However, this freedom did not extend to rural and urban credit co-operatives, major providers of financing to SMEs.

⁹¹ Defined as neither an enterprise not controlled by the state or collective shareholders

⁹² Cheng Xiang Liu, SME Financing in China, Working Paper, University of Paris X-Nanterre, 2007-29

⁹³ Ibid.

⁹⁴ State Council Directive of February 2005 „Guidelines on Encouraging and Supporting the Development of the Non Public Sector including Individual and Private Enterprises”

⁹⁵ Cheng Xiang Liu, Op. Cit.

⁹⁶ 14 Moskow et al., Op. Cit.

⁹⁷ Cheng Xiang Liu, Op. Cit.

⁹⁸ Ibid.

⁹⁹ Ibid. p6

¹⁰⁰ Ibid.

¹⁰¹ Ibid. p7

SMEs have only recently been recognised by the government as a sector warranting specific government attention. In 2005, the government issues guidelines to banks for lending to SMEs. It required SOBs to establish special SME loan departments; however, this did not give rise to a significant increase in loans to SMEs.¹⁰² Nevertheless, it was an important milestone for SME financing. It required banks to lend for commercially sustainable projects, as opposed to subsidy purposes; it promoted the adoption by Chinese banks of international best practices with respect to small-business lending, including a greater reliance on the enterprise’s cash flow as opposed to formal collateral, and altering incentive structure for loans officers towards number of new loans and their collecting record. Finally, it explicitly recognised the role of the policy banks in lending and providing technical assistance to small- and medium-sized banks for the purpose of penetrating the small-business lending market.¹⁰³

Provincial governments have participated in, and encouraged the establishment of, a very diverse range of credit guarantee institutions for SMEs, which in 2007 accounted for over 32% of all credit guarantee institutions.¹⁰⁴ The 10th Five-Year-Plan directed that SMEs be included in the evaluations of all credit-rating agencies. However, this was only marginally effective due to the banks’ unwillingness to rely on the ratings, and due to issues arising from the commercial competition between the agencies.¹⁰⁵

Agricultural and rural sectors

The prime vehicle for servicing the financial needs of the rural sector has been the Agricultural Bank of China (ABC). One of the “Big Four” SOBs, its mandate was to serve China’s rural economy. The Agricultural Development Bank of China (ADBC), one of China’s three policy banks, provided additional financing to support specific rural and agricultural projects. In addition, a multiple of collective-type institutions exists, such as credit co-operatives.

Agricultural and rural development has become a pressing priority in China. While tens of millions of workers have migrated to the cities, some 750m people still live in the countryside. Rural dwellers tend to save slightly more than their urban compatriots, but they have limited access to credit. Thus, in effect rural dwellers are financing urban development, an abnormal situation that has been recognised as such by the State Council.¹⁰⁶

¹⁰² 16 China Business News, [China to continue rapid economic growth in next 30 years, although credit system needs reform](#), 28 October 2004

¹⁰³ Cheng Xiang Liu, [Op. Cit.](#)

¹⁰⁴ Cheng Xiang Liu, [Op. Cit.](#)

¹⁰⁵ *Ibid.*

¹⁰⁶ *Ibid.*

Rural finance is one of the weakest points in China’s system. It does not provide sufficient support to rural areas, leaving many farmers and rural enterprises bereft of the capital they need to grow. A lack of adequate profitability for rural financial institutions, a lack of financial products accommodating rural needs, and the difficulty farmers encounter in obtaining bank loans form a vortex of interrelated issues that deprive rural areas of capital needed for development.¹⁰⁷

As a result of these structural issues, the transition of rural financing to market-based principles was initiated much later than in other sectors of the Chinese financial system. Thus, the main providers of credit to rural areas, ABC and the rural credit co-operatives (RCCs), granted loans on the basis of policy lending for many years, resulting in a massive heap of non-performing loans, by far the worst of the Big Four SOBs.¹⁰⁸ ABC was the last of the four SOBs to put restructured for partial privatisation, requiring 45bn USD in fresh capital, by far the largest of its Big Four bailouts.

The government made gradual adjustments to rural finance for ten years until 2007, including micro-credit initiatives, relaxing restrictions on village banks, village mutuals, and micro-credit companies.¹⁰⁹ Pilot projects were introduced for experiments in innovative finance. These had some effect, but generally failed to develop into models that could be replicated on a commercially sound basis.¹¹⁰ A key difficulty remains the costliness of providing financial services to thinly populated, remote areas.

Some measures have backfired. The pooling of RCCs’ assets for the purpose of consolidation, mandated by the central government to centralise the locus of decision-making on loans away from individual villages with little banking or credit know-how, resulted in even fewer loans being made to small businesses, and more to SOEs and corporations.¹¹¹

In 2007, it shifted policy in the direction of reforms based on market principles, to bring about the sustainable financial services in the rural areas that can support or even drive economic growth. The threshold capital and other restrictions on launching rural banks was reduced, the postal savings bank was reformed as a distribution channel for rural loans, and interest rates restrictions charged by micro-finance companies were relaxed to provide a profit margin for loans in higher cost areas. City commercial are beginning to

¹⁰⁷ Cheng Xiang Liu, Rural Finance Reform in China, Université de Paris Ouest Nanterre La Défense, Working Paper 2008-43

¹⁰⁸ Knowledge@Wharton, Can Rural Finance Take Root In China?, Wharton School of Knowledge Business Journal, 9th June 2007

¹⁰⁹ Ibid.

¹¹⁰ Ibid.

¹¹¹ Ibid.

show an interest in investing in village-level financial institutions, and some are running on a pilot basis.¹¹²

The measures, not all of which have been fully implemented, are threatened by the availability of subsidised interest rates by the RCCs. The availability of subsidised loans to farmers is a politically sensitive matter, and there has been no clear criteria established for situations where subsidised loans are merited.¹¹³

Nevertheless, the subject of rural finance remains high on the agenda, linked to rural and agricultural economic development.

As recently as October 2008, the Central Committee of the Communist Party issued a guidance document for important new measures to support rural finance.¹¹⁴ The guidance includes an encouragement to issue more small loans to farmers for working capital requirements, to provide a greater level of credit support for long-term rural development projects, and to tailor financial services to rural requirements. Concurrently, the CBRC announcement that China would have one hundred additional “new-type” rural financial institutions operating by the end of 2008, compared to the 61 existing in October 2008.¹¹⁵

Earlier this year (2009), the ADBC launched a domestic another bond issue to fund agricultural developments, and to expand the coverage of rural credit to support agriculture. ADBC has launched bond issues since 2005 and is now the third-largest domestic bond issuer in China, effectively recycling domestic savings to finance rural development.¹¹⁶

China’s informal financial system

No paper on the Chinese financial system would be complete without a mention of the informal financial system in China. Two segments can be identified : The first is the legitimate informal system of private networks, often through friends and family connections, through which financing can be obtained. The second is underground enterprises engaged in illegal financing, and related activities. There is much evidence that the presence of the second is not insignificant in China. However, its impact on economic growth is beyond the scope of this paper.

¹¹² Ibid.

¹¹³ Ibid.

¹¹⁴ Communiqué adopted by the Third Plenary Session of the 17th Communist Party of China Central Committee in October 2008

¹¹⁵ Window of China, China endeavors to set up modern rural financial system, www.chinaview.cn, 19th October, 2008

¹¹⁶ Chinaview, Chinese policy bank to issue 350 bln yuan financial bonds in 2009, www.chinaview.cn, 27th February 2009

As mentioned earlier in this paper, Allen et al. (2005)¹¹⁷ contend that China is a counterexample to the established theoretical link between finance and economic growth, on the basis that China’s informal economy (non-publicly-traded private companies) exhibits considerably higher growth rates than other sectors, but does not enjoy the same access to financing channels in the formal sector (capital markets, bank loans).¹¹⁸ They propose a model explaining this, in which the informal financial system has been instrumental in financing the growth of the informal economy, where applicable legal and financial mechanisms for the protection of investments are weak, but where other social and cultural factors act as an effective substitute for these.

They document a study of financing methods used by informal-sector companies in the two more developed provinces of Zhejiang and Jiangsu. They find that especially during the start-up and growth phases of these firms, ethnic Chinese, from Hong Kong, Taiwan and overseas, and trade credits from business partners were important sources of financing, complementary to formal financing channels.¹¹⁹ During the growth period, Private Credit Agencies (PCAs) were considered by the respondents to be the most important form of external financing.¹²⁰ These are allowed to charge very high interest rates and usually demand fixed collateral. Thus, they have an incentive to providing finance and to price on a risk-basis. In some cases, local governments participate in financing, indicating the support of informal-sector companies by government officials, in contrast to many other transition countries where governments “tax” the informal sector.¹²¹

From the period 1995 to 2002, self-fundraising for private, non-publicly-traded companies, including internally generated finance, and private capital and loans from the family and friends of the founders and managers, accounted for close to 60% of total funds raised by this sector.¹²²

Allen et al. (2005) cite numerous informal mechanisms that can substitute for formal legal mechanisms available in Western countries. These are beyond the scope of this paper. They cite evidence from their study that government officials encouraged the informal economy, in contrast to other countries.

¹¹⁷ Allen et al., Op. Cit.

¹¹⁸ *Ibid.*, p 3

¹¹⁹ *Ibid.*, p 4

¹²⁰ *Ibid.*, p 29

¹²¹ *Ibid.*, pp 29, 35

¹²² *Ibid.*, p 19

CONCLUSIONS

- The development of the Chinese financial system has been an integral part of the development and growth of the Chinese economy over the past decades. It has provided an intermediation role for the recycling of Chinese savings into the financing of enterprises. In this regard, the banking system has been and remains the dominant institution.
- The informal financial system has also been an important factor in providing financing to many sectors of the Chinese economy, in particular private non-publicly-traded companies.
- The intermediation role of the banking system has not reached all sectors equally. SMEs and the rural and agricultural sectors have benefited less than other sectors, among others.
- For SMEs, source of comparatively higher productivity gains, financing remains a bottleneck in their development.
- In rural areas, the withdrawal of many SOB branches has only been partially offset by new types of financial institutions willing to service these on a sustainable basis. The failure to make more financing available to the rural and agricultural sectors exacerbates regional disparities and limits an important source of potential additional domestic demand and sustainable economic growth.
- China represents a good example of the theoretical model of the positive correlation between the development of the financing industry and economic growth. However, it presents at the same time a counterexample of this model, to the extent that its informal financial sector has been able to play a major role in financing the economy, allocating credit productively and driving economic growth.
- To evaluate the importance of the financial system to China's economic development, it is insufficient to simply measure the correlation between economic growth and the development of the financial system. It is equally important to measure the sustainability of the economic growth that the financing has generated. Unsustainable investment will not generate continued economic activity over time.
- Sustainability of economic growth generated by financing, whether for investment or working capital, can be measured by the long-run economic output that it generates as opposed to the current economic activity generated. Two good proxies for this at national level are non-performing loans in the books of credit-allocating institutions, indicating insufficient borrower ROIs to reimburse the loans,

and the evolution of the return on capital over time, indicating productivity of employed capital. Both these measures give rise to concern that a significant portion China's credit financing has not been sustainable.

- The constraints of transition from a planned economy to a market economy, and the overarching policy of gradualism, have meant that the intermediation role of the banking system has taken the form of both directed and market-based allocation of financing and investment.
- Much of the directed allocation of credit has not contributed a sustainable economic platform to the economy. Suboptimal investment has been made possible by directed lending by the banking sector that is not subject to credit analysis, risk assessment, or risk-based pricing, in particular by SOBs.
- Directed allocation of credit has been directed to multiple purposes, including infrastructure investment, social purposes, industrial, regional and other policy considerations at various levels of government, macro-economic policy including, in particular, employment objectives, and others.
- The gradual decline in return on capital investment in China is evidence that much investment has been allocated for economically suboptimal purposes, even if it served social and other purposes.
- The legacy role of directed lending remains institutionalised, particularly in SOBs and RCCs, despite progressive reforms of the banking system.
- The role of equity markets in facilitating wealth creation and economic growth remains relatively small. The stock-exchanges are growing as providers of capital, but remain underrepresented as a ratio of market capitalisation to GDP. Other sources of equity capital, such as private equity, are underdeveloped.
- China has a large number of large-cap companies and no lack of potential issuers. However, almost all who have publicly listed have done so in Hong Kong or offshore exclusively. This indicates a lack of confidence in the depth and breadth of domestic investor demand for equities, in particular the lack of a mature institutional investor sector with cash to invest and investment expertise.
- Similarly, the retail sector is extremely weak. The percentage of persons holding individual stock accounts is small, and likely reflects a large-scale lack of financial education in the population at large. The initial unhappy experience of the QDII programme, and the authorities' freezing of additional quotas, indicates an extreme level of caution on the part of the authorities with respect to the retail investor, with

a high level of popular expectation to protect the large mass of investors with little financial education.

- Pricing characteristics of the Chinese stock markets reduce the attractiveness of the stock market to institutional and retail investor sectors and to issuers, hindering the development of a mature domestic equity market. The lack of a market beta co-efficient, high levels of volatility and churning, continued although narrowing differences in market valuations between the A- and B-markets, and the lack of integration between the Chinese stock-exchanges and world markets, are indicators of this.
- Thus, the Chinese stock market still plays a limited role in generating economic growth.
- The ability of SMEs to self-finance internally and through private networks is a strength of the Chinese economy, and has natural roots in Chinese society and culture. Nevertheless, the informal sector does not have access to the massive pool of savings of Chinese society and there are limits to its ability to finance SMEs, which constitute a large percentage of private economic activity. Financing remains a bottleneck for SMEs, and recent government initiatives at make a greater variety of financing sources available to them have been only partially successful.
- Thus, the banking system fails to exploit fully the potential of SMEs in generating sustainable economic growth.
- A sustainable mechanism for the provision of financing and adapted financial products to rural and agricultural areas has not yet been identified. It is too early to assess the impact of important new initiatives introduced late 2008. Thus, rural areas remain net contributors of capital to the overall Chinese economy, creating a drag on potential domestic demand and growth.
- The lack of a domestic bond market perpetuates the dominance of bank credits. As a market-based substitute source of debt finance with risk-based pricing, a bond market would create an alternative and market-based allocation of capital. It would also effectively force the acceleration of banks reforms and their implementation in practice, to the extent that the bond market would attract only credit-worthy issuers, leaving the banks with the lower quality borrowers.
- The lack of a domestic bond market inhibits the development of financial techniques based on the yield curve, at both borrower and investor levels, thus limiting the sophistication of products and the value of the financial system to the real economy.

- Although China’s growth rates over the past decade have reached double digit levels, the marginal return on capital investment has decreased, indicating a reducing level of effectiveness of the invested capital. Unless this trend reverses, ever greater investment will be required to maintain the same level of growth in the future.
- In such a logic, as the growth in exports slows down from the 27% CAGR achieved between 2002 and 2008, it will require sources of increased domestic productivity to compensate for the loss of this growth engine.
- One large and important potential source of domestic productivity is improved capital allocation, increasing the amount of economic growth generated by each investment yuan.

R E C O M M E N D A T I O N S

1. In order to improve the allocation of capital, it is critical to dissociate social policy from market-based financing mechanisms, and to allow the latter to function freely within a defined framework, so as to maximise its allocative efficiency. This should become a primary policy objective at the central government level.
2. To this end, and in the spirit of gradualism but with a clear timetable, establish expanded social nets through direct social policies and programmes, gradually reorienting commercial banks and their balance sheets from of this role. For example, establish direct payments to unemployment insurance to laid-off workers in order to obviate the need for keep unviable factories running; or, if it is deemed necessary to keep such factories running, establish a direct subsidy administered through bureaucratic channels, rather than granting subsidies the through medium of bank loans.
3. To the extent allowed in the context of monetary policy, allow banks as wide a range as possible in pricing their loans, fostering risk-based pricing for credit allocation and encouraging investment in credit training.
4. By leaving bank balance-sheets for commercially granted and priced loans only, it will be critical to take measures to improve the banks’ expertise in credit assessment and risk management, and, collaterally, reinforce financial supervision to oversee the transition to lending operations that are fully commercial.
5. To accelerate the transfer of know-how related to credit, risk management, and governance, allow a progressively greater proportion of foreign ownership of the banking sector, including and especially SOBs.

6. Following the same logic, implement a separation of market-based financing mechanisms and social policy in rural areas. Create clear categories of agricultural situations where subsidised loans are desirable. Eligible subsidies should be funded by the government, not by the RCCs' balance sheets, allowing the RCCs to adopt market-based policies for interest rates, in effect making the subsidy a matter between the recipient and the government. This will ensure that subsidised loans do not undermine banks willing to invest in rural and agricultural financing.
7. Strengthen and improve the current programme in place for making more financing available to SMEs and take advantage of their high allocative efficiency of capital. In this regard, Recommendations 2 and 4 should have a further positive effect on the credit available to SMEs.
8. Strengthen the allocative efficiency of policy banks by enhancing their credit assessment skills and ensuring their charter is compatible with market-based approach, much in the model of supra-national development banks at regional or global level. Where the government uses the policy banks as a paying agent for directed infrastructure projects, ensure this does not interfere with their allocative functions in the granting of credits.
9. Accelerate the establishment of credit infrastructure to reduce information asymmetries in the credit and bond markets, including a central registry of credit history, a central registry of property lodged as collateral, as well as credit and debt rating agencies. This will potentially improve the amount of credit extended, and more importantly the average quality of credit, resulting in improved credit allocation. It will be of particular benefit to SMEs, who have little market power in the financial system and where information asymmetries are among the largest. It will also foster the development of a domestic bond market.
10. In order to establish a more liquid investor base as the life-blood of domestic equity and bond markets, it is critical to develop of a cadre of institutional managers. (This is far more important than the retail market.) Therefore, encourage the development of an institutional investor sector with solid credit expertise, through procurement policies (government mandates to manage public monies in different asset classes) and special policies favouring the transfer of investment-management know-how into China. In this regard, the very recent decision to create a special zone for foreign-owned investment management companies in Pudong New Area is a step in the right direction.
11. Encourage the further development of the domestic bond market through additional measures, such as the establishment of debt-rating agencies, improved bankruptcy laws, and secondary market facilities.

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The Chinese Miracle & the Fifteen-Year Fuse

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Abstract: This paper examines how the economic, social, demographic and political forces behind China's striking emergence as a market-driven economic and geopolitical superpower have created unintended consequences that will lead the country to crisis and instability as early as 2025. Although many in the West fear China's economic, technological and military power, the potential consequences of a Chinese financial crisis are far more dire, given China's size and integration with the world economy.

I examine the macroeconomic advantages of China, and then present a cautionary analysis in which demographic, sociological, economic and other trends may converge to create an economic crisis in China in the period of 2025-30. I shall discuss various scenarios by which China might resolve or forestall this crisis.

Keywords: China, Chinese miracle, environment, pollution, public health, worker safety, capital markets, international cooperation, global economy

Reference: Reference to this paper should be made as follows: Spies, W. T., (2010) "The Chinese Miracle & the Fifteen-Year Fuse", The ISM Journal of International Business, ISSN 2150-1076, Volume 1, Issue 2, March 2011.

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1.0 Executive Summary

The stunning growth of the Chinese economy has come to be known as the “Chinese miracle.” Certainly China’s striking emergence as a market-driven economic and geopolitical superpower would have been shocking in the Maoist era, but, as miracles go, this one is neither unprecedented nor inexplicable.

As the world’s second largest economy, whose exports account for 30 percent of its gross domestic product, China’s continued integration with the global economy is inevitable. Despite its ideological reluctance and pragmatic reservations, China is, to any independent observer, a superpower—the military, social, and economic rough equivalent of the Euro Zone or the United States. Given its rate of growth, China’s economy is projected to eclipse that of the U.S. between 2020 and 2030, and its military might is undoubtedly on par with that of the Euro Zone, and growing.

The comparative economic advantages of these three powers relative to the rest of the world assure their dominance—and their increasing interdependence in the 21st Century. In short, what is good for the world economy is good for China, and what is bad for the Chinese economy is bad for the world.

The characterization of China’s achievement as a miracle, though, clouds our knowledge that nothing lasts forever and that the same economic, social and political forces that facilitated its rapid emergence can conspire to create unintended consequences leading to crisis and instability. Although many in the West fear China’s growth as an economic, technological and military threat, the potential consequences of a Chinese financial crisis to the rest of the world are far more dire, given China’s size and integration with the world economy.

In this paper, I examine the macroeconomic advantages of China, and then present a cautionary analysis in which demographic, sociological, economic and other trends may converge to create an economic crisis in China in the period of 2025-30. I shall discuss various scenarios by which China might resolve or forestall this crisis.

2.0 Background

2.1 The Chinese “Miracle”

China’s gross domestic product per capita increased from \$150¹ when Deng Xiaoping’s free-market reforms began in 1978 to \$6,660 in 2009 (Central Intelligence Agency, 2010). This is but one result of the so-called “China miracle,” widely—and wildly—

¹ All \$ are U.S. dollars.

heralded in the popular, business, and even the academic press. China’s 2010 GDP is projected to be \$4.98 trillion, roughly equivalent to that of Japan, long the world’s second largest economy (Leung & Kitanaka, 2010).

2.2 Economic Factors

While the phrase makes good headlines, calling China’s progress a miracle belies the fact that its remarkable changes are hardly inexplicable or supernatural in origin.

A country’s ability to produce goods or services more efficiently than others is known as its absolute advantage (Absolute and comparative advantage, pp. 1-2). In the absence of trade restrictions, production gravitates to countries with absolute advantages in a given industry. Absolute advantages are derived from factors of production, including natural resources, labor and human capital, capital, and entrepreneurship²

We can also classify absolute advantages as general, i.e., applying to an entire industry, or specific, i.e., applying to certain competitors because of their intrinsic capabilities or strategy. China’s huge unskilled and semi-skilled labor markets are often cited as general absolute advantages. They may offer specific advantages to a labor-intensive manufacturing firm, compared to a competitor that relies on robotics to produce the same good.³

2.2.1 Natural Resources

China has abundant natural resources, yet it leads the world in the importation of virtually all strategic minerals. China’s foreign policy has actively courted relationships with business and political leaders in the resource-rich developing world. Halper (2010) stated, “China has been able to exploit lingering resentment of western colonialism and its own experience as a developing nation under the heel of British imperialism.”

China’s deficiencies are not necessarily due to lack of resources, but to the fact that frequently its development and exploitation has not kept pace with the explosive demand. Prices of oil, water, energy (especially hydropower) and other resources are generally controlled. Basic industries, such as oil and steel, that refine resources into basic

² For other possible groupings, see, for example, <http://www.businessdictionary.com/definition/factors-of-production.html>

³ For a succinct explanation of comparative and absolute advantage from a classical economics perspective, see Suranovic, Steven M. “International Trade Theory and Policy,” accessed May 4, 2010, from <http://internationalecon.com/Trade/Tch40/T40-0.php>.

materials for manufacturing and construction, are heavily subsidized by the government (Matthews, 2009).⁴

As a result, the Chinese economy has been able to count on low-cost, abundant resources at stable prices—and low-cost, abundant resources at stable prices are ideal for large scale manufacturing and construction.

2.2.2 Labor & Human Capital

With the largest population on earth, China can supply unskilled and semi-skilled labor cheaper than countries with child-labor and worker protection laws as Lin (p. 11) notes.

As a factor of production, labor refers to the numbers of workers. Human capital refers to the investment in those workers' physical and mental capabilities. While most Western analysis focuses on its huge low-skilled labor force, it often overlooks China's comparative advantages in high-skilled labor.

Thirteen percent of China's government spending goes to education (UNESCO - a, 2008), and China graduates twice as many people from college as the U.S., (UNESCO - b, 2008). China produces three times as many engineers annually than the U.S., and twice as many engineering doctorates (National Science Foundation, 2007, p. 4).

This glut of graduates has led to underemployment of Chinese college graduates, who, upon graduation, often make as little as 35,000 Yuan per year (roughly \$100 per week).⁵ Its inexpensive skilled workforce, highly trained in technology, obviously is an important factor behind China's scientific progress, and its growing role in international R&D. For example, by 2005, China hosted over 750 foreign-funded R&D centers, including Motorola, whose 20 Chinese R&D centers budgeted \$130 million and employed 3,000 people in 2006 (Motorola beefs up R&D in China, 2006).

2.2.3 Capital

Since being admitted to the World Trade Organization in 2001, China has received more foreign capital than any country (Entrepreneurship in China, 2010).

Banking & Currency

As a result of competition between U.S., Euro and Hong Kong firms, China's banking system, including credit-card acceptance, is approaching the Euro Zone in basic

⁴ The U.S. has ruled that these subsidies violate trade agreements pertaining to paper products, steel tubing, steel pipes, steel grating, and tires (Ensinger, 2010).

⁵ Based on interviews with faculty, staff, and students at Fudan University, April 5-10, 2010.

consumer services and consumer confidence. Considered among the weakest in the world only ten years ago, the World Financial Crisis of 2009-10 demonstrated that it is solid, if lagging its counterparts in the West in terms of technology. The adoption of Western accounting rules, particularly the method of writing off nonperforming loans - in the past, no provisions were made for bad loans; missed payments were rolled over and capitalized into the loan. (deCarbonnel, 2009).

Throughout its growth period, China has carefully controlled the Yuan's value. Despite pressure from the West for currency revaluation, as well as internal pressure to curb its steep inflation (Homan, 2010), the consensus is that China will do so slowly, and floating its value in international currency markets is unlikely. As a result, the Yuan's stability reduces financial risk to investments, enhancing the viability of long-term investments in the private sector.

Savings

Mu (2007) stated that China's growth can be attributed, in part, to capital formation resulting from the Chinese tradition of saving. It is startling to the West to see the historical savings rate of the Chinese, especially those who live in relative poverty. This tradition has resulted in a huge increase in aggregate private saving as incomes have increased, to the point that Chinese aggregate savings now equals that of the U.S., as seen in Figure 1.

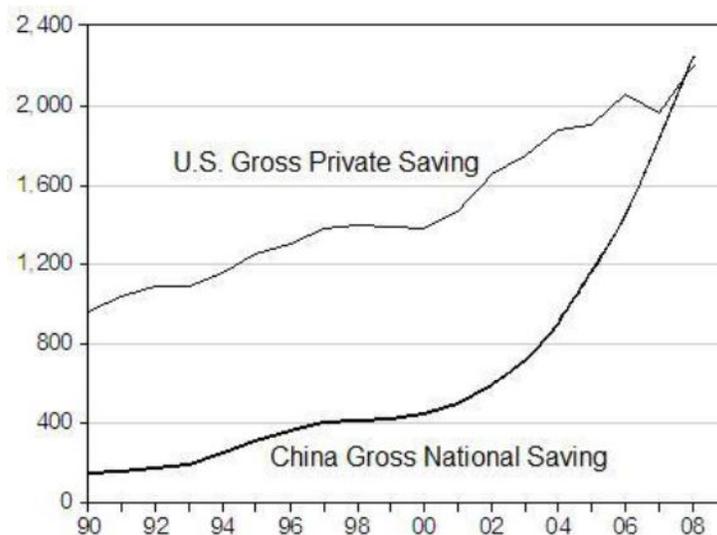


Figure 1: PRC v. U.S. Aggregate Savings (Econobrower, 2009)

Combine this cultural tradition with a relative lack of financial sophistication, limited financial transparency, a favorable tax policy⁶, and a dearth of investment opportunities, and we have the perfect combination of factors to channel huge investments into targeted areas that maximize growth: the stock markets and real estate (Barboza, 2010).

Equity Markets

Another significant factor in China’s dramatic growth is its vibrant equity markets, which have flourished even though they are, as with other second-tier regional and national IPO markets (see Appendix 1), less liquid and less regulated.

China has adopted the capitalist model of capital formation and share markets, but—so far—it has tried to suppress its volatility and to restrict international capital transfers, which could potentially threaten its economic or political stability. These two goals have been implemented in China’s system of dual-listing, where foreign investors are unable to buy shares on the Shenzhen or Shanghai exchanges, while Chinese citizens can’t purchase stock, under normal conditions, in foreign exchanges—effectively eliminating the ability of speculators to arbitrage price discrepancies on identical assets.

Even in a nominally Communist country, capital flows to the opportunity, not the style of government. As a result, China has had some very large IPOs, such as the 2006 IPO of the Industrial and Commercial Bank of China, at \$19 billion (Mann, The largest IPO in history). Because foreign investment by the Chinese investors is blocked, capital has nowhere else to go, other than China’s overheated real estate markets.

2.2.4 Entrepreneurship

The Chinese government’s embrace of free-market capitalism and growth-friendly economic policies, bordering on Western libertarianism has led to an explosion of entrepreneurship (Mu, 2007). Entrepreneurship is expanding at 20 percent annually, double the growth rate of the overall economy in the last two decades (Entrepreneurship in China, 2010).

According to the *Hurun Report*, China has 130 billionaires⁷, up 33 percent in 2009, during the greatest world-wide financial crisis since the Great Depression (2009 Hurun rich list series, 2009). One-third of China’s richest people are members of the Communist Party

⁶ These policies not only provide incentives to business, they also build concentrated wealth, with no inheritance tax or taxes on wealth transfers.

⁷ The United States has 359; Russia has 32 and India, 24 (Kroll, Miller, & Serafin, 2009).

(Blanchard, 2009). Such participation from China’s elites ensures that these growth-friendly policies are unlikely to change:

“During the 16th Congress of the Communist Party of China, at least four entrepreneurs are listed as delegates.... Some observers have hailed the move to persuade capitalists to become card-carrying communists as one of the most significant likely outcomes of the week-long meeting. The party estimates that more than 113,000 of their members already run businesses” (Entrepreneurship in China, 2010).

China in 2010 recalls the words of the economist Milton Friedman (Friedman, 2002): “Fundamentally, there are only two ways of coördinating the economic activities of millions. One is central direction involving the use of coercion—the technique of the army and of the modern totalitarian state. The other is voluntary coöperation of individuals—the technique of the marketplace.” China, it seems, wants them both.

2.3 Summary

Wrote Edmund Conway (2009), “There is nothing mysterious about this, no economic miracle—it is what happens when the elastic band holding back a country with one-fifth of the world’s population suddenly snaps.” The elastic band of Communism had created huge pent up economic opportunity, underemployment, misallocation of assets, and opportunities for growth.

A historic set of factors, notably, China’s population, investment in education, capital (from direct foreign investment, natural resources, internal savings, and the introduction of capital markets), pragmatic libertarian pro-business and pro-export policies, currency control, and embrace of entrepreneurship produced a historic opportunity for growth (Mu, 2007).

3.0 Crisis Points

Miracles notwithstanding, everything comes to an end. No country’s economy, no matter how “miraculous” it may seem, is immune from demographic, sociological, economic and technological trends.

Examined in isolation, many of the problems that China faces are manageable, if currently unmanaged. Yet, in the aggregate, these problems have the potential to converge, creating an economic crisis in China in the period of 2025-30 that would be as dangerous to China as its modernization has been dramatic. What’s more, such a threat to the Chinese economy would have dire implications to the economies of the U.S. and

Euro Zone—as if a fifteen-year fuse to a bomb has been, lit which, if not extinguished, threatens us all. Major crisis points include:

- Natural Resources: China's increasing reliance on foreign commodities, the depletion of its water reserves, and the cost of pollution;
- Human Capital: Education disparities and inadequacies, worker safety, and public health.
- Capital: Capital markets, real estate bubbles, infrastructure issues
- Demographics: The graying of China's population, the gender gap, the gaps between rich and poor, and between rural and urban, and the changing expectations of China's new middle class; and,
- Globalization: The growing pressures of modernization, integration, and globalization.

4.0 Natural Resources

As the world's factory, China's growth has produced an enormous appetite for ores and petroleum that has outstripped its great resources, making its supply lines extraordinarily vulnerable to interdiction.

4.1 International Dependence

China's economy is fueled by imported metal ores and petroleum. China consumes approximately:

- 30 percent of the world's aluminum (Bonner, 2010),
- over 50 percent of the world's iron ore (China consumes over 50% of the world's iron ore production, 2008),
- over 30 percent of the world's coal (Globalization's uneven impact, 2005), and,
- 40 percent of the world's copper (Bonner, 2010).

In these, and many other key minerals, China depends on a network of developing countries, characterized by unstable governments, corruption, and fragile infrastructures.

4.1.1 Oil Dependence

Nowhere is China's dependence on foreign suppliers more apparent than in its oil imports. China is the second-largest consumer of oil in the world behind the U.S., and has been a net importer of petroleum since 1993 (Hanson, 2008). According to the International Energy Agency, China's imports will increase to 13.1 million barrels per day by 2030 (International Energy Agency, 1998). As seen in Figure 2, China's oil demands on the world market through 2030 are immense (Tanaka, 2009).

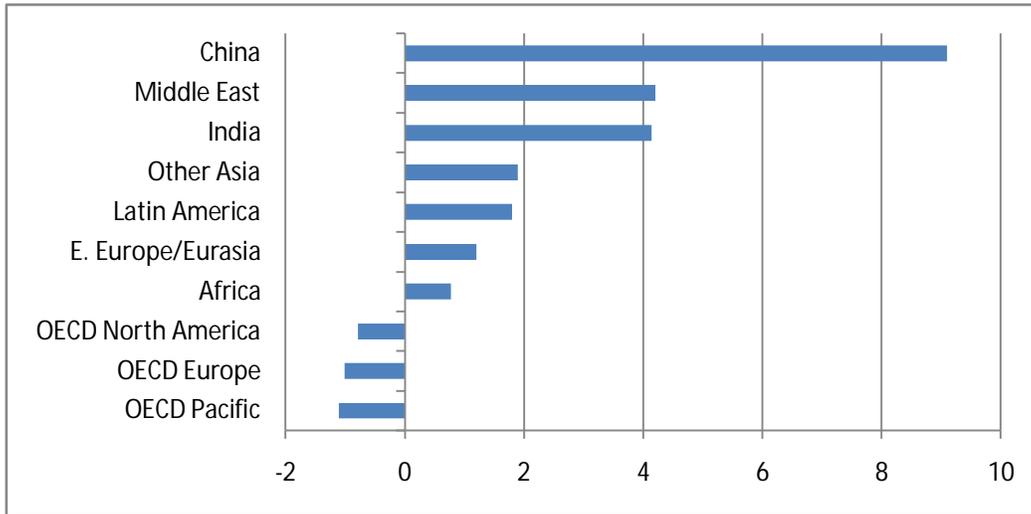


Figure 1: Change in Oil Demand by Region *Source: OECD/IEA – 2009, p. 4*

Yet, even as its demand increases dramatically, world oil production is believed by some to have peaked between 2005 and 2008 (Oil Drum, 2009); others predict slow growth through 2020 (Greene, Hopson, & Li, 2003); in either case it is expected to diminish sharply.

Although China is the fourth largest oil producer in the world, its energy security, like that of the United States and the Euro Zone, depends upon politically volatile regimes. For example, China has secured long-term oil supplies from Venezuela and Iran (Oil Drum, 2009). Their long-term prospects for stability, as with most oil exporting countries, are problematic. Long-term contracts smooth the spikes of unanticipated events and of the vicissitudes of a nervous market, but cannot guarantee delivery in a time of global shortage. Given the interlocking nature of global oil markets, increasing world-wide demand, diminishing world-wide production, the next 15 years are not a particularly good time to be increasing one's oil dependence.

China's largest natural gas reserves are in the isolated western and north-central regions, in the Sichuan, Ordos, and Tarim Basins (Higashi). Major reserves have been tapped in the East China Sea and South China Sea, but all of these options present significant challenges to the distribution infrastructure. In addition, as BP's 2010 Deepwater Horizon disaster has shown, deep-water drilling poses unique environmental hazards which cannot be easily prevented or remediated.

4.2 Water

In most industrialized countries, water is taken for granted, but McKinsey & Co. named water shortages as a key issue facing China in the next seven years (Barton, 2010). The problem is distribution; Southern China has abundant rainfall—averaging 79.0 inches annually—while the northeast, the heart of China’s manufacturing, receives only 7.9 to 15.8 inches annually (Roberts, 2009) and relies on a shrinking aquifer for 60 percent of its needs (Yardley, 2007). According to *The New York Times*, “more than 600 million people live in provinces under water stress” (China’s environmental crisis, 2007).

According to Larson (2010), “Severe water pollution and shortages stand in the way of ongoing economic growth.” Increasing manufacturing in the north east will only hasten the day of reckoning; as aquifers shrink, and urban populations continue to increase, water shortages are inevitable in the next 20 years.

As aquifers in coastal regions are depleted, salt water from the ocean is drawn into the wells resulting in contamination (University of Florida Extension Service). Also, as aquifers are depleted, the weight of overlying ground can make the aquifer itself compress:

“The aquifer would therefore never again be fully recharged even if pumping ceased, because its capacity to store water has been reduced. This occurs in areas of high water demand such as large municipalities and agricultural operations that require heavy irrigation.” (University of Florida Extension Service)

If the weight does not compress the aquifer, it may simply collapse, increasing the number and size of sinkholes, which can swallow entire factories or city blocks into the ground (California drought perspectives, 2010). How large is the problem? According to Brown & Halweil (China's water shortage could shake world grain markets, 1998), the water table beneath the North China Plain, which produces 40 percent of China’s grain, is now falling approximately five feet per year—approximately 150 feet between 1950 and 1993 (Hays, 2010).

Agriculture also suffers, as inland lakes have dried up, and deep well irrigation has increased. Agricultural demands are squeezed out by manufacturing by simple economics: “A thousand tons of water produces one ton of wheat, which has a market value of \$200, while a thousand tons of water used in industry yields an estimated \$14,000 of output, or 70 times as much” (Brown & Halweil, 1998). Also, some areas

reportedly subsidize water use to placate peasants, which discourages conservation (Hays, 2010).

More than one-quarter of China is now desert, and desertification is increasing at a rate of 2,500 square kilometers, annually (Gluckman). China’s northern bread belt comprises 31.19 percent of its farmland and 26.01 percent its population, but only 6.14 percent of China’s water resources (Li, 2003).

Lin Erda, identified as one of China’s top climate change experts by the Science and Development Network, was quoted as predicting, “China will see a food shortfall of 5 to 10 percent—a disastrous outcome in a country of 1.3 billion people—unless effective and timely measures are taken” to manage water resources (Lin S., 2009).

China’s response has been to build a network of canals to move water from the Yangtze River in the south to the Yellow River in the north—the South-North Water Transfer Project. It is designed to move 50 billion cubic meters of water from the south to Beijing, the industrial hub of Tianjin and Jiangsu and Shandong provinces. This was thought to be adequate ten years ago, when the water shortfall was projected to be 40 billion cubic meters, however it failed to consider global warming, quality of water issues, population growth, or the demands of manufacturing. As a result, China’s water shortfall is estimated by McKinsey & Co. to be 201 billion cubic meters in 2030 (Thomas, Krishnan, & Leung, 2010).

4.3 Pollution

4.3.1 Water Pollution

The water problem is not merely availability; water quality is also a growing impediment to growth. Twenty-five percent of the water sampled along the Yangtze and Yellow River is too polluted for farm irrigation, and 66 percent of China’s cities do not have clean water to drink (China’s environmental crisis, 2010).

Public awareness of the problem has grown since the 2004 publication of China’s Water Crisis (Jun, 2004) which focused on the state of the Yellow and Yangzi rivers. Water treatment is primitive by Western standards. Water quality in rural areas continues to decline, allowing the emergence of the schistosome parasite, which causes liver and intestinal damage (Environment problems pose health risk for China: Lancet, 2010). In a 2009 poll, 67 percent of Chinese respondents identified water pollution as “a very serious problem,” and 59 percent said that they were “very concerned” about the lack of potable water (Larson, 2010).

Water is a vital raw material in both agriculture and manufacturing; scarcity and pollution have reduced China's GDP by approximately 2.3 percent according to the World Bank (Thomas, Krishnan, & Leung, 2010).

4.3.2 Air Pollution

“Only 1 percent of China's urban population of 560 million now breathes air considered safe by the EU” (China's environmental crisis, 2010). According to the National Institute of Health, air pollution is the main environmental threat to human health. Long-term exposure to high levels of particulate matter causes a wide range of chronic respiratory diseases and exacerbates heart disease and other conditions.

The burden of ill health caused by particulate pollution, and Beijing's total suspended particulate matter is over ten times greater than any city in Germany, which is also heavily industrialized. Indeed, for the entire country, China's particulate matter is double that of Japan and four times that of Germany (World Bank, 2010). Exposure to ground-level ozone makes it difficult for people to breathe, causing particular problems for respiratory ailments. This is notable, since it is estimated that 66 percent of all Chinese men smoke, and tobacco is linked to the five leading causes of death there (Smoking statistics in China, 2010).

Air pollution is a function of coal-based manufacturing, which is the basis for 70 percent of China's industry. As such, it is predicted to grow at roughly the same rate. Air pollution reduces the GDP of a typical Chinese city by approximately 10 percent, due to death and sickness, according to the *Lancet* (Environment problems pose health risk for China: *Lancet*, 2010).

Costs associated with air pollution are not limited to health. Crops yields can be damaged from ozone exposure. Sulfur dioxide and nitrogen oxides that create acid rain, which leach trace minerals and nutrients critical to trees and plants and cause defoliation.

4.3.3 Global Warming

China has replaced the U.S. as the world's #1 source of greenhouse gases, producing 4.31 metric tons of CO₂ per capita (World Bank, 2010). China relies heavily on coal for most of its industrial needs. In addition to creating strong international pressure to reduce CO₂ emissions, global warming increases water consumption, evaporation and plant transpiration rates.

According to research by Lin, harvests in China will decline from 14 to 23 percent by 2050 due to global warming (Lin S., 2009). A decline of that magnitude combined with a

projected population of 1.89 billion⁸ would require imports so large that they would drive up world grain prices, putting 300 to 600 million people at risk, without massive subsidies.

5.0 Human Capital

5.1 Education

Although China provides nine years of compulsory, free education (Ministry of Education of the People's Republic of China, 2006), the quality of that education varies widely from province to province, and between rural and urban settings. Education in coastal cities is clearly high quality, but the country faces an enormous challenge of extending that quality to the majority of the country.

China faces other unique issues, such as educating urban migratory children.⁹ It is estimated that there are 2.4 to 3.6 million school-age children who lack schooling because they are not recognized as local residents.

5.1.2 Higher Education

Demand for higher quality education is increasing, especially in China's urban middle class, which is constantly exposed to the benefits of education. Also, as China has increased primary education, the pool of applicants from the increased number of secondary school graduates has increased. From 1998 to 2006, the number of matriculating students increased from 1.1 million to 5.5 million (Zhao & Sheng, 2008). Simultaneously government funding of higher education per capita has declined. As a result, the China Youth and Children Research Center reported that college tuition in China had increased by a factor of 25 times, between 1989 and 2007—far outstripping growth in per capita income (China's university tuition 25 times higher than in 1989, 2007).

China has doubled the size of its universities in a decade, but the quality of that education has been questioned:

“China's higher education has expanded too quickly in too short a period of time to the extent that the labor market and available educational resources cannot keep pace with the expansion.” (Zhao & Sheng, 2008).

⁸ Assuming a population growth rate of 0.512 percent (World Bank, 2010)

⁹ Article 2 of the Interim Measures on Schooling for Children among the Floating Population defines migratory children as “children between the ages of 6 and 14 living with parents or guardians in a temporary location for more than half a year, who have the ability to study” (Yan, 2005).

Quality has suffered due to the dilution in quality of incoming students, as a function of expansion. Also, classes are larger: the student-to-faculty ratio double from 8:1 in 1998 to 16:1 in 2006, and this trend has been more pronounced in graduate-level courses, as China faces a shortage of professors with PhDs, having only restored graduate education in 1978 (National Science Foundation).

Growing expectations for higher standards of living have collided with the cold reality of limited post-graduate employment: In 2007, 20 percent of China’s college graduates were unemployed throughout the year after graduation (Zhao & Sheng, 2008). The job market simply cannot expand as fast as education.

International business education is a significant need in China. According to a 2008 McKinsey & Co. survey, Chinese managers identified “Our company does not have enough managerial talent” as the #1 barrier to Chinese companies undertaking activities outside mainland China (Competition from China: Two McKinsey surveys, 2008).

5.2 Public Health

Professor Robert Workman of Southern Connecticut State University said, “Statistically, the Chinese healthcare system rounds to zero” (personal conversation, June 12, 2010). Here are some of the public health challenges China must face in the next 15 years.

5.2.1 STDs

Sexually transmitted diseases (STDs) have exploded in China. There has been a 1,200 percent increase in syphilis between 2003 and 2008, and it is now Shanghai’s most widely reported communicable disease (Tucker, Chen, & Peeling, 2010). This is partly a result of the 1.19:1 imbalance between men and women and rising incomes, which have combined to create a burgeoning sex industry. Another problem is ideological denial and under-reporting, since all sexually transmitted diseases were “officially” eradicated in China in 1964 (Dikotte, p. 344).

AIDS was recognized as China’s most deadly infectious disease, with 34,853 fatalities in the first three quarters of 2008—a five-fold increase since 2005 (Coonan). In addition to the rise in the sex industry, “unsanitary blood plasma-buying schemes and tainted transfusions in hospitals” have spread HIV (Coonan).

In the U.S., AIDS treatment is highly effective, but very expensive by Chinese standards (see Appendix 2)—ranging from 28,044 to 94,132 RMB per year, in a country whose 2007 GDP per capita was 41,789 RMB (Central Intelligence Agency, 2010). This amount far exceeds government-provided healthcare allowances.

In addition to the cost of antiretroviral treatment, AVERT.org, an international AIDS charity, identifies four other elements to AIDS care and prevention, including life-long commitment to antiretroviral drugs and supporting patients to adhere to a daily regimen, adequate health infrastructure including health staff, supply chains of effective drugs, and, widespread awareness of the value of testing and subsequent treatment (Universal access to AIDS treatment: Targets and challenges). Each represents a significant, yet currently unfunded, cost.

5.2.2 Mental Health

China has recently been victimized by a series of horrific crimes by the mentally ill, notably murders of children at schools and workplace suicides. Given the immense social transformation of China and the new conflicts, such as the aspirations of individualism v. the reality of social conformity, it should not be surprising that mental health issues would be coming to the fore.

Prior to the Revolution, the mentally ill in China were a source of family shame, publically ridiculed, and ostracized from society. Freud was eliminated from libraries in 1957, replaced by “politically motivated psychiatry” (Munro (a), 2002, p. 98) in which dissidents were imprisoned and maltreated as “political maniacs” in police-run psychiatric institutions (Munro (b), 2002). During the Cultural Revolution, modern psychology was virtually eliminated, and not restored until the reforms of Deng Xiaoping. There are ongoing allegations that political dissidents are being committed to mental hospitals, which, aside from its moral and political implications, further dilutes the availability of care to those in need (Lehrer, 2009).

Thus, for both political and cultural reasons, China has attached considerable social stigma to mental illness, which is a significant barrier to people seeking help. In addition, Chinese culture pressures men to not express emotions, which is seen as a sign of weakness (Mental health statistics of specific male groups, 2010). Huge needs and limited services present an ever-increasing challenge to China.

In response, China has announced the goal of building 550 new mental health facilities in the next two years (Moore, 2010). This would be one new facility for every 2,363,636 Chinese; staffing is problematic. “Psychiatry in China occupies the lowest rung in the medical hierarchy,” noted Stone in 2005, “China has only 4,000 qualified psychiatrists and a total of 14,000 doctors working in its psychiatric hospitals” (2005).

5.2.3 Smoking

As mentioned earlier, approximately 66 percent of Chinese men smoke. As a result, lung cancer is the #1 cause of death in China; 3,000 smokers die in China every day from tobacco-related causes—the highest death rate from tobacco in the world; this is estimated to increase to 8,000 people daily in 2050 (Smoking statistics in China, 2010). By 2020, two million Chinese will die annually from preventable tobacco-related deaths (60 percent doctors in China still smoke, 2010).

China consumes 33 percent of the world’s tobacco (Smoking statistics in China, 2010). Although smoking is the single largest preventable cause of disease and death, a survey found that “60 percent of Chinese adults did not know that smoking can cause lung cancer while 96 percent were unaware it can cause heart disease” (Cahani, 2008). According to a 2010 survey, 60 percent of medical workers and professors smoke (60 percent doctors in China still smoke, 2010).

China’s direct cost of medical care plus indirect costs (e.g., lost productivity, fires, passive smoking) in 2006 was estimated to be \$32.5 billion in 2006 (Smoking costs China 250 billion yuan last year, 2006); this is estimated to be between \$100-150 billion in fifteen years, reflecting higher expectations for health care, more available treatment, rising indirect costs (as a function of income) and increases in smoking. According to Sung, Wang, *et al.*, (2006):

“The adverse health effects of smoking constitute a huge economic burden to the Chinese society. To reduce this burden in the future, effective tobacco control programs and sustained efforts are needed to curb the tobacco epidemic and economic losses.”

5.2.4 Preventive Medicine

China’s medical system is primitive by any Western standard, and its medical insurance programs limit diagnostic/preventive care and effectively eliminate chronic care. This is occurring as chronic care needs, resulting from the aforementioned STDs and smoking-related illnesses, workplace exposure to hazardous materials, environmental pollution, and increased life expectancy increase.

One example is the rise in diabetes. Diabetes, detected early, can be treated effectively through a combination of diet and medication. Untreated, it leads to long-term chronic disabilities, including heart attacks, strokes, blindness, and limb amputation. In a study released by the New England Journal of Medicine in 2010, China is now the world leader

in diabetes. In most cases, it is undiagnosed, and, therefore untreated (Yang, Lu, Wang, Jia, Ji, & Xiao, 2010).

Another example is tuberculosis; China has the second highest incidence of TB, 16 times the rate in the U.S. (Shen, et al., 2006). In a familiar pattern, “China has never before acknowledged the presence of the most deadly form of tuberculosis in the country” (Matsuyama, 2010).

Cardiovascular disease (CVD), if not caught early, can be an extremely costly chronic disease. According to a 2010 study, CVD and death rates will increase 73 percent by 2030, because of smoking, untreated high blood pressure, aging, and dietary changes (Moran, 2010).

5.3 Worker Safety

China’s role as the world’s factory floor has placed its workforce at risk. Without an effective counterpart to America’s Occupational Safety & Health Administration (OSHA), lead-tainted paint, nickel-cadmium batteries, and coal mining lead the long list of items that present a danger to workers who “have long borne the brunt of a global manufacturing system that puts cost cutting ahead of safety” (China puts profit ahead of worker safety, 2008). The International Labor Organization estimates that China’s 2001 workplace fatality rate over 2.4 times that of the United States. Statistics on worker safety in China are “notoriously unreliable”; for example, in 2003, 14,675 workplace deaths were officially reported, but, according to Witt (2004), the real number may have approached 120,000.

Coal mining has long been recognized as one of the world’s most dangerous industry. In 2008, 3,215 Chinese miners died, and, in 2009, 2,631 miners died. These are not anomalies; in 2002, an astonishing 6,995 miners died (Kolo, 2010). The problem is widespread, in both large, state-owned enterprises and smaller, privately owned (and often illegal) mines.

The lack of effective oversight and safety regulations allow companies to save costs by hiring migrant construction workers who lack training or experience in mine safety. In the U.S. and Germany, the cost of coal safety initiatives adds 19.25 percent to the price of coal, but in China, these costs add only 3.5 percent (Kolo, 2010).

Paradoxically in a workers’ paradise, China does not legally require firms to sign collective contracts with employees. Due to its governmental ties the China Federation of

Trade Unions (ACFTU) lacks the power or capacity to advocate effectively for workers' safety (Qian, 2010).

5.4 Food Safety

Food safety is another growing issue in China. With limited regulation and corrupt inspectors, scandals over pesticide-laden vegetables, drug-laced fish and chicken, chemically enhanced baby formula, and carcinogenic dyes in eggs have exploded in the Western press, resulting in various bans in Europe, Japan, and Hong Kong. Only “6 percent of agricultural products were considered pollution free in 2005” (China's food safety woes now a global concern, 2007).

In 2008, 300,000 Chinese infants came down with kidney problems as a result of drinking tainted baby formula. One year after strict measures were announced in 2009, less than one-third of 400,000 in total Chinese food producers have been granted production licenses, according to the vice minister of General Administration of Quality Supervision, Inspection and Quarantine (Guo & Ji, 2010).

There are numerous causes for the food safety issue. There is no single government agency charged with food safety, as there is in the U.S. The staggering number of very small producers makes inspection problematic. The rise of market conditions, as well as an expanding export market, has created incentives to compromise quality. Growing environmental pressures on China's food supply in the coming years can only exacerbate the problem.

6.0 Capital Roulette

6.1 Real Estate

Real estate is considered investment, but if two people stranded on a desert island bid up the price of a coconut, nominal growth has occurred, although no wealth was created. As mentioned previously, Chinese per capita savings rates are extremely high, even among the poor and financially unsophisticated. Given limited investment opportunities, Chinese investors have bid up the prices of real estate.

As a result, real estate prices, especially in first-tier cities, such as Shanghai, have skyrocketed in recent years, sparking fears of a real estate bubble (Barboza, 2010). Paradoxically, in the aftermath of the Financial Crisis, both residential and commercial properties, particularly in second-tier cities, remain vacant.

The risk of financial bubbles is extremely grave, for even if the risk is small, the consequences are great. Not only would a collapse in the real estate market destroy savings, local governments depend on taxes on real estate transactions for revenue.

6.2 Infrastructure

Many foreign industry professionals, working in Shanghai, believe China's construction quality is lower than their counterparts in the West. They attributed this to four factors:

- Poorer construction materials and lower construction standards;
- Corruption in the inspection process; and,
- Fast, labor-intensive construction techniques.

6.2.1 Construction Materials & Standards

The quality of Chinese structural steel imported into the U.S. has been questioned for years. There are reports that half of the structural steel used in Shanghai construction failed quality tests (Lu, 2008).

The widespread use of substandard steel was linked to the collapse of school buildings in the 2008 earthquake in Sichuan province. So-called "tofu houses," presumably built to code, collapsed with even small earth tremors, while Western and Hong Kong-built buildings were unscathed (Faehnders, 2008).

Chinese drywall that was imported into the U.S. since 2005 has been found to be defective, emitting chemicals linked to respiratory problems, chest pain, and death (Chinese drywall problem far reaching, 2009). The U.S. Consumer Product Safety Commission, the U.S. Department of Housing and Urban Development and the U.S. Consumer Product Safety Commission have all instructed U.S. homeowners to remove the problematic drywall.

The huge demand for construction workers, particularly in Beijing, prior to the Olympics, and Shanghai, prior to Expo 2010, resulted in the employment of unskilled, inexperienced workers.

6.2.2 Corruption

Corruption is rampant in China, where it is widely believed that China's construction laws are simply ignored by corrupt inspectors (Faehnders, 2008). Local politicians, facing pressure for rapid—especially cosmetic—growth, have been accused of looking the other

way (Quake raises construction fears in China, 2008). This view has been substantiated by several Chinese officials that I interviewed.

Partially as a result of the Sichuan quake, China has tightened its anti-corruption laws, which President Hu Jintao described as “among the biggest threats to the government's legitimacy” (Krishnan, 2010). In 2010, over 5,800 Chinese were charged with over 9,900 charges of corruption related to construction projects since August 2009; the same investigation revealed 140,000 violations in the 340,000 projects examined (Over 5,800 Chinese officials penalized for corruption in construction projects: CCDI, 2010).

6.2.3 Infrastructure Maintenance

China's fast pace of development raises a timing issue. When one builds nine automobiles at the same time, all things being equal, you can expect that they will need new tires at the approximately the same time, oil changes at approximately the same time, and they will need to be replaced at approximately the same time. The analogy can be applied to infrastructure as well. When Shanghai builds nine subway lines at approximately the same time, they will need renovations at approximately the same time. In this way, the governments of today have created obligations for governments of the future. Add to this the belief, expressed to me by Thomas Wang, that “China builds for the present, not for the long term” (personal interview, June 1, 2010). Buildings that would be expected to last for 100 years in the West might be expected to last only 25 to 35 years in China.

A huge infrastructure requires huge maintenance, particularly when the quality of the construction is less than optimal. Unfortunately building new buildings, highways, high-speed trains and subway lines inspires awe; maintaining them does not. As a result, it is common for China to defer maintenance on infrastructure, which cuts into growth.

The emphasis on building, rather than repairing, has other unintended consequences. For example, Beijing was recently found to have the worst traffic jams in the world in an IBM study (Beijing traffic world's worst: study, 2010). This congestion occurs even though Beijing has only half the automobiles of Tokyo or New York. The problem is blamed “on the failure of infrastructure to keep pace with global economic activity” (Beijing traffic world's worst: study, 2010).

7.0 Demographics

As John Patrick Scanlon observed “demographics is destiny.” China’s demographics, notably its aging population, gender gap, and the economic gap between the haves and the have-nots, have set the parameters for the country’s future.

7.1 The Graying of China

With rising incomes, the Chinese are living longer, as in the West. Older Chinese have been traditionally supported by their children and grandchildren. Although age and the wisdom of the elderly are culturally revered, there are no substantial social welfare programs designed to address the elderly, and old-age homes can house only 1.5 million senior citizens—approximately 1 percent of the existing elderly population (Pocha, 2007). Subsidized housing and food for the elderly is being threatened by China’s move to a market economy, and the ratio of workers-to-retirees will decline to 2:1 by 2040, which hardly encourages a massive welfare program. It is estimated that only one-fourth of the elderly are covered by pensions (Schuler, 2005).

China’s one-child policy, initiated in 1979, has dramatically changed the arithmetic of support: in the years to come, one child must support parents who will be living longer. China is expected to have 290 million senior citizens in 2025, according to China’s State Council (Pocha, 2007). “China will need to take major steps to deal with this problem. The alternative is lots and lots of sick, destitute old people—a humanitarian catastrophe of incredible proportions” (Schuler, 2005).

7.2 Internal Divisions

As Nobel laureate Friedrich August von Hayek noted fifty years ago, “...free markets determine prices and allocate resources—labor, capital, and human ingenuity—in a manner that can’t be mimicked by a central plan, however brilliant the central planner.” The efficiency and effectiveness of free market economics is clear. What is equally clear is that these blessings do not occur without a price. In China, the growing disparity between the poor and the rich is increasing. The Gini coefficient has increased to 0.47, which indicates the strong potential for instability (China Labour Bulletin, 2010).

The rising social inequality is nowhere more evident than in Shanghai, where opulent store fronts, which appear to have been transplanted from Paris’s Champs-Élysées or New York’s Fifth Avenue, tower over the city’s impoverished, but it’s not limited to urban areas. China’s growing water crisis has created water shortages and “climate refugees”, yet water-intensive golf courses have sprouted all over China to entertain the elite, even

in water-challenged areas: “One group is fighting for water to make a living, while the other squanders money on lavishness and excess” (The Yunnan drought, and China’s looming water crisis, 2010).

According to the Xinhua News Agency, “The most affluent one-fifth of China's population earn 50 percent of total income, with the bottom one-fifth taking home only 4.7 percent” (Kurtenbach, 2005). That was in 2005; the gap has widened in the last five years. On the whole, urban incomes are three times those of rural incomes.

One result of the division may be an increase in violent crimes. While violent crimes are habitually underreported in China, the Chinese Academy of Social Sciences reported that the number of violent crimes increased 10 percent in 2009 (Violent crime rate increases for the first time in ten years, 2010). This was attributed to rising unemployment among migrant workers and their proximity to wealth.

7.3 Changing Expectations of the Growing Middle Class

Of all the demographic challenges facing the nation, perhaps the greatest is the changing expectations of the growing middle class. In the West, the middle class pays the taxes, gets involved in local schools, and participates in local politics. In short, it is the unchanging bedrock on which the community exists. The China middle class, having tasted the fruits of capitalism, doting on its “little emperors” and “little empresses,” being exposed to Western values and materialism through growing trade and cultural exchanges, may be highly resistant to giving back any of its new-found wealth or freedoms.

Indeed, it is probably incorrect to speak of a Chinese middle class when, depending on one’s location, that nomenclature might be properly applied to any number of socio-economic classes. One common denominator may be their view of government. Many writers have noted the ambivalence that the Chinese middle class has with its government:

“...they see the central government as there for them to advance and to make order from chaos...there is a frustration with the slow pace of reform and evolution of the structure that should protect the interests of society. Everyone wants institutional reform, but no one wants rebellion, they want a continuation of the status quo.... People do expect that government will become more responsive to their needs and they also see the enormous progress that has been made and are content that things are getting better.”
(Doctoroff, 2010)

How will they react when the status quo changes in the next 15 to 20 years, whether by preventable catastrophe or by government intervention?

8.0 Globalization

China jealously guards its tradition of a separate path of development. Yet, seeking commercial integration with the global economy would seem to put it on a collision course with its tradition. So far, globalization has been mostly a one-way street. The West, dependent on cheap Chinese goods to control the inflation in their own countries and fearful that a confronted China would step back from modernization, has been reluctant to demand that China live up to its moral responsibilities as a global superpower or its legal responsibilities as a member of the world community and its fabric of treaties. China should not be blamed for acting in its own best interests, but the days of a separate path without consequence may be numbered.

8.1 The Rule of Law

According to Wang, “China lacks the rule of law that is required for investor confidence.... The rule of law is neither necessary nor sufficient for a country to attract FDI... good economic fundamentals can attract FDI inflows in the absence of the rule of law” (Wang, Xu, & Zhu). According to Wang’s argument, competition and attention to expectations of stakeholders induce better behavior than its loose regulatory structures would suggest.

The rule of law is not just a domestic consideration. China has signed the Berne Convention on Intellectual Property (see Appendix 3); Taiwan has not (U.S. Customs and Border Protection, 2008). Montinola, Qian, and Weingast (1995) observed, “...rights are not as secure in China as they could be.”

In the intervening fifteen years, not much has changed. In 2001 China had approximately 500 pirate medicine manufacturers (Pincock, 2003). This year, Wi-Fi key-cracking kits, “ceng wang ka,” were sold openly—and illegally—in Shanghai (Fletcher, 2010). Copy markets and street vendors are ubiquitous, hawking pirated goods to tourists—unless the government deems them embarrassing, as the recent crackdown for EXPO 2010 demonstrated.

8.2 Political Liberalization

Since 1989, American foreign policy regarding China was based on the premise that free trade with China would result in political liberalization. Wrote Gideon Rachman:

Both Bill Clinton and George W. Bush firmly believed that free trade and, in particular, the information age would make political change in China irresistible. On a visit to China in 1998, Mr Clinton proclaimed: “In this global information age, when economic success is built on ideas, personal freedom is essential to the greatness of any nation.” A year later, Mr Bush made a similar point: “Economic freedom creates habits of liberty. And habits of liberty create expectations of democracy...Trade freely with the Chinese, and time is on our side” (Rachman, 2010).

Although Rachman noted that progress was much slower than the U.S. anticipated, clearly government control over the populace has become much less restrictive and much more selective in recent years.

Still, government surveillance is unnerving. There is no reasonable expectation of privacy, even in private settings, and electronic, physical and video surveillance is ubiquitous (Crime in China).

In addition to privacy concerns, there are concerns about the freedom to travel within China (U.S. Department of State, 2010), freedom of religious practice (Association for Asian Research, 2004), freedom of expression (Mufson, 2010), legal defenses (U.S. Department of State, 2010), and other rights fundamental to Western societies.¹⁰

8.3 Internal Integration & Foreign Policy

Imagine a world in which China embraced “one United States,” but then sold \$6.5 billion worth of arms to Texas, including attack helicopters and missiles that could be launched from submarines. How would Washington D.C. react? Then imagine in that imaginary world that the Chinese Premier would meet the leader of a remote religious sect that advocated independence for Hawaii with all of the pomp and circumstance of a state visit.

¹⁰ Obviously the West and China must be patient when applying their own values to the other’s paradigm. Kuhn (1996, p. 200) noted the difficulties of understand a new paradigm with the vocabulary of the old. The Chinese model was intended to improve the well-being of the Chinese, not to meet American expectations. In particular, the West must avoid “the missionary thinking that requires Westerners to save the world by imposing the blessings of Western values” (Naisbitt & Naisbitt, 2010, pp. 8-9). While the West is rightfully concerned about conducting business in a country that, according to Wang, Xu & Zhu (2009), “lacks the rule of law” but it must also acknowledge that the rule of law in the United States—the world-wide standard—did not prevent the corrupt business practices of HP, Enron, AIG, Xerox, Tycho, Adelphia, Global Crossing, WorldCom, and Countrywide, to name only a few.

You don't have to imagine, of course, because it is the reality of Sino-U.S. relations, in reverse. The U.S. sold \$6.5 billion worth of arms to Taiwan, despite its “one China” policy, and President Obama has met formally with the Dalai Lama (Cooper, 2010)—only to decry China's lack of cooperation with international sanctions against Iran. This is the logic hangover of a post-Cold War realpolitik.

China faces separatist forces in Taiwan, Tibet, and Uighurs in Xinjiang challenge its security and unity (China sees separatist threats, 2009). Although China views these as internal affairs, these and others certainly have an international component, inciting Western wrath with its methods of suppression, particularly when dissident forces wrap themselves in the cloak of human rights.

9.0 The 15-Year Fuse

The true Chinese miracle is not its dramatic restoration as a global economic, political, and military power, but the faith that its authoritarian government has an inexplicable or supernatural ability to arrive in Beijing, when it is on a train bound for Shanghai. Agathon, in the fifth century B.C., observed that even God cannot change the past, and not even an authoritarian government can reverse cause and effect. Both China and the West would be well-advised to remember that China's success began when that government's central planning gave way to entrepreneurs and markets; central planning would seem to be an unlikely savior.

Every day that it delays addressing these issues, China relies more and more on a miracle. Yet, in example after example in my research for this paper, authorities respond to a disaster in a now-familiar pattern: a predictable crisis results in a disaster; highly publicized announcements are made to crack-down on the individuals responsible; follow up is negligible; and the cycle repeats. We can see by the trends in demographics, society, public policy, and other factors that China's government seems to be content, in the Chinese expression, “to pierce ears at the wedding,” enjoying its 9 percent growth, while ignoring the imputed costs and obligations of the economic externalities and unintended consequences.

10.0 Conclusions

In the next 15-20 years, change in China is inevitable; progress is not. As I have demonstrated in this paper, a great number of potential crises lay ahead for the Chinese economy, and all seem to be coming to a head between 2025 and 2030. Any one of them has the potential to significantly disrupt the Chinese economy. Furthermore, most of these issues are interrelated, existing in an uneasy balance in which one crisis can

trigger many others in a cascade of economic strife. It would be foolish to attempt to lay out these crises in the timeline with any expectation of accuracy, but it is also clear that events have been set in motion that will become increasingly difficult to affect as time goes on.

In most cases, whether the disease is the willful deferred maintenance or failing to consider economic externalities, the medicine is the same...and it is bitter. Instead of creating legal, moral, and economic obligations for future governments, China should act now, even at the expense of employment, even at the expense of growth, even at the cost of inflation, even at the expense of national pride, to solve these problems while they can still be solved, and resolve those that cannot. If leaders think these are untenable now, they have not considered how bad they can get in 15 to 20 years.

China is sitting on huge reserves of dollars, generating minimal returns. Why not return those dollars to the U.S., by hiring its considerable expertise and technology to solve these problems (and to transfer knowledge in the process)?

Why not work with the U.S. to lower expenditures on both sides for strategic weapons, and help both countries' economies?

Why not adopt the rule of law and join the community of nations as a full partner? Ad hoc responses to crises do not solve systemic problems in a complex society. The development of basic legal regulatory and legal institutions, free from graft, is necessary, not because the West demands it, but because China needs it.

Why not address moral—if not directly economic—issues, such as health care and care for the elderly? In the recent health care debate in the U.S., were there not moments when leaders wished they led an authoritarian government that could impose a solution?

China, despite its almost Jungian racial memories of humiliation at the hands of foreigners, has returned to economic, political, and military greatness in an astonishingly short period. It's now time to earn the respect that it so fervently longs for.

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12.0 Appendices

Appendix 1: Secondary IPO Exchanges

- Amman Stock Exchange
- Athens Exchange
- Australian Securities Exchange
- Bermuda Stock Exchange
- BM&FBOVESPA S.A.
- BME Spanish Exchanges
- Bolsa de Comercio de Buenos Aires
- Bolsa de Comercio de Santiago
- Bolsa de Valores de Colombia
- Bolsa de Valores de Lima
- Bolsa Mexicana de Valores
- Bombay Stock Exchange Ltd.
- Borsa Italiana SpA (London Stock Exchange Group)
- Bourse de Luxembourg
- Bourse de Montréal (TMX Group Inc.)

Budapest Stock Exchange Ltd. (Wiener Börse AG)

Bursa Malaysia

CME Group

Colombo Stock Exchange

Cyprus Stock Exchange

Indonesia Stock Exchange

IntercontinentalExchange

International Securities Exchange

Irish Stock Exchange

Istanbul Stock Exchange

Jasdaq Securities Exchange, Inc. (Osaka Securities Exchange)

JSE Limited

Korea Exchange

Ljubljana Stock Exchange

Malta Stock Exchange

Moscow Interbank Currency Exchange

National Stock Exchange of India Limited

New Zealand Exchange Ltd.

Oslo Børs

Philippine Stock Exchange

Saudi Stock Exchange (Tadawul)

Shanghai Stock Exchange

Shenzhen Stock Exchange

SIX Swiss Exchange

Stock Exchange of Mauritius

Stock Exchange of Tehran

Stock Exchange of Thailand

Taiwan Stock Exchange

Tel-Aviv Stock Exchange

The Egyptian Exchange

TMX Group Inc.

Warsaw Stock Exchange

Wiener Börse AG

Appendix 2: Cost of AIDS Treatments

Drug	Month Cost (US\$)	Monthly Cost (RBN)
Agenerase	\$772	5,288 RBN
Aptivus	\$1,117.50	7,654 RBN
Combivir	\$752.64	5,155 RBN
Crixivan	\$570.96	3,911 RBN
Emtriva	\$347.11	2,377 RBN
Epivir 300mg	\$347.11	2,377 RBN
Epzicom	\$813.55	5,572 RBN
Fortovase	\$263.35	1,804 RBN
Fuzeon	\$2,315.40	15,859 RBN
Hivid	\$273.00	1,870 RBN
Invirase	\$748.50	5,127 RBN
Kaletra	\$796.26	5,454 RBN
Lexiva	\$658.99	4,514 RBN
Norvir	\$321.46	2,202 RBN
Rescriptor	\$316.35	2,167 RBN
Retrovir	\$405.59	2,778 RBN
Reyataz	\$892.91	6,116 RBN
Sustiva 600mg	\$499.43	3,421 RBN
Trizivir	\$1,164.35	7,975 RBN
Truvada	\$867.99	5,945 RBN
Videx EC 400mg	\$346.04	2,370 RBN
Viramune	\$442.45	3,030 RBN
Zerit	\$385.88	2,643 RBN
Ziagen	\$466.44	3,195 RBN

Source: "Annual HIV Drug Guide" 2006, from <http://www.thebody.com/>, accessed April 21, 2010

Appendix 3: Berne Convention Member States

Albania	Chad	Gabon
Algeria	Chile	Gambia
Andorra	China	Georgia
Antigua and Barbuda	Colombia	Germany
Argentina	Comoros	Ghana
Armenia	Congo	Greece
Australia	Costa Rica	Grenada
Austria	Côte d'Ivoire	Guatemala
Azerbaijan	Croatia	Guinea
Bahamas	Cuba	Guinea-Bissau
Bahrain	Cyprus	Guyana
Bangladesh	Czech Republic	Haiti
Barbados	Democratic People's	Holy See
Belarus	Republic of Korea	Honduras
Belgium	Democratic Republic of	Hungary
Belize	the Congo	Iceland
Benin	Denmark	India
Bhutan	Djibouti	Indonesia
Bolivia	Dominica	Ireland
Bosnia and Herzegovina	Dominican Republic	Israel
Botswana	Ecuador	Italy
Brazil	Egypt	Jamaica
Brunei Darussalam	El Salvador	Japan
Bulgaria	Equatorial Guinea	Jordan
Burkina Faso	Estonia	Kazakhstan
Cameroon	Fiji	Kenya
Canada	Finland	Kyrgyzstan
Cape Verde	France	Latvia
Central African Republic		

Lebanon	Philippines	The Former Yugoslav
Lesotho	Poland	Republic of Macedonia
Liberia	Portugal	Togo
Libyan Arab Jamahiriya	Qatar	Tonga
Liechtenstein	Republic of Korea	Trinidad and Tobago
Lithuania	Republic of Moldova	Tunisia
Luxembourg	Romania	Turkey
Madagascar	Russian Federation	Ukraine
Malawi	Rwanda	United Arab Emirates
Malaysia	Saint Kitts and Nevis	United Kingdom
Mali Malta	Saint Lucia	United Republic of
Mauritania	Saint Vincent and the	Tanzania
Mauritius	Grenadines	United States of America
Mexico	Samoa	Uruguay
Micronesia (Federated	Saudi Arabia	Uzbekistan
States of)	Senegal	Venezuela
Monaco	Serbia and Montenegro	Viet Nam
Mongolia	Singapore	Zambia
Morocco	Slovakia	Zimbabwe
Namibia	Slovenia	
Nepal	South Africa	
Netherlands	Spain	
New Zealand	Sri Lanka	
Nicaragua	Sudan	
Niger	Suriname	
Nigeria	Swaziland	
Norway	Sweden	
Oman	Switzerland	
Pakistan	Syrian Arab Republic	
Panama	Tajikistan	
Paraguay	Thailand	
Peru		

Source: "Intellectual Property Rights Guidelines," Theatre without Borders (2006) accessed April 28, 2010, at <http://www.theatrewithoutborders.com/node/64>

Comparative Financial Systems – The Chinese and Nigerian Experience

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Abstract: This study compares the banking and financial systems in China and Nigeria. China as the fastest growing economy in Asia is compared with Nigeria being the most populous country in black Africa also with a fast growing economy.

It identified that although the banking system in China is quite robust, it is mainly owned and controlled by the state as a result, competition and innovation is lacking. The financial market in the two countries, represented by the equity and bonds markets is shallow and the insurance market and other non-bank financial intermediation institutions in the two economies are also not well developed.

The study concluded with recommendations to improve the performance of the market. Prominent among the recommendations is the restructuring of the banking and financial system.

Keywords: Comparative, financial system, intermediation

Reference: Reference to this paper should be made as follows: Aliogo, P. N. (2010) "Comparative Financial Systems – The Chinese and Nigerian Experience", The ISM Journal of International Business, ISSN 2150-1076. Volume 1, Issue 2, March 2011

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1.0 Introduction

A financial system consist of all entities which functions together to support effective payment intermediation in any country including the channel of deposits and credits to ensure optimal risk apportionment mechanism towards supporting the development of the economy. A financial system allows for the transfer of money or fund between *savers* and *borrowers*, *thereby ensuring effective arbitrage between surplus and deficit units*. The savers save money for the generation of interest whilst the borrowers borrow to invest at the prevailing interest rate(s). The financial system could thus be seen as the cyclical flow of fund between the savers and borrowers for the purpose of investment and interest generation.

1.1 The Components of a Financial System

Four crucial elements are taken for granted in a financial system: the savers who inject fund into the system, the borrowers who invest in the economy, the financial Services operators and finally the regulators. All these entities are crucial to the financial system acting as the intermediary between the savers and the borrowers in any economy, hence it is these intermediaries that constitute the components of a financial system. They exist in the form of financial institutions such as the banks (Commercial, Merchant, Investment, Development, Micro Finance, Mortgage, Agricultural, etc.), Stock Brokers, Insurance companies, Pension Funds, Mutual Funds, Hedge Funds and so many other variants which constitute the Operative arm of the financial system. The regulatory arm of the financial system is made up of the Central Bank, Deposit Insurance Corporation, Insurance Commission, Securities and Exchange Commission, Stock exchange and a host of other variants of regulators operating under various names with identified roles as stipulated by various sovereign governments. In most countries governments play key role in regulation with limited private sector involvement, whilst private sector plays predominant role in financial system operations with government playing a sparing role. This dichotomy shall constitute an anchor of interest as we dissect the topic in focus which is aimed at reviewing comparative financial systems of China and Nigeria. There is also the attempt by contemporary writers to co-opt the human elements as a component of the financial system particularly for reason of the sensitive role the financial system plays in any economy. This has seen the development of many national institutes operating under state charters with the intent of assuring capacity building, personal discipline, sound corporate governance and ethics in providing financial services. In some countries we have Institute of Bankers, Chartered Insurance Institute, Association of Stock Brokers to mention a few.

The Banking component of financial institutions are also referred to as savings and loans institutions as they act as depositories for funds and pay interest to people who deposit funds with them; whilst borrowers pay interest on their loans given to them at a risk to the Bank. Monetary exchange usually attracts an interest rate. This is

considered to be the price someone pays to borrow money. Like any other price in a market economy, supply and demand determine the interest rate. The demand for money depends on how much money people and organizations want to have to meet their everyday expenses, how much they want to save to protect themselves against times when their income may fall or their expenses may rise, and how much they want to borrow to invest. One of the components of a financial system, the apex bank or central bank of a nation, usually control the supply of money. The money market institutions perform financial intermediation and support economic activities as determined by their regulated roles in the economy. The predominant role of Central Banks and Banks in managing the flow of funds underpins their importance in every discuss of financial institution in any economy. The role of Central Banks and banks in any economy has been duly played out by the experience of the global financial meltdown which affected the global economy notwithstanding the fact that domino effect started as a proximate cause from failed interbank obligations and sub-prime loan defaults in the USA. This position is not intended to diminish the fundamental role played by other operators and regulators towards ensuring a virile and sound financial system capable of supporting national development.

2.0 The Importance of the Financial System in the Economy.

Banks and other financial institutions in the economy play a key role by providing incentives for people and various organizations to save, and then lend those funds to firms and other people who are interested in investing. Investment itself is one of the most important ways that economies are able to grow over time. Investments allows for capital formation which enables businesses to purchase factories, machines, and other capital goods, which in turn increase the production of goods and services and thus the standard of living of those who live in the economy (Watts: 2008).

From the foregoing, one can argue that a mature financial system plays several functions in an economy, such as:

- (i) it mobilizes savings, enabling households and companies to transfer consumption to the future;
- (ii) it allocates savings to users of capital in the economy;
- (iii) it provides price signals and information about users of capital;
- (iv) it creates financial vehicles that enable the disaggregating and trading of risk;
- (v) it provides oversight to borrowers from investors and intermediaries who can threaten to withdraw funding;
- (vi) it provides an efficient payments system;
- (vii) it improves the incentives of companies to operate efficiently (Mckinsey & Company, 2006:25)

The level of success of any financial system in achieving the above is commonly determined by the regulatory activities of the various components of the system. A lot

thus depend on these components in determining the growth of the economy. A comparative analysis of two different financial systems in relation to how each contributes to its own economy shall reinforce the point made above. The focus of this paper therefore is the comparative analysis of the “Chinese” and “Nigerian” financial systems.

3.0 The Chinese Financial System

After opening its arms to financial reforms and open policies in 1978, the Chinese financial system started experiencing gradual financial development. Close to a decade after this time, China’s gross domestic product started rising at a very high rate as indicated in Table 1. The financial sector like every other sector was influenced by the opening up of the economy. In no time, two groups of financial sectors became adequately accommodated by the Chinese financial system. One group constitutes the banking sector while the second constitute financial markets like the Equity market and Bond market. The two sectors constitute the core components of Chinese Financial System. In actual fact, their activities and method of operation impact enormously on the Chinese economy.

Table 1: Gross Domestic Product of China 1955 to 2005

Year	Gross domestic product (‘M Chinese Yuan)	US dollar exchange	Inflation index (2000=100)
1955	91,000	2.46	N.A
1960	145,700	2.46	N.A
1965	171,600	2.46	N.A
1970	225,300	2.46	21.3
1975	299,700	1.86	22.4

1980	460,906	1.49	25
1985	896,440	2.93	30
1990	1,854,790	4.78	49
1995	6,079,400	8.35	91
2000	9,921,500	8.27	100
2005	18,308,500	8.19	106
2006	21,087,100	7.98	107.6
2007	25,730,600	7.62	112.6

Table 1 shows the trend of the [GDP](#) of China at market prices estimated by the [IMF](#) with figures in millions ([Chinese yuan](#)).

3.1 The Chinese Banking Sector

China's financial system is largely dominated by the banking industry. According to the China Banking Regulatory Commission (CBRC), at the end of 2006, the total assets of China's banking industry rose by 17.3 percent to 43.9 trillion yuan (5.48 trillion, U.S dollars) (Maswana, 2008). Four types of banks stand out in China. They include

- (i) State-owned banks,
- (ii) Commercial banks,
- (iii) Credit cooperatives and
- (iv) Foreign banks.

Non-bank financial institutions further complement these four.

3.1.1 The State-owned Banks

The State-owned banks is made up of the following: People’s Bank of China, the Industrial and Commercial Bank of China, the Bank of China, the Agricultural Bank of China and the China Construction Bank. Over the years, the People’s Bank of China has exercised the functions and powers of a Central Bank, as well as handling industrial and commercial credit and savings business; it was neither the Central Bank in the true sense, nor a commercial entity conforming to the law of the market economy. But since reforms and opening-up began in 1978, China has carried out a series of significant reforms in its banking system, and strengthened its opening to the outside world. Consequently, the finance industry has made steady development. At the end of 2004, the balance of domestic and foreign currency savings deposits stood at 25,318.3 billion yuan and the balance of home and foreign currency loans came to 18,856.6 billion yuan. Now, China has basically formed a financial system under the regulation, control and supervision of the central bank, with its state banks as the mainstay, featuring the separation of policy-related finance and commercial finance, the cooperation of various financial institutions with mutually complementary functions.

In 1984, the People’s Bank of China stopped handling credit and saving business, and began formally to exercise central bank functions and powers by conducting macro-control and supervision over the nation’s banking system, which include conduct of monetary and perhaps support for fiscal policies. In 1994, the Industrial and Commercial Bank of China, the Bank of China, the Agricultural Bank of China and the China Construction Bank were transformed into state-owned commercial banks; and three policy-related banks were founded, namely the Agricultural Development Bank of China, The National Development Bank and the China Import and Export Bank (Wikipedia, 2009).

3.1.2. The functions of the State-owned Banks

- (i) The People’s Bank of China performs such functions as acting as the country’s treasury; issuing currency; monitoring money supply; regulating monetary organizations and formulating monetary policy for the State Council.
- (ii) The Bank of China performs such functions as managing foreign exchange transactions and managing foreign exchange reserves.
- (iii) The China Development Bank distributes foreign capital from a variety of sources.
- (iv) The China Construction Bank lends funds for capital construction projects from the State budge
- (v) The Agricultural Bank of China functions as a lending and deposit taking institution for the agriculture sector (Ibid.)

3.1.3 Commercial Banks

With the 1994 Chinese banking reform, the Commercial Banking Law took effect in July 1995. Commercial banks as currently constituted are divided into two subgroups.

- (i) Shareholding or joint-stock commercial banks, which are incorporated as joint-stock limited companies under the People's Republic of China's Company law; and
- (ii) City commercial banks, constructed on the basis of the traditional urban credit cooperative, which have become commercial banks with stock-holding features. In 2004, there were 114 city commercial banks, representing approximately four percent of the domestic banking business.

3.1.4 Credit Cooperatives

The cooperatives typically provided credit to small and medium-sized enterprises and individuals. Urban Credit Cooperatives (about 3,200) have approximately five percent of the domestic banking business, while numerous (about 41,500) rural credit cooperatives and other small institutions have approximately nine percent (Maswana, 2008).

3.1.5 Foreign Banks

After the implementation of the *Open door policy*, a number of foreign banks were permitted to operate in major cities in China. However, they are largely representative branches, with only a few being permitted to carry out branch functions in Shanghai and Shenzhen. Their participation in China's financial system has been limited, but as China starts to borrow more from abroad, their role may become greater in the future.

When first foreign bank was permitted in the mid-1980s, foreign banks were restricted to designated cities and could deal only with transactions by foreign companies in China. After those restrictions were loosened following China accession to the World Trade Organization in 2001, some foreign banks were allowed to provide services to local residents and businesses. In 2004 there were 70 foreign banks with more than 150 branches in China (Wikipedia, 2009). IN 2006, foreign banks accounted for only around two percent of total banking-sector assets in contrast to the total assets of foreign banks in China, which according to the Banking Regulatory Commission (CBRC), is about \$153.9 billion by the end of October 2007, up 41 percent from the same month the previous year (Maswana, 2008).

3.1.6 Non-bank Financial Institutions

There are three main types of nonbank financial institutions, namely – Trust and investment companies (TICs), finance companies, and leasing companies. Together they account for around 1 percent of the banking sector's total assets.

3.1.7 Other Entities

These categories include securities companies, asset management companies, and insurance companies. The insurance industry has been established for a longer period but is still dominated by the state-owned People’s Insurance Company of China (PICC) group.

3.2 Financial Markets.

Apart from the banking industry, another important component of the Chinese financial system is the financial market. This market comprising both the Stock and Bond markets is equally experiencing growth, thus complementing the growth of the banking industry.

3.2.1 The Stock Market

In 1990 and 1991, China set up stock exchanges in Shanghai and Shenzhen, respectively. In the past decade, the Chinese stock market has completed a journey that took many countries over a century to cover. China’s stock market today has capital approaching 3,705.6 billion yuan, 1,377 listed companies and 72.16 million investors.

The Chinese stock market has promoted the reform of government–owned corporations and the change of their systems, and enabled a stable transition between the two systems. On the strength of the stock market in the past decade, many large state-owned enterprises have realized system change. The change also stimulated medium and small-sized state-owned enterprises to adopt the shareholding system, thus solving the most important issue - the system problem – during the transition from planned to a market economy. As for ordinary citizens, bank deposit is not the only way to invest their money, the stock market has become one of the most important channels for investment. No, thanks to the current financial meltdown during which most Stock Exchanges lost significant market capitalization. Methods of stock trading are constantly being improved. Today, a network system for securities exchange and account settlement has been formed, with the Shanghai and Shenzhen exchanges as the powerhouse, radiating to all parts of the country.

In 2004, China issued 123 kinds of *A* share, and 23 rights issues, collecting a total of 83.6 billion yuan, and 28 kinds of *B* and *H* shares, collecting a total of 67.5 billion yuan (wikipedia, 2009). By 2007, the combined market capitalization of the Shanghai and Shenzhen stock markets stood at 21.147 trillion RMB, passing the 2006 GDP level of 21.087 trillion RMB. In 2005, stock markets provided about five percent of official corporate financing (Maswana, 2008). It is thus clear that the market was experience a year-in-year-out growth.

A note-worthy distinctive feature characterizes the Chinese equity market. The market is divided into two segments, one restricted to domestic Chinese investors, the other opened to foreigners. The first segment consists of *A* shares, launched in 1990, which are common stock issued by mainland PRC companies, subscribed and traded in RMB, listed on mainland stock exchanges, and reserved for trading by PRC citizens. The second segment is partly made up of *B* shares, launched in 1992, which are issued by mainland PRC companies, traded in foreign currencies, listed on mainland stock exchanges, and prior to February 19, 2001, were restricted to foreign investors. This segment also includes *H* shares, shares of mainland PRC companies listed on the Hong Kong Stock Exchange (ibid).

3.2.2 Bond Market

China's bond market is composed of three markets: the inter-bank bond market, the exchange market, and the bank over-the-counter-market. It is the second largest domestic bond market in non-Japan Asia after South Korea's, with total outstanding issuance at around 34 percent of the GDP.

To oversee the various activities of these financial institutions, numerous regulatory bodies were put in place. These bodies are also put in place to make policies for these financial institutions. Monetary policy and the payment system is the responsibility of the PBOC, which sets deposit and lending rate bonds, as well as reserve requirement ratios. Likewise, the China Securities Regulatory Commission (CSRC) oversees the securities and futures market; the CIRC (China Banking Regulatory Commission) regulates the banking institutions, the asset-management forms, trust and investment companies, and other depository financial institutions; and the National Development and Reform Commission (NDRC) sets macroeconomic policies for the country, including the annual quota of corporate bond issues (ibid).

4.0 The Nigerian Financial System

Being the most populous country in Africa and offering an interestingly complex economy for study, Nigeria provides a financial system that is worthy of comparison with China's. Nigeria, like other African States boasts of a peculiar political experience that impacted considerably on her economy. African countries at a point in time of their history were colonized by the Western nations. The British colonized Nigeria.

Nigeria's economy, traditionally based on agriculture and trade, changed profoundly under colonial rule, beginning in the late 19th century. The need to pay taxes to the colonial government forced Nigerian farmers to replace feed-producing crops with cash-producing crops, which the government bought at low prices and resold at a profit. Money made by the farmers was considerably too low to take care of the taxes paid to government. The urge to seek an alternative means of generating money was tactically sown in the minds of the people.

In the 1960s and 1970s the petroleum industry developed, prompting greatly increased export earnings and allowing massive investment in industry, agriculture, infrastructure, and social services. Many of these large investments, often joint ventures with private corporations, failed.

In 2005, Nigeria's Gross Domestic Product (GDP) was \$99 billion. The GDP has varied widely, depending on the oil market: \$81 billion in 1985; \$33.2 billion in 1994, \$40.5 billion in 1995. In 2005 Nigeria's GDP per capita was only \$752.30, among the lowest in the world and well below the average for sub-Saharan Africa. The poor have been especially hard hit by Nigeria's economic problems, notably by devaluations of the currency, which make basic imported goods, such as food, more expensive; cutbacks in services and increases in fees for services; and a 14 percent average annual rate of inflation from 2000 to 2005 (Stock, 2007). Although currently undergoing serious economic reform, Nigerian economy is yet to get to the stage expected of a State with such vast resources available to it. Against this paradox, the status of Nigerian Financial System in the scheme of event provides a source of inquiry and a possible tool of comparison with a fast developing economy like China.

The Nigerian financial system comprises bank and non-bank financial institutions which are regulated by the Federal Ministry of Finance (FMF), Central Bank of Nigeria (CBN), Nigeria Deposit Insurance Corporation (NDIC), Securities and Exchange Commission (SEC), National Insurance Commission (NIC), Federal Mortgage Bank of Nigeria (FMBN), and the National Board for Community Bank (NBCB).

Two types of financial markets are prominent in the Nigerian financial system, namely: the money market and the capital market. The two markets through their various financial institutions are very active in the Nigerian economy.

4.1 The Money Market and Its Institutions

This is a market for short-term debt instruments. The major function of the money market is to facilitate the raising of short-term funds from the surplus sectors of the economy. The deficit units, which could be public or private, obtain funds from the market to bridge budgetary gaps by trading in short-term securities such as Treasury Bills, Treasury Certificates, Call Money, Certificates of Deposit (CD), and Commercial Papers (CP). The money market institutions include discount houses, commercial banks and some other institutions.

4.1.1 Commercial Banks

As applicable in other places, the key roles of commercial banks in Nigeria include, the acceptance of deposits, granting of loans and the operation of the payment and settlement mechanism. The deregulation of the Nigerian economy in 1986 by the Nigerian Government brought about rapid growth to the commercial banking sector

especially in terms of the number of institutions and product innovations in the money market. The number of commercial banks and their branches rose, respectively, from 30 and 2,397 in 1986 to 64 and 2,402 in 1996. However, many branches were later closed down in structural rationalization. The minimum capitalization of both commercial and merchant banks was increased to a uniform level of N500 million (from N50 million and N40 million respectively). The commercial banks continue to dominate the banking sector accounting for 82.6 percent of the banking system's total assets and deposit liabilities in 1996.

Nearly a decade after this period, the banking reform initiated by the apex bank, the Central Bank of Nigeria, changed the status quo. The CBN enforced a new regulation for banks to increase their minimum capital base to N25 billion naira (About USD200m). This directive sparked a series of mergers and acquisitions as banks sought to consolidate their market positions, reducing the number of banks to 25 initially and now 24. These 24 private banks, some of them foreign owned, form the largest component of the financial system, with the 10 largest of them accounting for over 60% of the aggregate assets and 72% of liabilities.

4.2 The Capital Market

The Nigerian Capital Market is a channel for mobilizing long-term funds. Regulated by the Securities and Exchange Commission (SEC), the Nigerian Capital market is centered on one stock exchange, the Nigerian Stock Exchange (NSE). Established in 1961, there are 289 listed securities, with a stock market capitalization of USD 46 billion as at January 2007. The country boasts of the third largest stock exchange by market capitalization in the African continent behind South Africa and Egypt. Banking and conglomerate stocks have historically been the most active on the NSE. There is also a commodity exchange, the Abuja Commodities Exchange, which was established in 2006.

4.3 The Central Bank of Nigeria (CBN)

The Central Bank of Nigeria is one out the strongest financial regulatory authority in the Nigerian financial system with monumental statutory powers which most times influence the operators of non-banks financial institutions. It is indeed the apex regulatory authority with heculian mandate to ensure effective performance of the financial system. It was established by the Central Bank of Nigeria Act of 1958 and commenced operations on 1st July 1959. Among its primary functions the Bank promotes monetary stability and a sound financial system, and acts as banker and financial adviser to the Federal Government, as well as banker of last resort to the banks. The bank also encourages the growth and development of financial institutions. Enabling laws made in 1991, gave the Bank more flexibility in regulating and overseeing finance companies, which hitherto operated outside any regulatory framework.

5.0 The Comparison between the Chinese and Nigerian Financial Systems

Taking a cue from the components of the two financial systems as analyzed above, a systematic comparison could be carried out along the line of the triadic: Banking, Equity Market and Bond Markets. The three components are plausible choice considering the fact that they play critical roles in these financial systems. Besides, many modern financial systems revolve around these three. Moreover, the latter two sub-systems as above support the performance capacity of the Banking sector which we have adjudged as most critical entity in the whole financial system super structure.

5.1 Banking and its Effect on the Chinese Financial System

Banks play very important role in the economic life of the nation. The health of the economy is closely related to the soundness of its banking system. Although banks create no new wealth but their borrowing, lending and related activities facilitate the process of production, distribution, exchange and consumption of wealth. They actually create money and by consequence the wealth of a nation. In this way, they become very effective partners in the process of economic development. Today modern banks are very useful for the utilization of the resources of the country. The banks mobilize the savings of the people for the investment purposes. If there would be no banks then a great portion of a capital of the country would remain idle as they fuel the velocity flow of stock of money in any economy, which by itself has tremendous impact on the economy's capacity for production, distribution and consumption of goods and services.

A bank as a matter of fact is just like a heart in the economic structure and the capital provided by it is like blood in it. As long as blood is in circulation the organs will remain sound and healthy. If the blood is not supplied to any organ then that part would become useless, so if finance is not provided to the Agricultural sector or industrial sector, for instance, it will be destroyed. Loan facility provided by banks works as an incentive to the producer to increase production.

In the Chinese financial sector the banking sector plays a highly dominant role. As a matter of fact, the sector's contribution to the system on financial intermediation is nearly 75 percent of the entire capital formation in the economy. This is claimed to be higher in proportion to what is obtainable in other Asian countries. Relative to other developed economies, China's banking system controlled assets equivalent to 160 percent of GDP at the end of 2004; this rate is lower in such economies as that of United States, Singapore and Japan. Banks are also the major source of capital for investment. As much as 95 percent of corporate funding is provided by the banks.

5.1.1 Two-Factor Anomalies in Chinese Banking Sector

The lending activities of banks in China however create room for some financial anomalies. The banking sector in China is alleged to have an unusually large stock of

non - performing loans. Also alleged is the fact that there is poor bank lending. For instance, the consumers who are supposed to benefit more in bank lending only benefited from 10 per cent of bank loans. It is the corporation (with two thirds of all China's bank lending) that derives more benefits from bank loans. This is not what holds in other developed economies where consumers are treated as the natural customers of banks, while corporations and other large business entities mainly patronize the capital markets for fund raising. Some factors which have been adduced to these fundamental anomalies are discussed below.

5.1.2. The Foundation of the Two-Factor Anomalies

The problems of the Chinese banking practices are traceable to the following: Weak governance and lack of commercial mindset, Operational weaknesses and Decentralized structure.

5.1.2. Weak Governance

While it is true that the banking sector dominates the Chinese financial system, it is however alarming that the sector is characterized by high state ownership. The government is controlling affairs in the sector in contrast to the reduction of such control in other sectors of the economy. State controlled banks accounted for 83 percent of bank assets in China in 2004, which contrasted with the lesser percentage of some major world economies. This situation created some problems in the Chinese financial system. These include:

- (i) Reduction in the tempo of competition among banks.
- (ii) Reduced pressures on banks to operate on a commercial, profit-oriented basis since government is injecting huge amount of capital into them. Hence, innovative product development capacity is stifled.
- (iii) High levels of state ownership create difficulty in reducing local political influence over lending decisions and to reduce bloated bank payrolls.

The final outcome of the problems above is that banks could not perform professionally as expected. In essence there was lack professionalism in bank operations even when their economic impact cannot be undermined going by consistent growth rate paraded by the Chinese economy for over one decade and still counting. Effective governance was equally lacking leading to problems of misappropriation of fund, fraud and uncontrolled money laundering.

5.1.3. Operational Weaknesses

This relates to the problem of difficulty in regulating and monitoring of banking activities especially the smaller commercial banks. Operational problems that affect the banking industry include:

- (i) Lack of good internal credit assessment associated with loan and credit assessment skills that bank workers lack.
- (ii) Lack of relevant external information management on the credit histories and financial condition of potential borrowers.
- (iii) Inadequate effective performance management system including objective credit history, data and rating agency to support extension of credit.

5.1.4. Decentralized Structure

Like in most aspects of Chinese ways of life or culture, the banking sector was highly influenced by the Chinese socio-political structure. This structure is characterized by strong provinces with weak central control. This is akin to unitary system of governance where the parts that make up the society wield stronger power than the centre. This eventually robbed-on, on the Chinese banking system where bank branches possess profound autonomy with little control from their headquarters. Centralized decision making that is expected to be binding on the branches or at the regional level was quite difficult. Even when this implementation and enforcement is somewhat constrained. The local or regional authority seems to wield more control over these branches than the central.

This situation has a far reaching implication on the overall financial system. For instance, a customer who defrauded a particular bank branch could still have the opportunity to loan services in another branch. Such a practice usually has further effect on the non-performing loan problem already mentioned.

The various anomalies ascribed to the Chinese banking practices above are expected to adversely affect not just the banking sector alone but the totality of the financial system. One way this could occur is for foreign banks to displace the local banks on the basis of highly professional and efficient practices. Local banks may even face liquidity crisis in the face of strong foreign competitions if critical best practices are not implemented as the Chinese market opens further to the world. The worst may be experienced through the over dependency of banks on corporate patronage. The fear here is that if corporate bodies suddenly perceive the wisdom to patronize bond market for financing, then the banks will be adversely affected since the corporate bodies constitute half of the Chinese banks' customer base. Only if operations are improved can such danger be averted.

5.2 The Equity Market and its Effect on the Chinese Financial System

The fundamental role of the equity market is to mobilize long-term fund for firms. Primary mobilization is channeled through the shareholders who now take the mantle of ownership and decision makers for the firm. In the Chinese system, the expectation is that the equity market through its functions shall take pressure off the banking institutions in the area of business financing. When rated along this line of thought the

equity market shall be adjudged as underdeveloped. This is presumed to be unexpected considering the fact that stock market operations had gone on for as far back as 1990 and 1991. Today, the market is characterized by “low level of depth” and “poor performance” (China’s mainland exchanges have been performing poorly over the years).

The following factors have been adduced to the deficiency of the equity market.

- (1) It is alleged that large number of non tradable shares are held by government. The implication of this is that government possesses far-reaching power over corporate bodies in shaping the affairs of the stock market. This therefore, reduces the corporate governance role of the market. The Chinese situation is worsened by the fact that listed companies on the market are the badly performing ones in the economy. It should be noted that government itself is the instrument behind the listing of these poor performing companies. The expectation was that the decision shall ease banks’ burden of continuous lending to these firms. Incidentally their being listed rendered the market unattractive. Government, thus, more or less uses the stock market as the instrument of actualizing its own policy.
- (2) It is also alleged that government itself encouraged the biggest and most profitable Chinese companies to list on international exchanges. By so doing, these companies became exposed to international standards of governance and accounting. Eventually, it is the local exchange that suffers from the set-back of lack of patronage and attraction.
- (3) It is argued that due to non-implementation of international best practice, lack of good corporate governance, and scandals that characterized the market, share prices became depressed. It further discourages institutional investors from looking the way of the market.

5.3. The Bond Market and its effect on the Chinese Financial System.

Bond simply is interest-bearing certificate sold by corporations and government to raise money for expansion or capital. An investor who purchases a bond is essentially loaning money to the bond’s issuer in return for interest. The investor can hold the bond and collect interest payment or sell the bond to a third party.

Through bond market, investors, companies and government can raise long-term fund at lower cost relative to bank offers. In the Chinese financial market, it is alleged that while government bond market is sound, that of corporate market is small. One of the reasons that account for this Chinese bond market condition is the highly restrictive government regulations. Such regulations include the governmental role of approving and issuing bonds. In China, the process involved is argued to be cumbersome in relation to what is obtainable in some other countries. Other problems affecting the bond market include

that of the poor state of credit rating agencies in China, which invariably produce adverse effect on investors' interest in the market. Finally, the Chinese bond market is not blessed with adequate number of institutional investors that would act as catalysts to the emergence of a vibrant market.

6.0. The Nigerian Perspective

In comparing the banking sector and the financial market in China and Nigeria, the following questions are pertinent:

- (i) Is Nigerian banking sector equally more regulated by the state as obtainable in China?
- (ii) Are the anomalies identified in Chinese Banking sector equally existing in the Nigerian Banking sector?
- (iii) Is the equity market equally underdeveloped?
- (iv) Is the Nigerian bond market characterized by small corporate issues?

6.1. Appraising the Money Market in the Nigerian Financial System.

The value of money market instruments grew by over 60% between 1994 and 1998 but the market is still overwhelmingly dominated by government treasury bills, although there has been a sharp increase in the inter-bank funds market in the last couple of years. The market is relatively illiquid (transactional) and further development of the market has been hampered by instability in government macroeconomic and monetary policies as well as inadequacies in the payments system. Although *discount houses* have played an important role in the implementation of Open Market Operations (OMO) and in providing liquidity to cash-strapped banks, their continued survival in the present form is questionable. Their use for OMO auctions should disappear once the CBN becomes more adept at handling the logistics of conducting indirect monetary policy. As the revival of the inter-bank market reduces business volume for discount houses, there is a need to clarify what their medium to long-term role and survival would depend.

In order to improve the functioning of the money market and further promote its development, it is necessary to:

- (i) Ensure macroeconomic and policy stability to reduce uncertainties and increase transactional liquidity
- (ii) Address auction failures of treasury bills by fully deregulating rates and injecting more competition by allowing the direct participation of insurance companies and other interested investors.
- (iii) Increase transactional liquidity by increasing the volume of treasury bills available for trading through: i) substantially reducing CBN absorption of treasury bills; and ii) relaxing portfolio restrictions and lowering liquidity

ratios which force banks and discount houses to hold excessive amounts of bills in their portfolios.

- (iv) Upgrade the payments and settlement system to facilitate the transfer of funds to Lagos where all money market activities currently take place.
- (v) Increase confidence in the Money Market by CBN guaranteeing interbank placements among Banks.

6.2 Appraising the Capital Market in the Nigerian Financial System.

Although market capitalization increased seven-fold between 1993 and 1996, the capital market remains underdeveloped representing only 0.5% of financial sector assets, with market capitalization currently at 9% of GDP, and a still low turnover of 5.2%. There is little diversification of securities traded as over 95% of transactions is in equities, new issues are small in number and the bond market is moribund. Constraints on foreign participation have been lifted but given the high cost of transactions and the instability of macroeconomic and financial policies; foreign investors have not made appreciable entry into the market.

To enable the capital market to effectively play its role in mobilizing and allocating long term funds, there is a need to:

- (i) Lower transaction costs to encourage trading, improve liquidity and promote share ownership.
- (ii) Stabilize government macroeconomic and financial policies to create a favorable enabling environment.
- (iv) Increase demand and supply for securities through: (i) resuming and sustaining the privatization exercise; (ii) conducting an awareness campaign on the benefits of listing, especially for SMEs; and
- (iii) removing portfolio restrictions to encourage wider participation by institutional investors.
- (iv) Reinvigorate the bond market by: (i) making the pricing of bonds less rigid and more competitive; and (ii) resuming the issuing of competitively priced government bonds to serve as benchmark. The recent establishment of a credit rating agency (Duff and Phelps) in November 1999 should help foster confidence in the bond market.
- (v) Complement the newly-issued Investment and Securities Decree (ISD) by strengthening the capacity of the SEC (manpower and technology) to maintain effective surveillance and enforcement. (Nigerian financial sector review, 2000)
- (vi) Recapitalize the capital base of industry participants strengthen rules and corporate governance towards improving the efficiency and transparency in market dealings.

6.3 Appraising the Insurance Industry in Nigerian Financial System.

6.3.1 The insurance industry plays a crucial role in the Nigerian financial system. The industry is grossly underdeveloped, with premiums received amounting to less than 1% of GDP. The life insurance market is steadily shrinking in spite of benefits of this service in supporting financial intermediation; non-life companies face numerous problems and a number of insurance companies are distressed. There is a serious problem with unpaid premiums, especially by government agencies and parastatals. Overdue premiums currently amount to 38% of annual premiums, with some arrears dating back several years. Although life insurance companies are a major source of long-term funds in developing countries, the industry is presently investing almost entirely in short-term securities and real estate. The National Insurance Commission (NAICOM) is tackling industry issues in a proactive fashion but has been operating without a Board of Directors for more than four years and is hampered by a lack of resources to carry out its broad mandate. We can therefore say that there is no government support for the industry notwithstanding its crucial role in the economy.

6.3.2. There is an urgent need to prescribe a clear standard for minimum solvency in the industry and shift emphasis from a controls-based supervisory system to solvency monitoring, with onsite inspections focusing on identifying risks to the financial soundness of firms rather than focusing on compliance with regulations. Adequacy of capital should be monitored on a continuous basis through the collection of monthly reports from companies. In making this transition, the Insurance Commission should be made more effective by constituting its Board of Directors as soon as possible. The authorities should take steps to address the problem of unpaid premiums, most of which are owed by government agencies and parastatals. In addition, investment rules should be changed to concentrate on protecting policyholders and providing a rate of return that is consistent with the safety of the principal. There is a need to remove supervisory controls over the pricing of insurance products and consideration should be given to permitting foreign investors into the insurance business.

7.0 Conclusion and Recommendations

A general appraisal of the Nigerian financial system shows certain key issues which could be compared to the situation that characterizes its Chinese counterpart. For instance, we have the issue of weak corporate governance practices, which have adversely affected the Nigerian Financial System and businesses. Prominent amongst weak corporate governance practices is insider abuses through bad/unpaid loans by financial system operators. Other features common to the two economies include weak corporate practices, weak internal control, non compliance with rules and guidelines

governing business operations and inexperience of operators resulting from the explosion in the number of financial institutions.

In view of the anomalies noticeable in the two financial systems, it is apt to make the following recommend:

- Restructuring of the banking and financial system. However, our strong point is that the principle of financial surveillance needed to be injected into these systems.
- Surveillance on the financial systems to avoid the huge costs associated with financial distress/instability.
- The need for quality control to maintain uniform standards and the best practices.
- Complying with the doctrine of Know Your Customer (KYC), particularly regarding account opening documentation and other business dealings.

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Bubbles and Monetary Policy: Can China Avert a Minsky Moment?

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Abstract: This paper examines China's risk of an asset bubble and compares China's current economic situation to that of Japan's in the mid-80s when Japan's burgeoning economy led to a real estate asset bubble and eventual market collapse in 1991. Like Japan then, China now has a strong real estate market, fuelled by fast growth, rapid urbanization, and an increasingly more lenient bank lending monetary policy. Similarly, China also has a significant trade surplus with the United States and tensions exist over related currency issues. When comparing China's current market economy to Japan's bubble economy, do the differences outweigh the similarities and can government intervention give China the upper hand in engineering a gradual, controlled slow down of the market economy without bursting the bubble?

Keywords: China, Japan, asset bubbles, monetary policy, market collapse, Minsky, meltdown,

Reference: Reference to this paper should be made as follows: Yurichuk, S. (2010) " Bubbles and Monetary Policy: Can China Avert a Minsky Moment?", The ISM Journal of International Business, ISSN 2150-1076, Volume 1, Issue 2, March 2011.

Biographical Notes: Sandi Yurichuk is a Ph.D. candidate at ISM. Sandi works in the pharmaceutical and biotech industry specializing in oncology drug development. She has her own consulting company based in California. Sandi has a BSc degree from the University of Manitoba, Canada and an MBA from the Canadian Institute of Management.

Introduction

China is the fastest growing economy in the world. For over the past ten years China's annual GDP growth has consistently surpassed 8 percent. China's 2009 GDP was 10.7 percent and the strong growth trend has continued into 2010 with a first quarter GDP of 11.9 percent.¹ In 2010, it is anticipated that China will become the world's second-largest economy surpassing that of Japan (Figure 1).²

With a controlled economy and strong policy implementation, the impact of the 2008 global financial crisis on China has been nominal compared to that of the developed nations. Backed by a \$585 billion^a government stimulus package, China has quickly emerged as a leading contender for global dominance in many sectors. In 2009, industrial production in China increased by 18.5 percent and retail sales were up by 17.5 percent, boosted by government subsidies and tax cuts on purchases of cars and appliances.³

China also experienced an extraordinary growth in money supply and bank credit which grew 32 percent in 2009. Consequently, China's real estate market is booming. The stock market has also reached new heights, overtaking Japan's as the second-largest stock market in the world.⁴ Such rapid growth has raised concerns of China's economy overheating. Much of the world is speculating that China's real estate market is currently in a bubble that inevitably will burst. China's A-Share and H-Share markets have recently shown signs of volatility as qualms about China's sustainability begin to appear in market research and media reports. Inflation concerns have also surfaced with China's 12-month rate of consumer-price inflation increasing to 1.9 percent at the end of 2009 (Figure 2).

This paper examines China's risk of an asset bubble and compares China's current economic situation to that of Japan's in the mid-80s when Japan's burgeoning economy led to a real estate asset bubble and eventual market collapse in 1991. Like Japan then, China now has a strong real estate market, fuelled by fast growth, rapid urbanization, and an increasingly more lenient bank lending monetary policy. Similarly, China also has a significant trade surplus with the United States (U.S.) and tensions exist over related currency issues. When comparing China's current market economy to Japan's bubble economy, do the differences outweigh the similarities and can government intervention give China the upper hand in engineering a gradual, controlled slow down of the market without bursting the bubble?

^a All dollar signs (\$) denote U.S currency.

Figure 1: China vs. Japan GDP Percentage of U.S. GDP at market exchange rates²

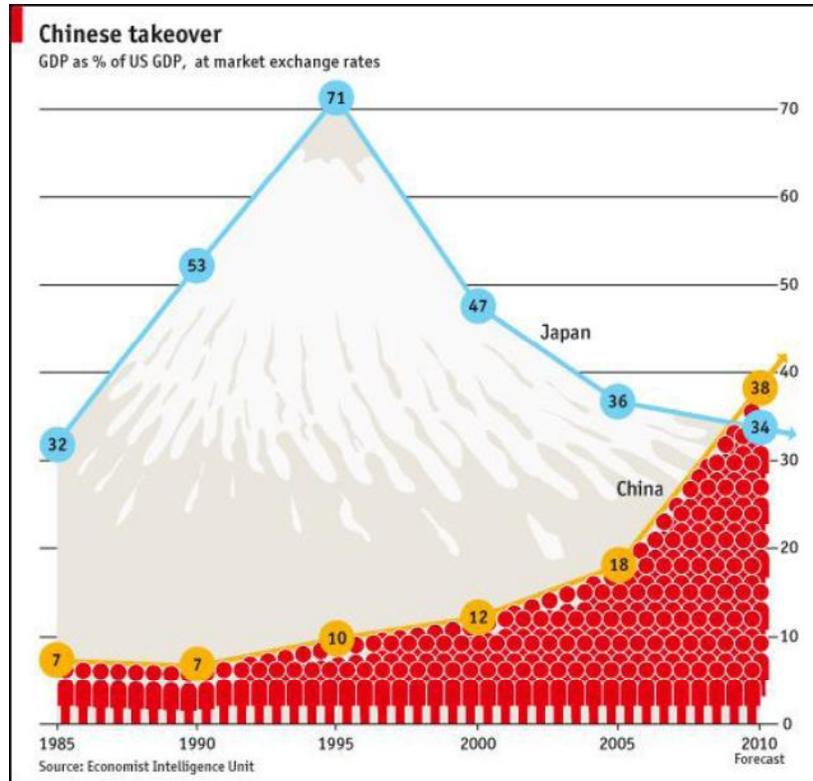
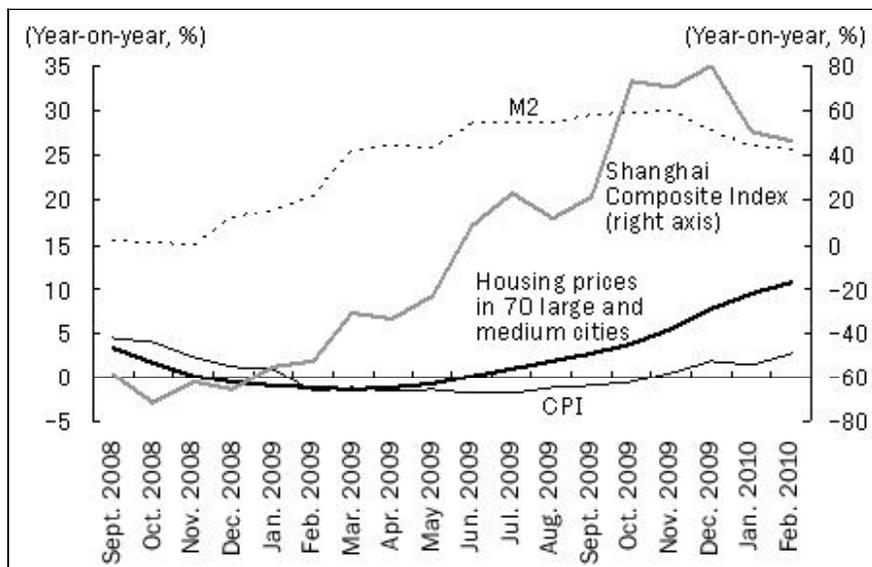


Figure 2. Stock and Real Estate Prices ahead of Consumer Prices



Source: National Bureau of Statistics of China and Shanghai Stock Exchange

Bubbles

The term "bubble," in the financial context, generally refers to a situation where the price for an asset exceeds its fundamental or intrinsic value by a large margin.⁵ Bubbles have been categorized in terms of *asset* bubbles, *financial* or *economic* bubbles, *housing* or *real estate* bubbles and more recently, *technology* or *tech* bubbles, to name a few. While bubbles are not well understood by most economists, they have been widely studied following the stock market bubble of the 1920's, the tech stock bubble of the dot.com era in the U.S. (1970's), Japan's economic bubble (1986–1991), various real estate bubbles in Australia, the United Kingdom, Ireland, and most recently the U.S. housing market bubble that helped trigger the recent global financial crisis and current market instability.

Former economist Hyman P. Minsky (1919-1996) gave greater understanding to asset bubbles when he identified the process in which a capitalist economy moves from economic stability to instability (a bubble).⁶ In his Financial Instability Hypothesis (FIH), he described this process in three types of debt phases:

- Hedge financing: in which borrowers can fulfill all their obligations by their cash flows;
- Speculative financing: in which borrowers can meet their payment commitments on "income account" on their liabilities, even as they cannot repay the principle out of income cash flows; and
- Ponzi financing in which the cash flows are not sufficient to fulfill either the repayment of principle or the interest due on outstanding debts.

Minsky held that, over a prolonged period of growth and prosperity, borrowers, lenders, and regulators are lulled into complacency as asset prices rise. Investors take on more and more risk, until lending exceeds what borrowers can pay off from their incoming revenues. When over-indebted investors are forced to sell even their less-speculative positions to make good on their loans, markets spiral lower and create a severe demand for cash and quickly, the market collapses.⁷ Falling into this crisis has often been referred to as a *Minsky Moment*, followed by a *Minsky Meltdown*.

While there are various debates on how and why asset bubbles happen, the pattern of an asset bubble is fairly constant and has been described from start to finish in five stages⁸:

1. *Displacement*: some change in economic circumstances that allows for profitable opportunities.
2. *Euphoria or overtrading*: Expected profits lead to a rapid increase in share prices (the 'boom'). Valuations begin to disconnect from fundamentals.
3. *Mania or the Bubble*: The prospect of easy capital gains attracts first-time investors and swindlers - driving the market; over trading ensues.

4. *Distress or Panic*: Insiders realizing that the imbalance of price to value is not sustainable take profits by selling.
5. Revulsion or discredit: As share prices fall, panic ensues as outsiders clamber for the exit and the bubble bursts (market collapse or *Minsky Meltdown*).

Stock market bubbles have three other recurrent features: asymmetric information, cross-border capital flow, and easy credit.⁹ In times of prosperity and available credit, real estate asset bubbles and stock market bubbles often co-exist as investors seek greater returns on investments. This economic bubble pattern is clearly seen in one of the most devastating and widely studied asset price bubbles of our time; that of Japan's economic 'boom and bust' bubble from 1986 to 1991. Many now wonder if China's current economic situation and growth pattern constitute a similar development compared to that of Japan's in the mid 80's and is therefore predictive of a bubble real estate market in China. There are indeed strong similarities.

Trend

Japan's Economic Bubble (1986-1991)

Key Events leading up to the Bubble

Following World War II, Japan slowly put in place trade tariffs and finance policies that encouraged individual savings and investments. Credit was made available, stimulating manufacturing production that quickly resulted in a trade surplus and the "made in Japan" era ensued. Japan became internationally known for its high quality, low priced radios and television sets. The U.S. became Japan's second largest trading partner and championed Japan becoming a member of the Organization of Economic Cooperation and Development (OECD) and the International Monetary Fund (IMF) in 1964. All of this was done in the spirit of free trade with Japan, even though Japan's legal structure prevented American companies, who had branch offices in Japan, from transferring their earnings from Japan to the U.S.

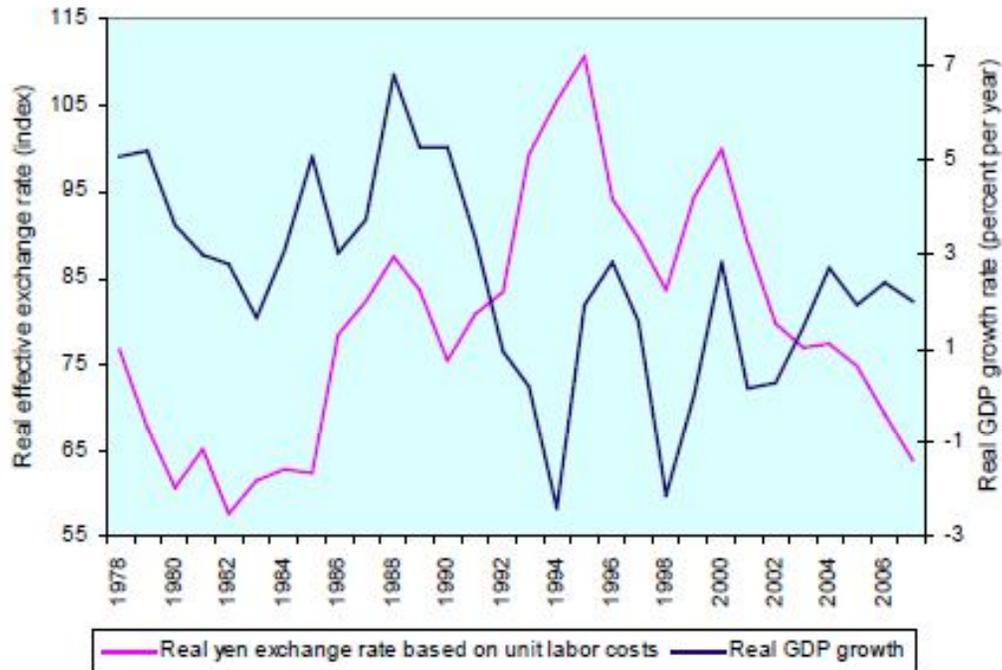
Trade Gap and Currency Issues

By 1971, Japanese exports to the U.S. had almost tripled (\$7.3 billion) accounting for 16 percent of all U.S. imports while U.S. exports to Japan had merely doubled (\$4.1 billion). The trade gap between the U.S. and Japan continued to widen amidst increasing trade friction with the U.S. American businesses objected to the many legal and administrative barriers that protected Japanese manufacturers and markets and demanded Japanese reciprocity in free trade. The U.S. courts charged some Japanese companies (e.g., Sony Corporation in 1970) with 'dumping products', or selling them below cost, in the U.S. In 1971, President Nixon imposed a 10 percent tariff surcharge on all Japanese imports to the U.S. and in August 1971 suspended the dollar's gold convertibility.¹⁰

From 1980 to 1985 the Japanese trade gap with the U.S. increased from \$10 billion to \$46 billion with Japanese trade accounting for 15.6 percent of U.S. foreign trade. Also in the early 80's the yen and other world currencies depreciated sharply against the U.S. dollar. The dollar's renewed strength reinforced trade tensions between the U.S. and its trading partners. The U.S. sought to balance the situation through a variety of economic policy initiatives. From 1984 to 1985, the Market Oriented Sector Selective (MOSS) talks covered the contentious issue of U.S. access to Japanese markets in select fields.¹¹ Two currency agreements, the Plaza Accord and the Louvre Accord, between the G-5 and later G-6 nations were put in place - both designed to stabilize international trade. The 1985 Plaza Accord^b was aimed at depreciating the U.S. dollar relative to the G-5 currencies and thereby strengthened the yen versus the dollar.¹² In 1987, the Louvre Accord, aimed at stopping the depreciation of the U.S. dollar, further strengthened the yen relative to the U.S. dollar (Figures 3 and 4).¹³

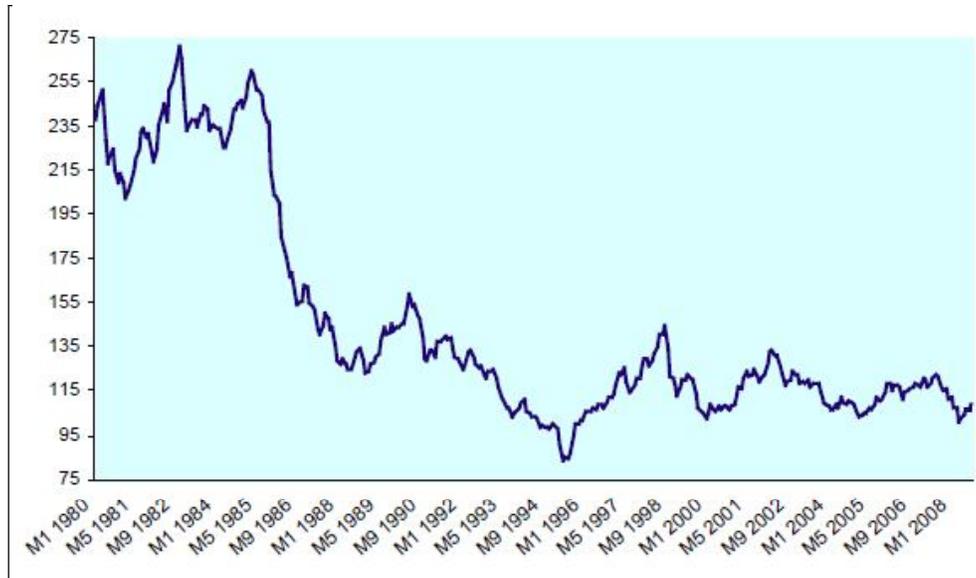
^b The 1985 Plaza Accord agreement among the G-5 nations (France, Germany, the U.S., the United Kingdom and Japan) intended to manipulate exchange rates by depreciating the U.S. dollar relative to the Japanese yen and the German Deutsche mark. The Plaza Accord's intention was to hedge against inflation by correcting trade imbalances between the U.S. and Germany and the U.S. and Japan allowing the dollar to slide 20 percent against the yen, 15 percent against the French franc and 15 percent against the German Deutsch mark. The U.S. went from surplus to deficit in two years; the dollar index on the New York Board of Trade fell from 130 to 123 in two months in 1985 and from 124 to 108 in 1986. These dollar levels proved to be unacceptable as twin deficits mounted in the U.S. and surpluses increased in Europe and Japan. The Louvre Agreement was convened by the G-6 nations to stop the slide of the dollar and achieve currency price stability among all industrialized nations.

Figure 3: Yen real exchange rate and Japan's growth^c



^c References for Figures 1 and 2: Maurice Obstfeld. The Yen and Japan's Economy, 1985-2007 *University of California, Berkeley*, November 2008. Prepared for the ESRI/CJEB Pre-Workshop, Columbia University, March 21-22, 2008. http://www.esri.go.jp/en/workshop/080321/pdf/09_Obstfeld_slide_esri-cjeb2.pdf; Accessed June 4, 2010.

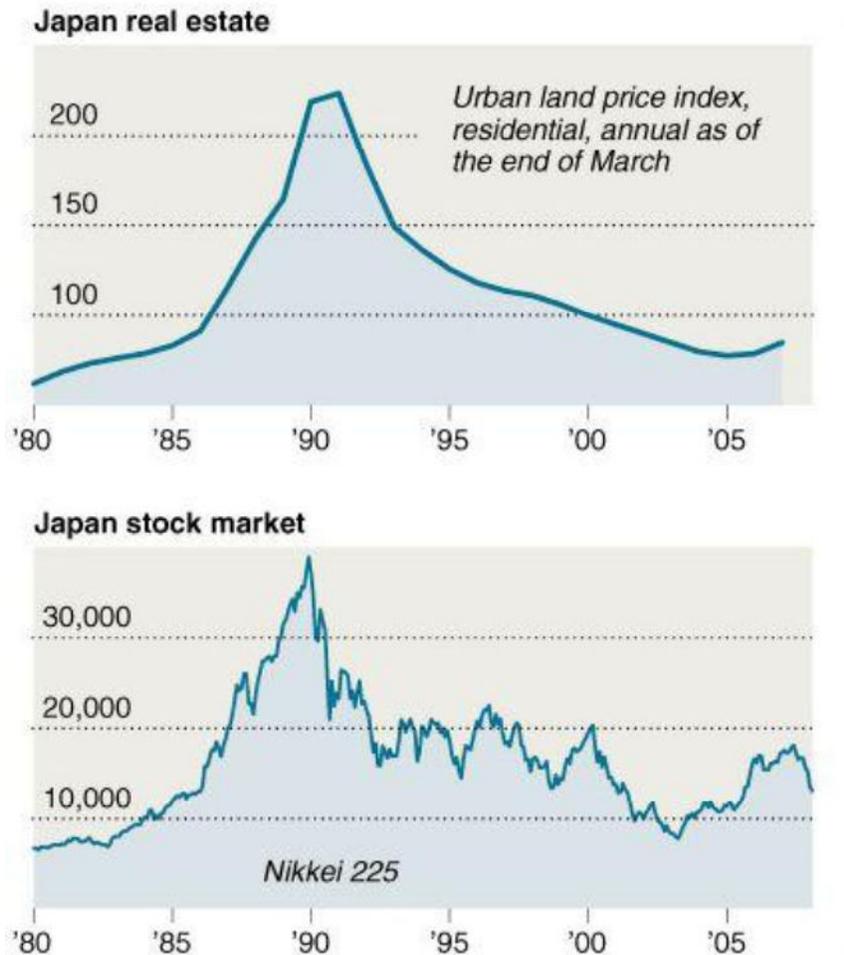
Figure 4: Yen/Dollar Nominal Exchange Rate



Loosening of Banking Monetary Policies Fuels Speculation

In keeping with the 1985 Plaza Accord, Japan loosened its monetary policy agreeing to stimulate its own economy to enhance domestic demand for U.S. products. Interest rates were lowered. The commercial success of Japanese manufacturing had helped banks gain wealth and they increased lending. The surplus capital in Japan made companies less reliant on bank lending and large first-tier corporations started raising their own capital directly from the markets. When the monetary policy was loosened, banks found little demand from first-tier companies and ended up making loans to riskier second-tier companies who, lacking close supervision from the bank used the money to speculate on increasingly priced real estate. Banks had also borrowed extensively in the euro-dollar markets paying premiums on their borrowing. With low interest rates and a stronger yen appreciation, the Tokyo Stock Exchange and real estate markets became the target for investment and speculation. Throughout the late 80s, borrowing and speculative investing accelerated. On December 29, 1989, the Nikkei stock index hit its all time high recorded at 38,957.44, and closing at 38,915.87.¹⁴ Choice real estate properties also hit an all time high and were known as some of the most expensive real estate in the world – recorded at US\$93,000 per square foot (Figure 5).

Figure 5: Japan's Real Estate Prices and Stock Market Indices



Sources: Standard & Poor's; Japan Real Estate Institute, via Japan Ministry of Internal Affairs and Communications; Bloomberg

The Bubble Bursts

Then, in 1990, the bubble burst. The Tokyo stock market collapsed with stock prices declining over 70 percent and real estate lost an estimated 80 percent of its inflated value. After the bubble collapse, the yen appreciated through mid-95 coinciding with a sharp drop in economic growth (Figure 3). The country took on an enormous amount of debt in an attempt to stimulate the economy. These efforts were not successful and the economy endured a long, L-shaped depression and a continually depreciating yen.

In hindsight, many economists site lack of intervention by the Central Bank of Japan to boost interest rates and renew appreciation of the yen as helping generate the bubble.

Japan's bubble's collapse lasted for more than a decade and the 1990s is commonly referred to as the "Lost Decade" in Japan. Stock prices bottomed out in 2003, and then went even lower amidst the global crisis of 2008. Two decades after the collapse of the bubble economy in Japan, the economic future of Japan still remains uncertain

The Present Day China Parallel

China's Current Economic Environment

The current Chinese market economy has many parallels compared with Japan's pre-bubble era of the 1980s (Table 1). Like Japan then, China now has a rapidly growing economy fueled by manufacturing, exports and a favorable currency exchange rate. Urbanization is occurring at an unprecedented rate; banks have loosened monetary policies increasing loan to debt ratios and the borrowing of money is accelerating.

Since Deng Xiaoping's (Xiaoping) initiation of economic reforms in 1978, China has quickly been transforming itself from a 'centrally planned economy' into a 'socialist market-driven economy'. Under these economic reforms China's manufacturing and exports have become key drivers of the economy. In November 2001, China joined the World Trade Organization (WTO) significantly upping the ante towards becoming a market driven economy.¹⁵ China is also one of the largest recipients of foreign direct investment (FDI) funds recorded at \$90 billion for 2009.¹⁶ China is now the world's largest exporter and the 'made in China' era is here.

**Table 1: China - Similarities and Differences Compared to Japan's
 Asset Bubble Economy**

	Japan's Economic Indicators 1986-1991	China's Economic Indicators 2008-2010	China's Policy Changes (as of May 2010)
Domestic Growth %GDP	3-4%	8-10%	1Q2010 GDP at 11.9%
Domestic Savings	Strong	Very high: 20-40% of income	
Central Bank Interest Rates	Lowered 5 times essentially to zero rate	Decreasing 2H08 loan rate:7.41% Sept 08 deposit rate: 4.41%	March 2010 Loan rate: 5.31%; Deposit rate 2.25%. ¹⁷
Credit and Money Supply	Increased & liberalized Banks capitalized at no more than 10% of GDP	Slight Increase in bank bills 30% increase in 2009 20% increase in 1Q10	<ul style="list-style-type: none"> ▶ Money growth rate set at 17% (as of May 2010 it is still over 20%)¹⁸; ▶ Lending policy tightened, <ul style="list-style-type: none"> ▶ Bank reserve ratio increased.
Loans / GDP	50% of GDP (cumulative bad debt 25-30% of GDP; actual write-offs 20% GDP) ¹⁹	40% GDP	Increasing qualifications for loans; increasing down payment requirements
% of Loans in the Real Estate Sector		Estimated 20-25% with another 8% to developers	Curbing loans
Real Estate Market	Residential & Commercial	Primarily Residential	
Local Currency vs. the U.S. dollar	Volatile Yen Strong appreciation followed by strong depreciation	Stable Yuan Minimal appreciation against the US dollar	No change in currency valuation

Growth Initiatives Domestic and Exports	Decreased due to appreciation in the Yen Then, with the depreciation of the yen, failed to stimulate the post bubble economy	Decreased due to global economic financial crisis.	<ul style="list-style-type: none"> ▶ Stable currency allows for continued growth of exports <ul style="list-style-type: none"> •MOFCOM institutes eight measures to enhance foreign trade and competitiveness of exports.²⁰ ▶ Five-Year Plans focus on: <ul style="list-style-type: none"> •increasing production of high-technology goods, •opening central China to attract foreign investment, •Encouraging more domestic companies to develop middle and high-end markets.²¹
CPI		Slowly Increasing	3.1% in May 2010

China - U.S. Trade Gap Issues

In 2009, China surpassed Japan in becoming the U.S. second largest trading partner (Canada is first). In 2009, China recorded total trades with the U.S. at \$366 billion with U.S. imports at \$296.4 billion and exports to China at \$69.6 billion.²² Given the impact of the world economic crisis, China's exports to the U.S. decreased 12.3 percent from \$337.8 billion in 2008. The U.S. trade deficit with China continues to grow however, and was recorded at \$226.8 billion in 2009 from just \$6 million in 1985.²² China now holds an estimated \$2.5 trillion in total foreign currency reserves.²³

Currency Issues

The Chinese mainland currency, known as renminbi (RMB) or the yuan,^d is a definite factor affecting the Chinese market and the economy.^e The RMB is controlled by the

^d The renminbi is denominated in yuan units and both terms ‘renminbi’ (RMB) and ‘yuan’ are used interchangeably throughout this article.

^e Under China’s “one country, two systems” principle, Hong Kong and Macau each have their own legal currencies; the Hong Kong dollar and the Macanese pataca.

People’s Republic of China (PRC) through the Central Bank and is not traded as an international currency.

From 1994 to July 2005, China maintained a policy of pegging the RMB to the U.S. dollar at an exchange rate of approximately 8.28 yuan to the dollar. The Chinese Central Bank maintained this peg by buying or selling as many dollar-denominated assets as needed (in exchange for newly printed yuan) to eliminate excess demand (supply) for the yuan. As a result, the exchange rate between the yuan and the dollar basically stayed the same, despite changing economic factors which could have otherwise caused the yuan to either appreciate or depreciate relative to the dollar.

In July 2005, China linked the value of its yuan to a basket of world currencies without full disclosure as to the weighted currencies in the basket.²⁴ From July 21, 2005 to July 21, 2009, the dollar-RMB exchange rate went from 8.11 to 6.83, an appreciation of 18.7 percent. Then, in 2009, China essentially pegged the yuan back to the U.S. dollar by linking the value of the yuan, on a narrow range of fluctuation, against a basket of currencies, including the dollar, euro, yen and won, without disclosing the different weights assigned to each currency.²⁵ Since that time, the exchange rate to the U.S. dollar has generally stayed at 6.83.

Increasing Trade Frictions with the U.S.

Like the pre-bubble time period in Japan, trade frictions exist between the U.S. and China. The value of the yuan compared to the U.S. dollar continues to be a contentious issue with the U.S. government. The U.S. asserts that China is purposefully intervening in its currency, keeping it undervalued to allow for accelerated growth of exports.²⁶ Many businesses contend that China’s currency policy gives China an unfair trade advantage including: low wages, selling below cost (dumping), and direct government financial assistance.²⁷

The U.S. government continues to pressure the Chinese government to appreciate the RMB and/ or allow the RMB to float freely on the open market in the hopes of correcting trade imbalances. While there are many hypotheses on allowing the RMB to float freely, the net effect on China, the U.S., and other world economies is unknown. Unlike Japan, China has kept a tight control on its currency withstanding outside political pressures to devalue the yen. This is a major difference compared to Japan’s bubble era.

Loosening of “Planned Economy Policies” Spur Growth

Under China’s economic reforms, both the real estate market and the stock markets have been propelled to new heights.

Reform of the Real Estate Market

Under the PRC, founded in 1949, all land became owned by the Communist Party. Under Xiaoping's economic reforms, China began to experiment with rural and urban privatization land reforms. In the early-80s, Special Economic Development Zones were created in which state-owned land was leased to foreign corporations spurring the development of the manufacturing and exporting of goods.²⁸ In 1988, the Constitution was amended to allow for the legal transaction of land use further supporting foreign investment in China.²⁸

In 1990, China officially adopted 'land leasing' as the basis for assigning land use rights to urban land users. While rural land is still effectively controlled by township- and village-enterprises, policy changes have allowed farmers to lease or trade their 30-year land-use contracts to individuals or companies. Urban reforms have allowed 'for-profit' construction of commercial housing by developers. Local governments, under continued pressure to sustain economic growth also sell and in many cases auction their land to developers for substantial and increasing profits. Urban home owners can now buy 70-year contracts on urban properties. By establishing 'property rights' under the legal system, China also opened the doors to foreign real estate investment. In 2005 China's real estate market began to accelerate. Huge profits provided additional economic incentives for illegal land transactions and "hot money" (speculative capital) also began fueling the real estate market. In 2010, Bank of American- Merrill Lynch analysts estimated that,

As much as \$30 billion a month of speculative capital may flow in during the first half of this year (2010).²⁹

Current Real Estate Market Boom

In 2009, property and construction represented about 10 percent of China's GDP. According to China's National Bureau of Statistics, housing sales prices in 70 Chinese cities rose by 12.4 percent year-on-year to May 2010.³⁰ Nationwide sales prices for commercial and residential real estate increased 22 percent and 19.5 percent respectively year-on-year to May 2010. The total April sales value of homes was documented by the Bureau at 384 billion yuan (\$56.3 billion). New construction nationwide in 2009 was up 15 percent with select cities ('hot-spots') experiencing a much greater growth (e.g., 22 percent in Beijing; 58 percent in Sanya and 64 percent in Haikou, to name a few). Stephen Green, a China economist at Standard Chartered notes that at least seven cities saw land prices triple in 2009.³¹

"This is clearly bubble territory for the land markets in many cities," he wrote in early February.³¹

In major cities including Beijing, Shanghai, Shenzhen and Guangzhou, real estate prices are unaffordable for most. To buy a 100-square-metre home in the capital, the average

Beijing household must now spend 17 years' income.³² Across the country as a whole, home prices are nine times the average income of urban households.

The average median income in China, and it's only slightly higher in the cities, is something like US\$3,500 per person. Typical second-tier city real-estate prices have now gone above \$100 a square foot. So a typical 100 square meter condo is probably going to cost you after all your expenses - \$120,000 to \$140,000 U.S. Say you're a dual income couple and you make \$7,000 to \$10,000 a year total. Even if you put down the 20% down - you're still paying mortgage interest of probably ... 60 to 100% of your income, pretax.³³

Real Estate Market Drivers

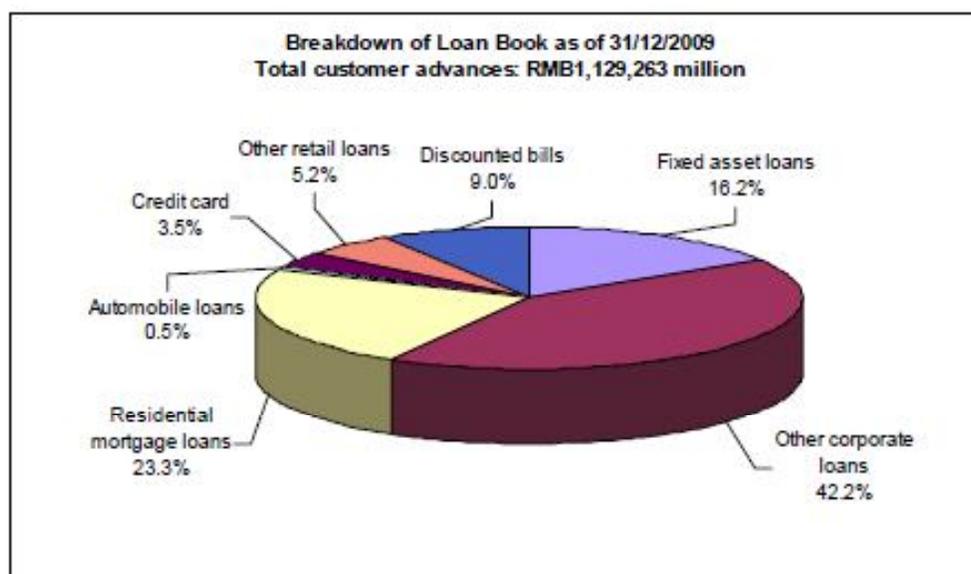
Pivotal to China's concerns is that privatization of land and the resultant real estate market boom is still in its early development and growth stages. It is estimated that less than 20 percent of the Chinese population currently own their own property.³⁴

China's urbanization rate continues to accelerate and China's income levels, while still low, have more than doubled in the past five years.³⁴ The 2009 City Development Report of China shows that an estimated 622 million people lived in cities in 2009, and the report estimates that 50 percent of the Chinese population will live in cities by 2020, and 75 percent by 2050.³⁵ Thus, with increasing urbanization, demand for housing will continue. Factors influencing continued demand include:

- Speculative cash buyers driving up prices
 - Land developers, affluent locals and foreign investors comprise the major market players and many have purchased land for cash.
- Increasing numbers of first-time homebuyers
 - First-time home buyers are a younger "Western lifestyle" seeking generation.
 - China's "one-child" policy gives newly married couples home buying financial support from both families.
 - Incomes are slowly rising with increasing education and economic prosperity.
- High savings rate
 - The Chinese save around 30-40 percent of their income.³⁶ However, with continued economic expansion and rising real estate prices and demands for housing, will saving policies change under possible 'irrational exuberance' to own and invest in increasingly valued property?³⁷
- Continued growth in bank loans
 - 2009 bank loans totaled a record 9.59 trillion yuan (\$1.4 trillion). While loans for 2010 are predicted to be 22 percent less (7.5 trillion yuan), growth is still robust.

- China Merchants Bank's mortgage book grew by 72.6 percent in 2009 accounting for 23.3 percent of its total loans (Figure 6).³⁸ In China's other big banks, the share is less than 20 percent. Loans to property developers are estimated at approximately 8 percent.
- Increasing number of foreign investors

**Figure 6. Comparison of China Merchants Bank's Loan Book
December 31, 2009**



Real Estate Market Challenges

- Banking policies have not matured with respects to dealing with the credit and financing of borrowed money. There is increasing credit risks associated with home mortgages.
- There is no 'default policy' for non-performing loans.
- Housing is still unaffordable for the majority of the population.
 - This keeps the farmers out of the cities and the migrant population high
 - Raises risks of wide spread social discontent
- Excessive inventory is a problem.
 - In Shanghai and Guangzhou, the commercial vacancy rate exceeded 15 percent at the end of 2009. In Beijing's central business district the commercial vacancy rate was 29.2 percent, while the citywide vacancy rate was about 20 percent.³⁴
- Inability to control 'hot money'.

China takes strong measures to curb the asset bubble – Will it be enough?

Unlike the Japan pre-bubble era, the Chinese government has introduced a variety of measures to avoid or quell an asset bubble. The question is - will it be enough? Measures taken include:

- Tightening credit controls
 - Lending by Chinese banks fell 43 percent in 1Q2010, from a year earlier.³⁹
 - The central bank has increased required reserve deposits and bill yields.²⁹
 - Mortgage rates have been increased.
 - Down payment requirements have increased 20 to 40 percent.
 - Buyers must make at least a 50 percent down payment on a second home, even if it is their first mortgage.³²
 - Loans for third home purchases have been curbed and pre-sales restricted. In Beijing third home purchases were banned and the purchase and/or the provision of housing mortgage loans to non-residents of the city were temporarily prohibited.⁴⁰
 - In some property hotspots, out-of-towners cannot get a mortgage until they have paid local taxes for at least a year.
- Government has selectively slowed land sales to developers.⁴¹
- Developers are postponing projects and project launch dates.⁴¹
- Property tax is being debated.⁴²

Mixed Signs of Control

In May 2010, the total sale of homes was down significantly (36.6 percent compared to the month of April) at 281.6 billion yuan (\$41.2 billion) and the floor space sold was 61.13m square meters, down 18.6 percent from the prior month (Figures 7 and 8; Table 2).³⁰ However, while volumes have been down, sales prices have been up. The National Bureau of Statistics showed that real-estate prices in China's 70 biggest cities rose 12.4% in May from a year earlier and are keeping pace with April sales.

Figure 7. Residential Building Monthly Sales in China 2009 through May 2010^f

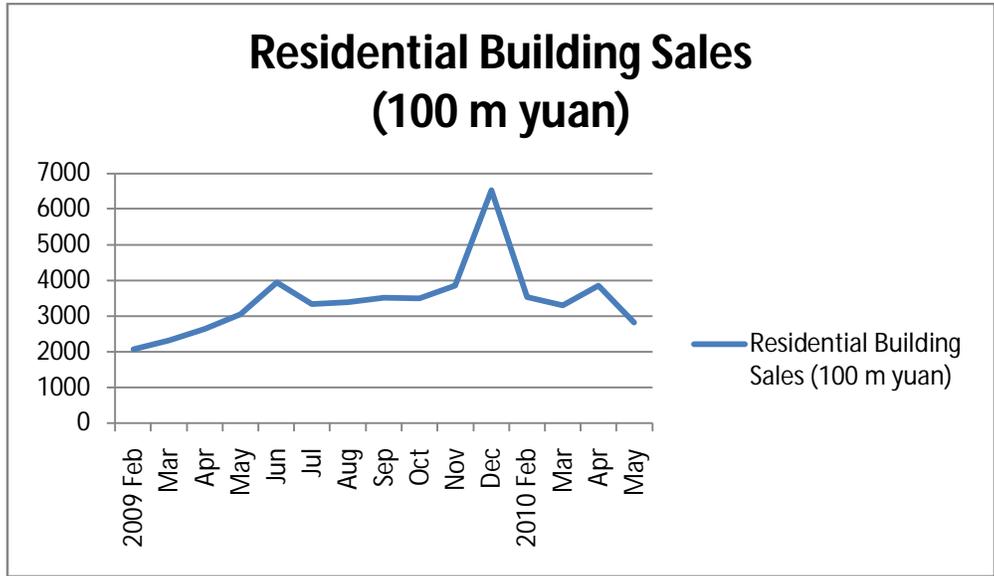
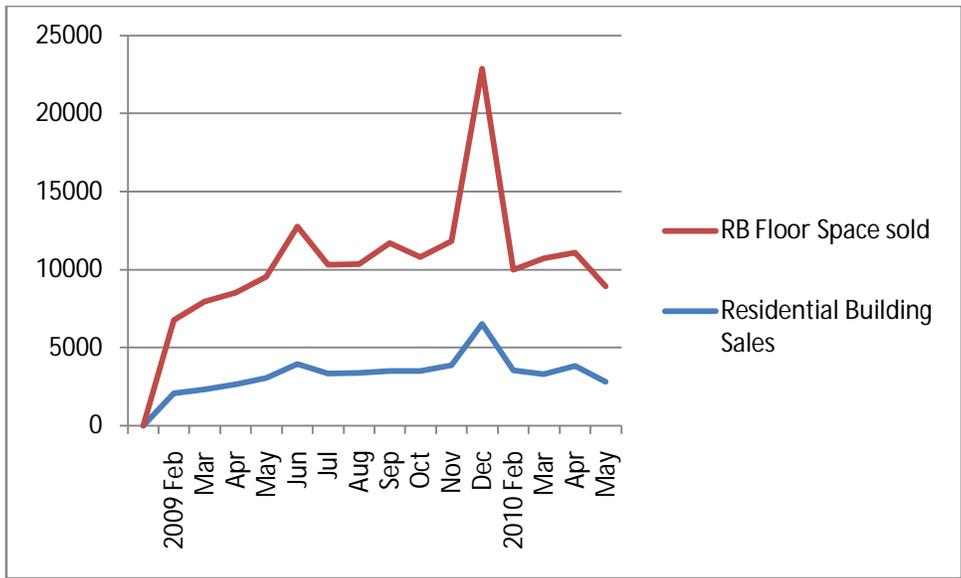


Figure 8. Residential Building and Floor Space Monthly Sales in China 2009 through May 2010



^f Data for Figures 6 and 7, and Table 2 are derived from the National Bureau of Statistics of China (2010.05) http://www.stats.gov.cn/english/statisticaldata/monthlydata/t20100610_402649156.htm

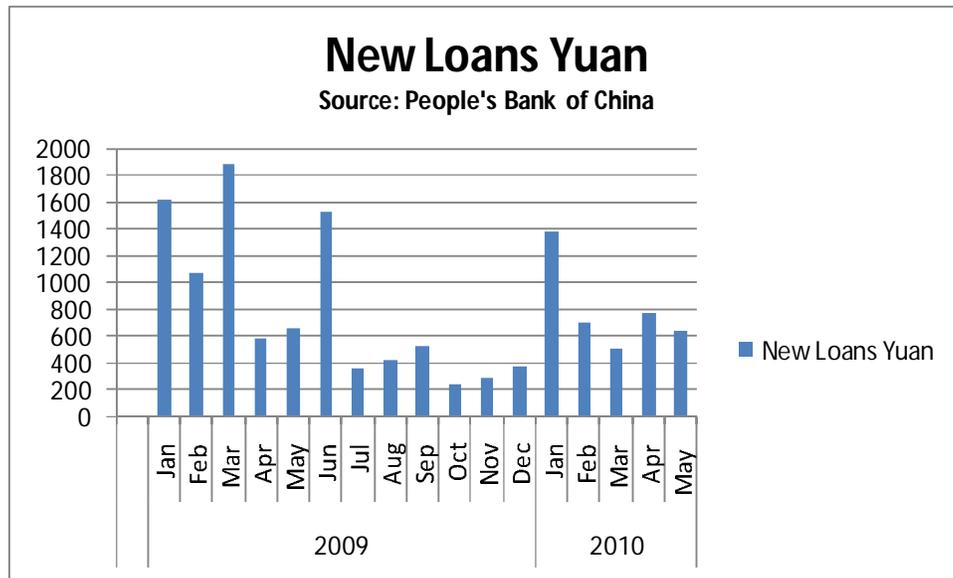
**Table 2. Residential Building and Floor Space Monthly Sales Numbers
 2009 through May 2010**

Year	Month	Residential Building Sales (100 m yuan)	Percentage Variance	RB Floor Space sold	Percentage Variance
2009	2009 Feb	2074	Base	4709	Base
	Mar	2330	12.34%	5619	19.32%
	Apr	2648	13.65%	5876	4.57%
	May	3051	15.22%	6499	10.60%
	Jun	3943	29.24%	8795	35.33%
	Jul	3326	-15.65%	7001	-20.40%
	Aug	3379	1.59%	6987	-0.20%
	Sep	3516	4.05%	8187	17.17%
	Oct	3498	-0.51%	7302	-10.81%
	Nov	3859	10.32%	7977	9.24%
	Dec	6532	69.27%	16342	104.86%
2010	2010 Feb	3543	Base	6433	Base
	Mar	3293	-7.06%	7429	15.48%
	Apr	3846	16.79%	7249	-2.42%
	May	2816	-26.78%	6113	-15.67%

While loans decreased sharply at the beginning of the year, April and May new loan numbers bring credit control into question (Figure 9). As of April 2010, Chinese banks have extended 45% of their lending quota for the year, adding to the risks that credit could overshoot the government's 7.5 trillion yuan target. Without increasing lending rates, control could remain challenging.

According to the National Bureau of Statistics consumer prices were 3.1 percent higher in May while wholesale prices rose 7.1 percent both exceeding targeted expectations. Inflation concerns remain strong.

**Figure 9. New Loans (Yuan)
2009 through May 2010**



Conclusion

Asset bubbles and monetary linkages to asset bubbles remain controversial. Whether China is experiencing an asset bubble or not will continue to be debated as the world economy struggles to regain stability. While there are strong similarities in China's current market situation compared to Japan's bubble era, there are also major differences, the largest and most impactful being that of government intervention. In response to its macroeconomic situation, the Chinese government is carefully crafting and closely monitoring monetary policies, hoping to prevent a *Minsky Moment* and resultant meltdown of the economy.

By curbing loans and increasing mortgage requirements the pace of housing price increases has slowed. The question is: has it slowed enough? To this end the government continues to control and closely monitor credit provisions as the financial markets evolve. Incremental steps have been taken to contain inflation while supporting domestic growth initiatives by slowly adjusting interest rates.

To date, China has also successfully resisted pressures to appreciate the yuan and continues to keep the exchange rate stable with the U.S. dollar as a means of sustaining foreign investment and boosting exports. While this may not be viewed as favorable by the U.S. government, the U.S. has recently lessened its political pressure for the appreciation of the RMB in light of the global economic slowdown and recent fall-out of

the euro. How the weak euro will impact the Chinese currency and China's housing market remains to be seen.

The world is carefully watching China and its continued monetary interventions hoping that China can control and thereby prevent a *Minsky Moment* in the bursting of the asset bubble. Notably, Minsky's predictions of asset bubbles being somewhat uncontrollable were predictions held fast by the natures of a fully functioning capitalistic economy. Can China's controlled economy and policy of gradualism make a difference? Only time will tell.

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Maintaining Performance during the Downturn

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Abstract: This paper examines the problematic of maintaining performance during the downturn and looks at how HR professionals are dealing with the challenges.

The paper begins by looking at the transition from slowdown to downturn in the Irish economy in early 2008 and compares the impact on the Irish economy with that of France. We then discuss the effects of the downturn on employment and performance and put forward some hypotheses on the potential consequences for HR management in terms of goal setting, talent management and training.

It concludes with a summary of best practices based on the Ulrich matrix.

Keywords: Performance, Talent Management, Human Resources, Downturn

Reference: Reference to this paper should be made as follows: Shaw, L.; Findelair, A.; "Maintaining Performance During the Downturn" *The ISM Journal of International Business*, ISSN 2150-1076, Volume 1, Issue 2, March 2011.

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Fiscal year 2008-9 will go down in history as the year the collapse of global financial markets caused by the implosion of the sub-prime sector dealt a hammer-blow to the real economy, affecting businesses and households all over the world, with governments pouring trillions of dollars into the financial system and corporates resorting to budget cuts, hiring freezes and layoffs to survive. As a result, intact work teams were broken up or shuffled around, individual responsibilities grew, and those who remained in employment felt anxious and uncertain about their current roles and future stability.

Management teams must face these issues head on if they are to maintain productivity and profitability, as well as morale, during these challenging economic times. That might seem like an impossible goal, given budget cuts and expanded responsibilities. It is up to the HR function to meet the challenge and ensure that goal is attained.

This downturn in the global economy has put HR professionals under critical pressure and is forcing them to re-evaluate, re-energize and transform themselves into key players in the organizational strategy and decision-making responses of corporates in riding out the storm. HR managers are expected to provide innovative solutions to problems of productivity, performance and motivation.

During the boom years preceding the downturn it was taken as given that HR is a value-added function in an organization. Academic research highlighted the relationship between corporate performance and HR practices. One analysis of over 700 corporatesⁱ found that those with best HR practices boosted performance and market value per employee, thus demonstrating that HR systems enhanced operational and strategic excellence. HR professionals had shaken off their administrative stereotype by demonstrating their essential role in understanding and driving organizational change, a role that required them to go beyond personnel management and acquire a mastery of business competencies, including sound financial management.

In a buoyant global economy, driven by innovation and a consumer and investment boom, HR had a field day hiring, managing and rewarding talent.ⁱⁱ In some sectors, such as investment banking and software, the biggest problem HR faced was how to stop people leaving. The downturn changed all that, as the strategy of survival through retrenchment led to massive layoffs and cost cutting.

This is bound to have a deep and lasting impact on all employees before, during and after the implementation of cost cutting measures. Our study aims to examine the problematic of maintaining performance during the downturn, by carrying out an ambitious field study to see just how HR professionals are dealing with the challenges.

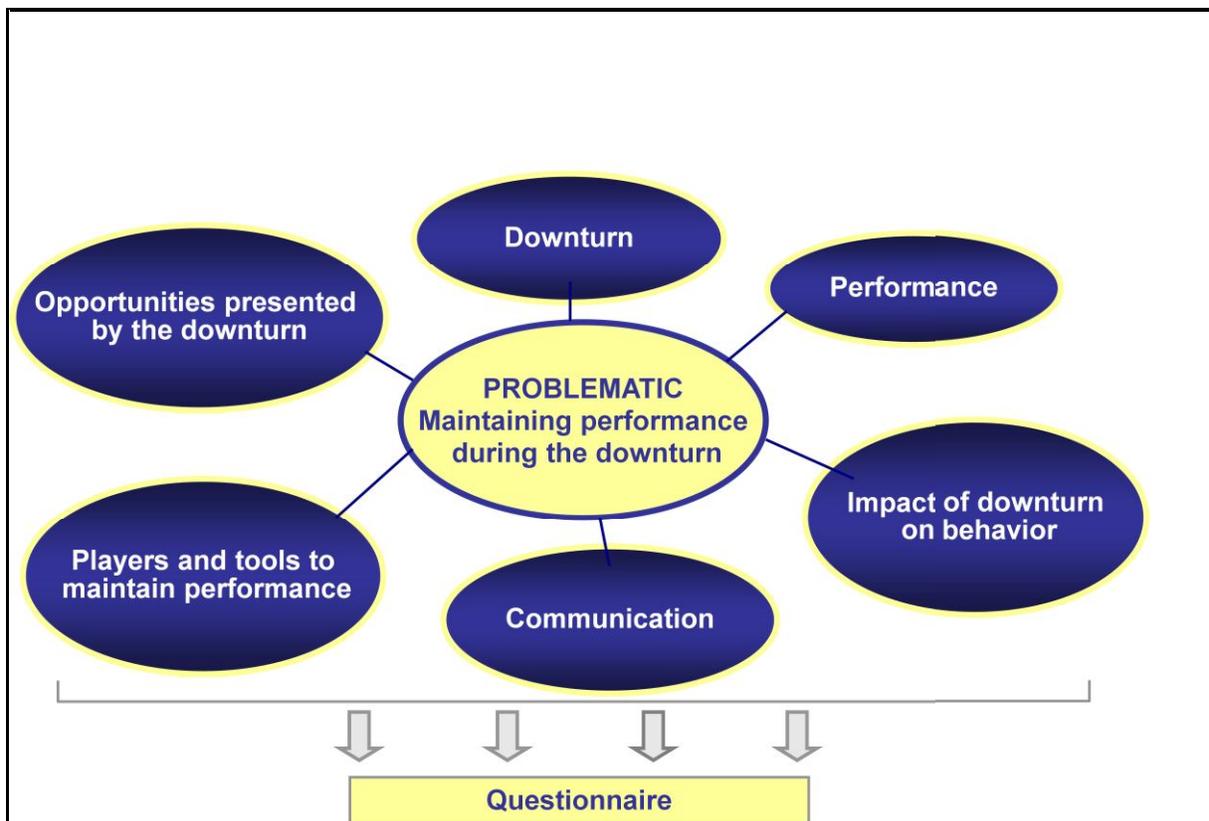
The research was carried out by a team of 40 French HR executivesⁱⁱⁱ and culminated in a field trip to Dublin where they met with Irish HR executives from key business sectors

(ICT, Consulting, Pharmaceuticals) who related their experiences of the downturn and their strategies for coping with it. The Irish economy has suffered more severely than any other economy in Europe, if not the world, so some valuable lessons were expected to emerge from the project.

We begin with an overview of the downturn, continue with a selection of case studies from our field research^{iv} and conclude with a summary of the results in a set of best HR practices using the Ulrich matrix as a framework.

Figure 1 illustrates the themes that emerged from the problematic, from a brief review of the arrival of the downturn, a definition of performance, the impact of the downturn on performance, the key role played by communication, the tools used to maintain performance and the opportunities presented by the downturn to enhance the bottom line when the turnaround finally comes.

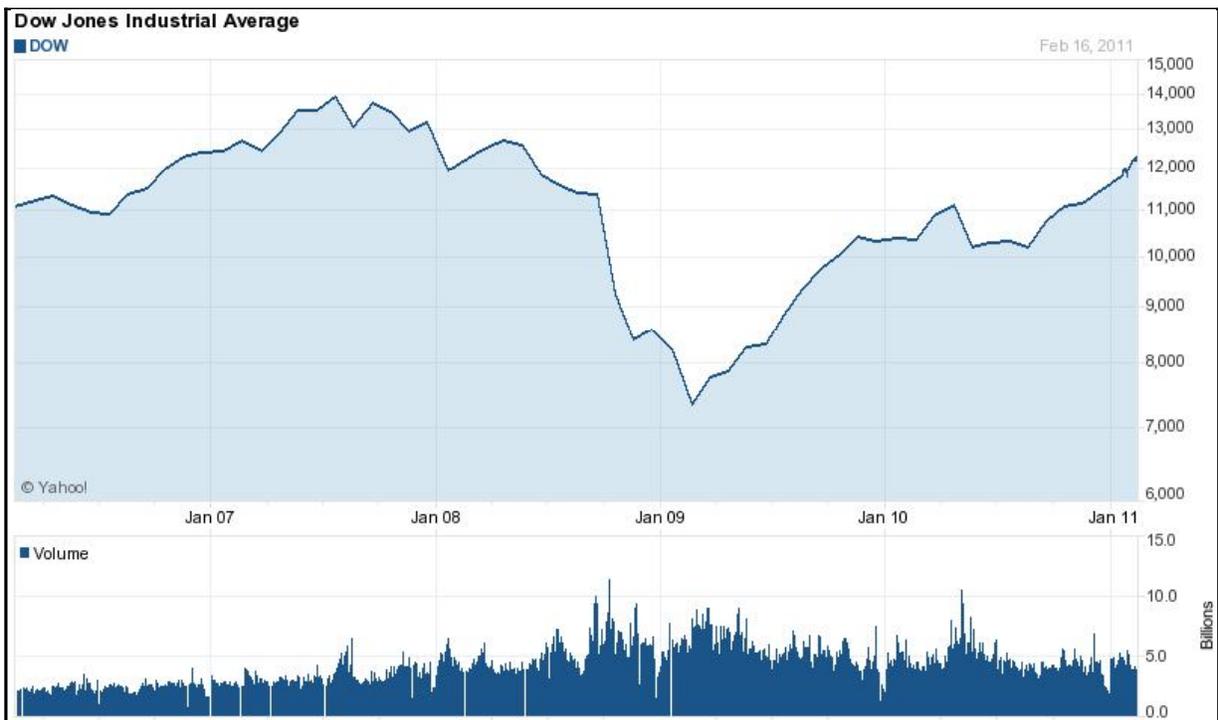
Figure 1 - Problematic, themes and research method.



From Slowdown to Downturn

At the end of the first quarter of 2008 some analysts began to realize that what had heretofore been considered as a slowdown in an overheated global economy was in fact something more serious. These concerns were confirmed in September of that year, when the credit crunch hit. A crisis that should only have affected lending banks and insolvent households contaminated the entire planet and resulted in a liquidity meltdown similar to that of 1929. This scarcity of credit exacerbated the slowdown in the real economy and acted as a brake on investment and consumption, the twin engines of growth. The impact of the downturn was quick to follow when corporates reacted with massive layoffs and cost cutting measures. The morale of households and entrepreneurs was seriously undermined.

Figure 2 - Dow Jones 2006-2011



Post Celtic Tiger Ireland

The uncertainty in global economic conditions following 9/11/2001 and the worst downturn in the history of the ICT sector made it particularly difficult for the firms Ireland was seeking to attract and keep to forecast product demand and hence investment. Doomsayers predicted that this situation would herald the beginning of the end of the

Celtic Tiger and demonstrate the fatal flaws in Ireland’s growth strategy: too narrow a focus on new technology and an over-reliance on the construction sector, which in 2006 accounted for 23% of GDP compared to a 12% EU average (11% in France).^v

While growth slowed as a result of the contraction in global trade - from an average rate of 10% in the 1990s and on into 2001 to around 5% for 2002 - Ireland weathered the negative global environment better than its EU neighbours (Figure 4). Despite this, some key players in the ICT sector were beginning to revamp their Irish operations in response to the slowdown. In February 2003 Dell reduced its sales and marketing staff by 20-30, while Microsoft cut 167 posts in Dublin following a reorganization of its Windows international division. Storm clouds were looming on the horizon long before the credit crunch hit.

Low-cost economies in Asia, Latin America and Central and Eastern Europe began to replicate the benefits Ireland had been using to attract foreign corporates. Reports in US newspapers were quoting salaries for call-centre workers in India at \$3-4 an hour, significantly lower than rates paid by Dell, for example, in both its US and Irish operations. Dell now employs over 3,000 people in its global business centre in India. Saronix moved its Dublin manufacturing operation to China, and Honeywell relocated 63 software jobs from Waterford to India.

Economists who had been predicting the end of the Celtic Tiger were proved right when the Irish economy went into freefall, reflected in the macroeconomic forecasts for 2009 - a sharp rise in job losses (after a decade of full employment), a deflationary trend and negative growth (Figure 3). The combination of the global banking crisis, the collapse in the property sector and the strong euro led the country into recession, reflected in the crash of the Dublin stock market in March 2008, when almost 4 billion euros was wiped off the value of Irish shares. Structural problems in the economy (rising inflation and wages) combined with the increased competition from emerging economies for foreign direct investment to reverse the fortunes of the Celtic Tiger.

The full extent of the contribution made by the construction boom (house prices had risen by 300% in ten years) to the vertiginous Irish growth rates began to be recognized. As property developers and construction firms began falling like ninepins, jobless rates soared and matters were made worse with flagship investors and employers like Dell announcing they were pulling out of the Emerald Isle,^{vi} while other multinationals (Pfizer, Procter & Gamble, Motorola, Vodafone and even Intel) began slashing jobs.

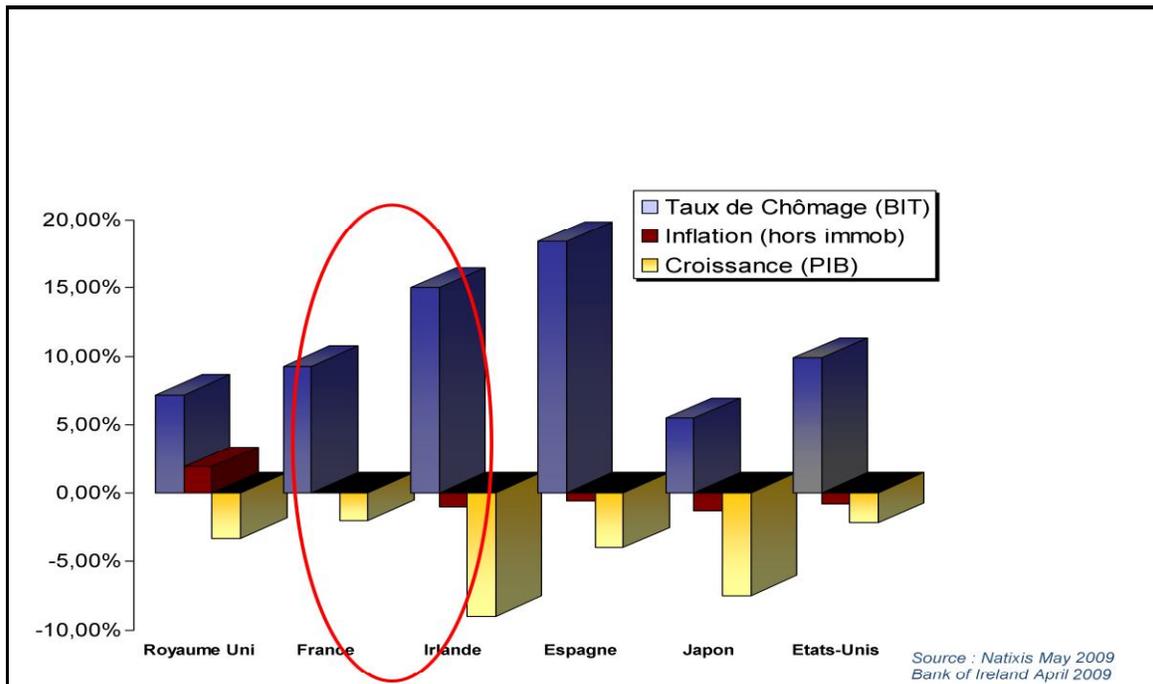
With the two pillars of the economy - high-tech exports and construction - in freefall, the country literally no longer had a leg to stand on. The government, unlike the French, had no leeway to compensate the decline in exports, investment and consumer spending by

increasing public spending, particularly since the social partnership agreements during the boom years had led to massive increases in public sector pay.

The Irish reaction to the crisis was to raise taxes and slash spending in a desperate attempt to maintain a declining competitiveness that had been masked by the construction and credit-fueled boom that led to artificially high growth rates and propped up an economy that appeared to be in secular decline.

The blanket guarantee given to the banks by the Irish government at the height of the 2008 financial crisis resulted in a budget deficit equivalent to 32% of GDP in 2010. As losses mounted at the banks, foreign investors began to withdraw deposits and the government found it more difficult to raise money on the bond markets. This led to the November 2010 bailout deal of €85 billion with the EU and IMF, who imposed an austerity plan to get the deficit down to 3% of GDP by 2015. Despite the meltdown of the financial sector, exports continued to perform well and increased by 10% in 2010, the fastest growth since 2000.

Figure 3 - Unemployment, inflation and growth 2009



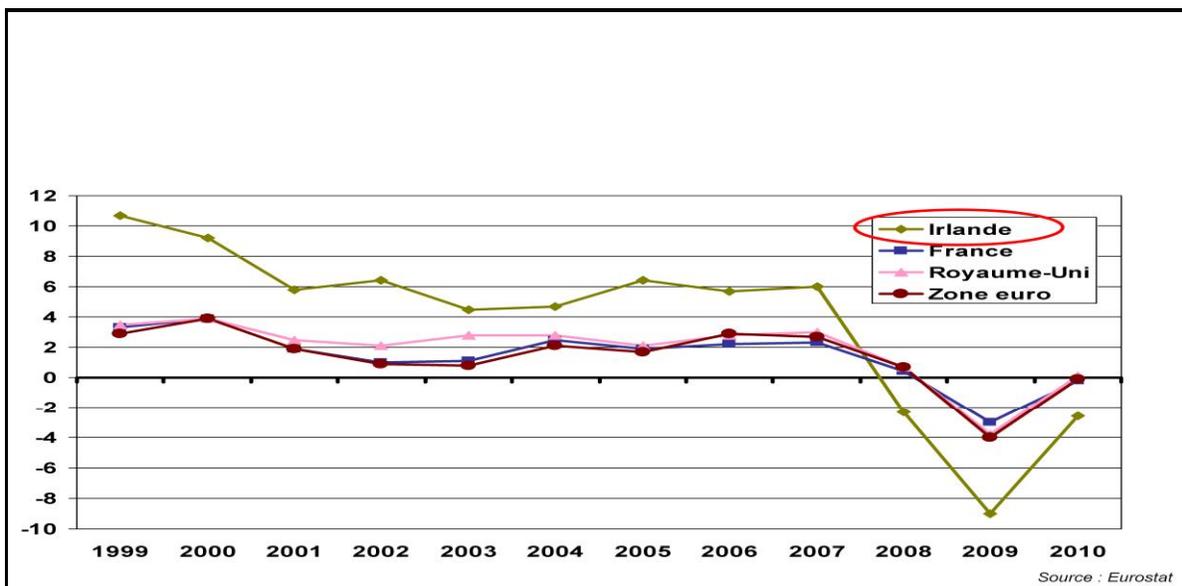
France

France, whose economic performance over the previous two decades had been sluggish, to say the least, in comparison with the results of the Irish *laissez-faire* economic policy, turned out to be relatively less affected by the downturn. It is as though the French reluctance to go down the ultra free market road that Ireland had taken, had given their economy a degree of immunity to the macroeconomic consequences of the credit crunch (Figure 4). Strong automatic stabilizers, a generous fiscal stimulus package (1.5% of GDP for 2009–10) and the much maligned French social safety net helped sustain consumption, while a lower exposure to the slump in global demand (in 2008 French exports accounted for 27% of GDP compared to 47% for Ireland) shielded France from the worst effects of the contraction in global trade.

The French recovery plan is highly interventionist, combining investment in public works, and research and development with aid to the private sector (in particular the auto industry) and a 3 billion euro social investment fund dedicated to retraining, remuneration of part-time work, aid for jobseekers who set up a business and youth employment schemes.

The downside of the French economic model is that the rigid labor markets and high social protection that cushioned the impact of the downturn are likely to act as a drag on recovery.

Figure 4 - Year on year GDP volume growth Ireland, France, UK, Eurozone



The Downturn and Jobs

Of most interest to HR professionals are the figures for unemployment. Ireland had been plagued by massive unemployment and emigration in the decade and a half preceding the advent of the Celtic Tiger. France had fared better (relatively speaking) over the same period, but the two countries had more than 10% of their workforces idle in 1997. The following year saw a sharp drop in the Irish jobless rate with near full employment at 4% becoming the norm from 2000 onwards, while the French rate never went below 8%, despite the global trade boom of the first decade of the 21st century.

Figure 5 - Unemployment 1980-2009

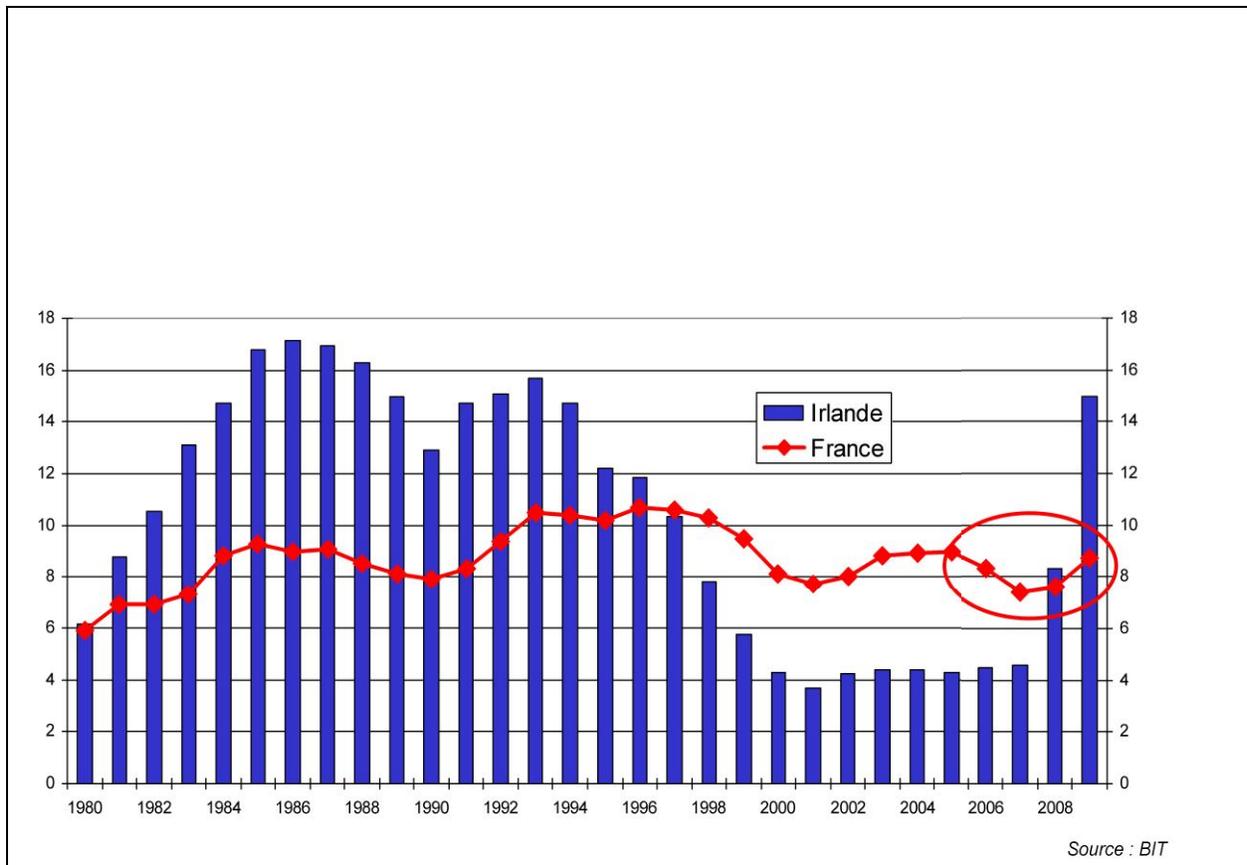
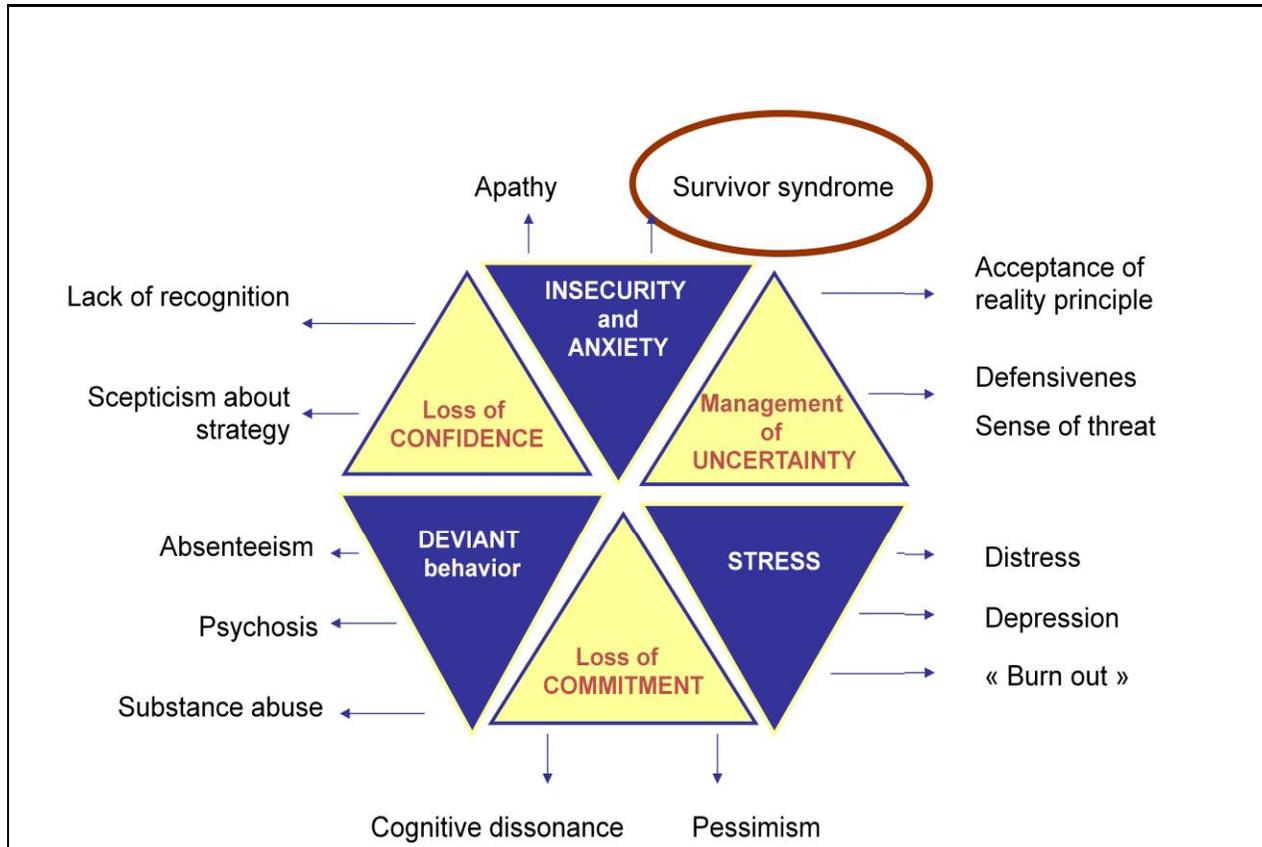


Figure 6 - Behavioural impact of the downturn



The behavioral impact of the downturn on employees is illustrated in Figure 6.

Survivor syndrome

Survivor syndrome can be defined as the resentment of and loss of identification with an employer felt by people who keep their jobs while seeing their colleagues laid off. These negative feelings are generated by the extra workload resulting in a higher degree of stress, coupled with a sense of potential betrayal caused by the fear that they may be the next to go. Massive media coverage of the credit crunch and its repercussion in the form of a downturn in the real economy served to reinforce what amounted to a collective psychosis about job security and financial solvency.

A survey of French workers carried out by the University of Paris in March 2009 (Figure 7) reveals the extent to which the downturn was prompting acute anxiety about their own situation as well as that of their colleagues and the companies that employed them. Note

the high degree of expectations demanded of the HR function by respondents and the cynicism of managers concerning innovative solutions proposed by staff.

Figure 7 - Perceptions of French workers on the impact of the downturn



Source : Université Paris XII survey, March 2009

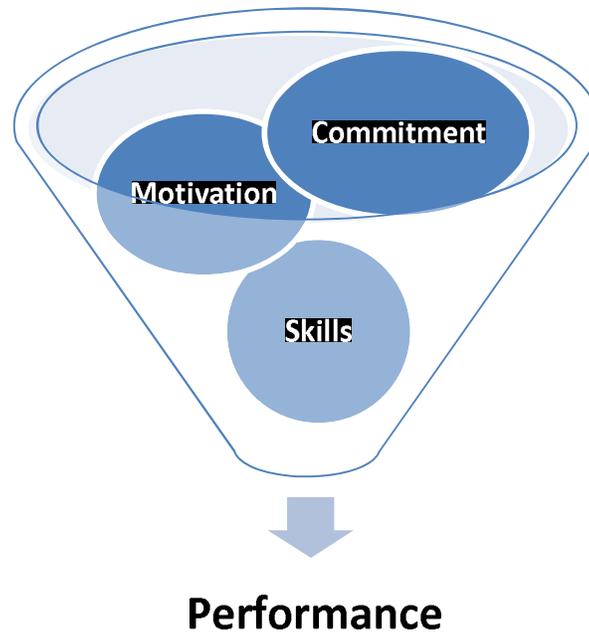
Performance

For the purposes of this project and for the sake of simplicity we borrowed the definition of employee performance used by the EADS HR department:

"Individual performance is workplace behavior expected by the firm in relation to objectives and results fixed by mutual agreement."^{vii}

While global corporate performance depends on the economic context (even poorly managed firms can make money during a boom), corporate strategy (investment and innovation) and social performance (crucially, labour relations), employee performance is a function of skills, motivation and commitment to the organization (Figure 8).

Figure 8 - Performance and Commitment



HR has developed a battery of metrics (goals, standards, targets, benchmarks, milestones, work outputs, customer satisfaction, performance management software) to measure both quantitative and qualitative performance but transforming these tools into action plans to improve productivity and corporate efficiency differs from one firm to another.

- Less than 50% of available indicators are actually used
- 40% of firms don't use them to improve processes
- 65% of firms only use them for managers

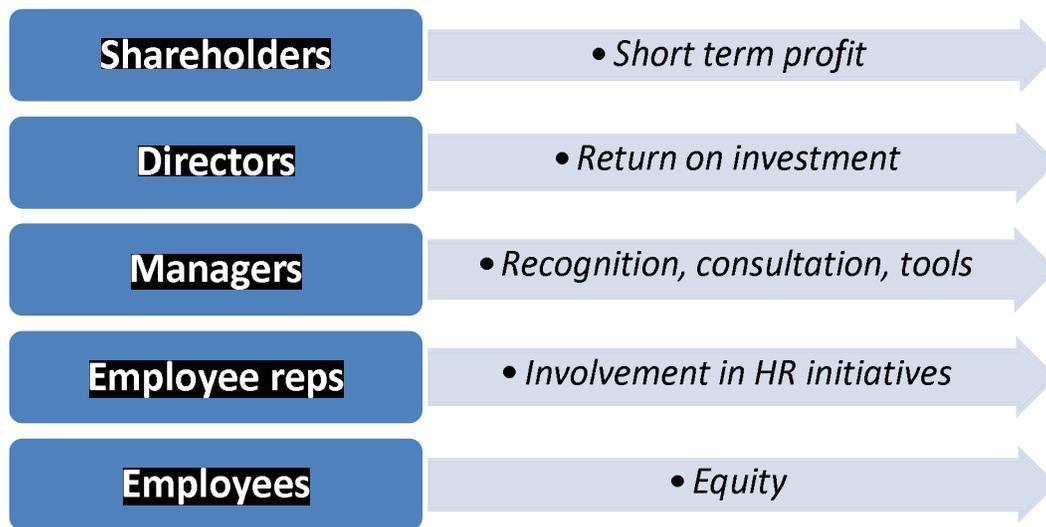
Moreover, little consideration has been given to the phenomenon of disengagement, the silent enemy of global corporate performance that represents a significant financial risk. Research by M@rs-Lab^{viii} has revealed a new form of disengagement in France whereby disenchanting employees vent their frustration through mental absenteeism.

While an employee who goes on strike or sick leave for a day costs the equivalent of 1 lost working day in the year, an ongoing reduction in his capacity to create value of 20% costs the company 40 working days.

The downturn entails the risk of modifying employee commitment in both France and Ireland by replacing reward with fear as the prime motivator, with employees becoming committed not to earning a bonus but to keeping their jobs.

In a period of crisis the various stakeholders within the firm have differing and sometimes conflicting expectations of HR in terms of how the workforce is managed and which levers are used to optimize performance (Figure 9).

Figure 9 - What stakeholders expect HR to deliver



The Downturn: HR Expectations

What impact would one expect a major downturn to have on performance management?

Firstly, the increased uncertainty of the market makes goal-setting problematic. The dilemma for managers is to find a balance between setting revised goals that are realistically attainable and reflect the business context, without adjusting goals downward to the extent that they are prejudicial to shareholder interests. If the goal is too high, the employee is being set up to fail. If it is too low, underperformance will be rewarded.

The performance management system needs to be aligned with industry and peer performance and a degree of flexibility introduced so that targets can be revised to take account of changing circumstances. This requires close monitoring of key result areas and more frequent performance reviews.

Secondly, the changed environment will have a major impact on talent management. In good times, career progression based on a mix of skills, goal attainment and seniority created high expectations and companies risked losing dissatisfied employees, particularly high performers, to competitors. This was prevalent in areas such as software development, consulting and investment banking.

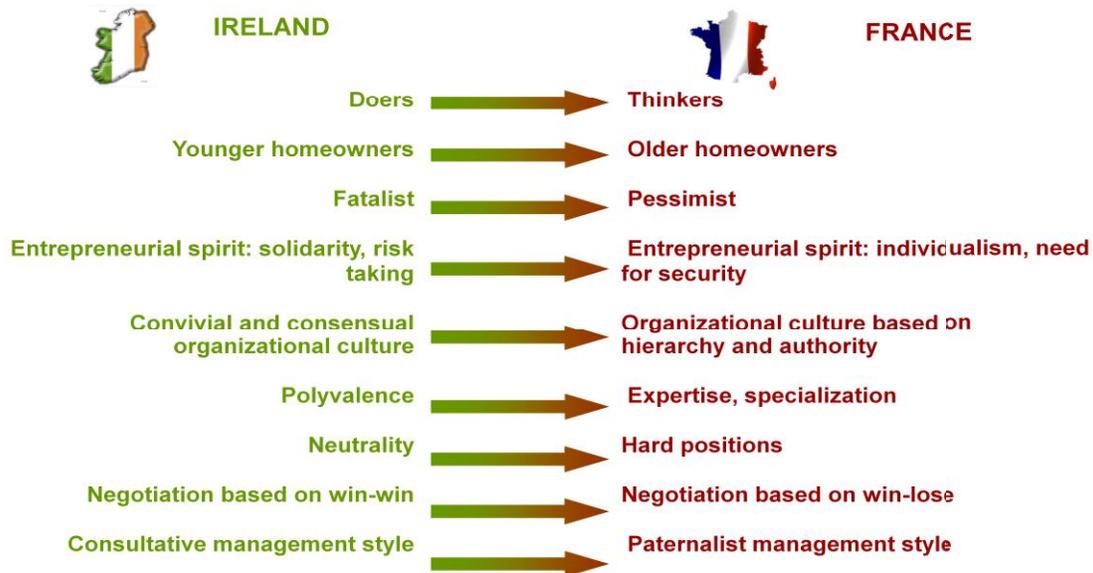
During a downturn, one would expect staff turnover to fall and the departure of talent to be less of a problem for HR. At the other end of the spectrum, average performers, who in good times might have enjoyed a relative degree of security despite mediocre results, are likely to find themselves first in line when layoffs become the order of the day. This situation is likely to focus their energies on improving their performance and shift their priorities towards the work side of the work/life scale.

Thirdly, training programs are likely to suffer due to budget cutbacks. This may not necessarily be a bad thing (except for training providers) as it will result in greater efficiency by reducing company money and employee time wasted on training investments that have no real payback. The downturn is also an opportunity for employees to upgrade their skills in anticipation of the turnaround and this can be integrated into their performance goals.

Before presenting the results of our field trip to Dublin, it is worth looking at the cultural differences between the Irish and French in terms of attitudes and work-related behaviour. These differences partially explain the contrasting economic performance of the two countries during the boom in global investment and trade that preceded the downturn, an example being the desire of young Irish people to own not just one but several apartments or houses, including investment in foreign property. This, coupled with the capacity to take significant financial risk, accounts for the property and credit bubble that helped fuel Irish growth rates during the Celtic Tiger era. The difference in organizational culture and management style also explains why the Irish workforce is more willing to accept personal financial sacrifices to enable their employers to weather the downturn.

It would be inconceivable for Irish employees to engage in the strong arm tactics used by French workers in the first semester of 2009 (sit-ins, sequestration of CEOs) in protest against layoffs and pay cuts. Common sense and pragmatism prevail in Ireland, whereas in France mistrust and defensiveness are the rule in relations between management and workers.

Figure 10 - Ireland and France: cultural contrast



Selected Case Studies^{ix}

The following case studies illustrate how HR departments in flagship corporates located in Dublin reacted to the downturn. The interviews, conducted by a team of French HR professionals, were conducted in the third quarter of 2009.

Information and Communication Technology:

Cisco Ireland

David Buckley, *HR Director Scotland and Ireland*

Cisco has 66,000 employees worldwide. Cisco Ireland was set up in 1996 and employs 210 staff - 60 in Dublin and 150 in Galway, of which 140 work in a Research and Development unit dedicated to voice technology and 10 in customer applications.

The company had planned to increase the R & D unit to 250 in 2010, but this expansion was subsequently postponed.

The average age of employees is 30, though this is not a recruitment criterion and does not appear in the company database. The entry level qualification required is five years post secondary study.

Cisco Ireland has a diverse workforce including Indians, Chinese, Germans and French.

Impact of the downturn

There was a 20% drop in sales from the beginning of 2009, explained by the postponement of client projects and the consequent drop in volume of orders.

Cisco detected the downturn through forecasting and is determined to take advantage of it to be number 1 when the turnaround comes. "We want to be recognized for not being affected by the downturn" according to David Buckley.

This has led to the maintenance of innovative projects and the utilisation of the company's financial strength to make acquisitions. "Now is the time".

There are no layoffs planned in Ireland and there is no global downsizing policy, even if less buoyant sectors are in recession.

Employees are nevertheless concerned at the uncertainty of the future. While the sales force has borne the brunt of the drop in business through a fall in their bonuses, engineers, particularly those working on long term projects (3 to 5 years) are less affected and financial teams have a strong activity.

Cisco has conducted two employee satisfaction surveys, one internal and the other outsourced, in order to collect frank opinions and favour transparency. Both surveys produced identical results.

- 98% of employees are proud to work at Cisco
- Concern at the lack of visibility about the future was revealed

Cisco was ranked 14th in the 2008 Great Place to Work survey and was disappointed not to be in the top ten. Focus groups were set up within two weeks of the survey being published.

There have been no pay cuts and salaries have been maintained at average industry level, with raises awarded if necessary. The talent management and HIPO policy continues as before with maintenance of the assessment and development centre but there has been a downward adjustment of objectives, especially for the sales force.

No change has been made to compensation package strategy, which is based on reward and recognition. There has been a switch from stock-options to free shares as this generates greater involvement and is considered to create value.

Cost-cutting measures have been implemented with fewer business trips and greater use of videoconferencing. Teleworking has not been imposed. Savings in the training budget have been made through increased use of e-learning and on-the-job training.

The strategy of using the downturn to enhance the Cisco business model is reflected in the acceleration of development projects and the proactive integration of change. An example of this is the passage from a hierarchical to a collaborative organizational structure.^x This has had an impact on leadership style with greater focus on the behavioural dimension.

The introduction of 360° feedback has been welcomed by staff although some resistance has been observed at Vice President level. The culture of transparent communication predates the downturn and the ensuing climate of trust that prevails in Cisco is a major asset in meeting the challenges posed.

Cisco has always paid for high performance and the active diversity policy, which is a core value of the company, is a valuable tool to leverage performance and encourage personal development.

Microsoft

Jean O'Connor, *HR Program Manager*

Microsoft has three Business Units in Ireland:

- European Development Center (529 staff) devoted to localization, including translation and packaging.
- EMEA Operations Center (603 staff) supporting business in Europe, the Middle East and South Africa and handling customer payments.
- Sales Marketing & Service Group (105 staff).

A new Research & Development Business Unit was set up in 2010.

Impact of the downturn

The downturn began to be felt as of September 2008. Certain sectors saw a sharp drop in business leading to the current layoff programs (fewer clients, less work). The redundancy process is based on voluntary departures and consultation with employees but no figures were provided. Staff turnover in June 2009 had risen from 3% to 6%. Recruitment is more closely targeted because "there is no room for error in hiring".

Although pay increases have been suspended, the bonus system has been maintained because it is linked to performance, the keystone of Microsoft policy.

The training budget has been reduced, except for HIPOs. E-learning is, not surprisingly, omnipresent in Microsoft and there is an abundance of online tools.

Two management development programs are directly linked to the downturn:

- Change Management, dealing with how to manage future change.
- Stress Management, which provides tools to deal with stress-related behavior.

A confidential unit has been set up where staff or family members can seek psychological help. The company is informed about the number of consultations and recurring problems.

No de-motivation has been observed but staff are more highly stressed and less confident than before. Despite this they maintain a positive attitude to their jobs and are glad to have one especially in a flagship company like Microsoft.

Staff appear to be more focused as a result of the recent layoffs, which have been characterized by a structured process, good communication and fair treatment. Because of this, Microsoft employees "retain trust in the workplace" and the company was ranked number one in the 2009, 2010 and 2011 Great Place to Work survey.

Best Practice:

- Communication in the form of conferences, forums, briefings and HR surveys
- Change Management training
- Stress Management training
- Health department including a nursery and massage facilities. "Employees must stay healthy in order to do the best work."
- Encourage enthusiasm
- Openness (anyone can e-mail Bill Gates)

Future challenges identified by the Microsoft HR team include the need to be in tune with global change and the ability to meet the expectations of a new generation with new skills

Paypal

Emmanuel Accasis

E-Bay acquired Paypal in 1998. Headquartered in Luxembourg, the European Support Centre opened in Dublin in 2003 with a staff of 25 and now employs 1,200 people composed of 20 nationalities, including 150 French. The average employee age is 25.

The company enjoys firm political support and numerous partnerships with local chambers of commerce, boosting Dublin's reputation as the internet capital of Europe.

Impact of the downturn

Paypal is an exception to the rule in that the company is hiring during the downturn, with 40 recruitments in the third quarter of 2009, a further 100 in 2010 and 150 announced in February 2011, contrasting with the worldwide saturation of the job market.

The downturn is actually considered to have had a positive effect, as staff turnover dropped from 30% in 2008 to 10% in 2010.

Lower starting salaries, less negotiation on the part of new hires and more abundant manpower have enabled Paypal to lower payroll costs.

Paypal's strategy is built on the Risk Operations Unit, whose task is to manage risk procedures and disputes, ideally with first call resolution. The target of solving problems at first call transforms call centres into support centres and may be to the detriment of former productivity metrics.

The strategy requires aggressive performance management in which low performers (5% per department) should reach peak performance within a sixteen week timeframe. High performers benefit from a quarterly pay for performance scheme. There is a weekly one on one objectives interview between manager and employee using Key Performance Indicators such as the Net Promoter Score.

Paypal's current situation shows an improvement in average employee level with less turnover and a slightly older, better trained and experienced workforce.

A recent employee satisfaction survey in which job satisfaction and the decision making process scored lowest indicates there is a potential risk of demotivation. Failure to take account of the professional aspirations of staff can lead to feelings of frustration and searching for management talent outside the company may compound these feelings.

Paypal has not experienced any of the conventional consequences of the downturn - partial redundancy, leave-taking, layoffs. The impact has rather been indirect and internal. While the fall in turnover has led to increased loyalty, senior staff have expressed demands for greater clarity in the decision process, more transparent management of career paths and improved communication.

Failure to address these concerns could lead to de-motivation.

Consulting:

Accenture

Mark Ryan, *Country Managing Director*; Susan Jeffery, *Head of HR*; Denise Banks,
Training and Development Manager

Accenture has 4 activities (Consulting, Enterprise, Service outsourcing and Solutions) and 5 business units (Communication & High tech, Finance, Product, Public services, Resources). There are 1,400 staff, of which 600 work in consulting and 700 in outsourcing, with a support staff of 100. There are no unions but staff representatives.

Five years ago policy was centralized in the USA where 70% of turnover was generated. Today initiatives are more local (with 30% of turnover in the USA). "Global programs but really local flavor".

Impact of the downturn

Staff turnover was around 11% before the downturn (mainly in outsourcing) but dropped to 5% as employees sought to keep their jobs.

Accenture declared there was a recession in September 2008, they were the first to do so. The impact began to be felt in January 2009 with the postponement of client projects and a perceived lack of management decision making.

Financial measures adopted included a freeze on raises but no reduction in salaries and suppression of bonuses at all levels. These decisions were accepted by top management, but somewhat less so by juniors who experienced feelings of frustration.

The focus of the strategy was on flexibility, in the form of part-time work, sabbaticals with partial maintenance of salary and leave taken between contracts. Mobility increased with a switch from the UK to Australia and Japan. Redundancies were based on individual performance as a function of group policy.

These measures, none of which has a real impact taken separately, were accompanied by a reduction in structural costs.

Non-financial measures taken in response to the downturn focused on human capital with dedicated staff on each site. "We put the emphasis on the personal motivation of employees and their family situation."

Training and Development

All training programs are continuing but rates are renegotiated with providers. Career plans are maintained with some promotions and specially trained career managers provide active support. Recruitment policy has not changed but there is a sharp drop in numbers hired.

Communication

There is a policy of straight talking at all levels and no ambiguity. All staff have the opportunity to take part in a Q&A with their Country Managing Director, who reserves one day every six weeks for appointments with employees.

Senior managers and managers have been trained to send a coherent message about the downturn with reinforced management by proximity.

Key corporate events, such as the Christmas party, have been maintained in order to federate staff and maintain networking.

Reaction of employees

There is a keen sense of solidarity and equity at Accenture, where everything is done to avoid redundancies. Everybody feels concerned. Irish employees are pragmatic and resilient. The practical takes precedence over the emotional. There is no needless anticipation, just management of the downturn.

The downturn has reinforced the Global Network core value. Key indicators (absenteeism, maternity leave, staff turnover) do not show any evidence of demotivation. On the contrary, staff are even more committed and hesitate to take advantage of measures to stay in place.

All actions are taken with a view to retaining talent for the future and to respect, reassure and empower employees.

Deloitte and Touche

Orla Graham, *Head of HR*; Mary Collins, *Senior Talent Manager*

Deloitte and Touche has 165,000 employees worldwide and 1,100 in Ireland based in Dublin, Cork and Limerick, providing audit, tax, consulting and corporate finance services to private and public sector clients in a variety of sectors

There are no unions and HR has a staff of 14.

The company was in the top 50 best workplaces in Ireland from 2003 to 2011, reaching the top 10 in 2008 and 2009.

Impact of the downturn

Until early June 2008, Deloitte & Touche had a high level of recruitment. In mid June there was a sharp drop as hiring was frozen and budgets cut. By December 2008 it became clear that the downturn would last.

This realization led to a massive cost-cutting plan. Various options were considered - voluntary departures, a layoff program, pay cuts and sabbaticals. The dilemma for the company was how to adhere to the *Respect and Dignity* credo.

In March 2009 PwC and KPMG announced layoff programs, while Deloitte announced its cost-cutting plan. This involved reductions in operating costs and payments to suppliers, pay cuts and a voluntary layoff program involving 80 staff.

Staff turnover dropped from 20% to 1% and there was no change in the 3% absenteeism rate.

Best Practice

The layoff program was carefully planned. The target population (120 people) were informed individually before the general announcement. Information meetings to announce the measures were held on same day throughout the company. The generous departure package was complemented by ancillary services such as outplacement and advice. On the closure of the program, for which there were 78 volunteers, an e-mail of thanks was sent to each of them.

An e-mail address for questions and reactions was set up during the process and will be active for 3 weeks every quarter.

Communication was clear, focused and followed up.

Pay cuts were gradual, from 5% to 10% according to salary, effective from the beginning of May. Bonuses were maintained from manager level upwards but were reduced by 50% and indexed to performance.

Staff projects (sabbatical, educational leave...) were encouraged and incentives proposed to compensate for salary loss (€8,000 for a sabbatical)

Deloitte's goal is to be the employer of choice among the Big 4 and the company has a recruitment program targeting brilliant young graduates hired for up to three and a half years. Talent management is ensured through technical and professional career pathways. Since the downturn promotions have been maintained but reduced by 40%. Performance evaluation has been made more demanding, including performance in management, where development plans are agreed with firing if no improvement is observed.

An *Equilibrium Program* has been put in place to enhance work/life balance.

The downturn has led to a 40% reduction in the training budget, focused mainly on ancillary costs such as travel and a reduction in outsourced programs. The Deloitte Academy with a dedicated premises continues to operate but with a reduced budget. Lunchtime language classes and lectures have been reinforced during the downturn.

Deloitte runs a global employee survey every 2 years and is ranked the best place to work every year.

The goal of HR is to maintain optimism in the workplace and to this end executives and managers attend regular lectures by motivational speakers.

PwC Ireland

Michael Doolin, *HR Director*

The average age of PwC Ireland staff is 29 and 56% are women.

Impact of the downturn

The downturn began to impact in November 2008 and began to worsen in January 2009. Staff turnover dropped from 15% to 3% and in 2009 PwC made the top ten of the Great Place to Work survey.

PwC adopted three 3 strategies to deal with the downturn.

The First was a cut in jobs and working time. There were layoffs (including in HR, from 31 to 22 people), a recruitment freeze, a reduction in the working week (to 4 days for some activities), unpaid Christmas leave and incentives to take long term leave.

Second, cuts in payroll of 5% between 25K and 35K and 10% over 35K. Bonuses were slashed by 70% and overtime rates were reduced. Despite these measures, PwC compensation policy is still attractive with free health insurance and 75% pay for one year's maternity leave (reduced from 100% since the downturn) and staff are satisfied with working conditions (attractive premises, gym).

Third, cuts in non payroll costs such as free fruit and biscuits and travel & entertainment.

Best Practice

Communication is essential and must be transparent and comprehensive, including business results, expectations, effects of the downturn and HR strategy. The message must be carefully formulated to help staff understand what is happening and why. "You can't communicate too much."

Training is essential during a downturn, but a specific model for internal training is best.

People are part of the problem but also part of the solution. Talent management is not a priority but there are projects for the next 12 months, particularly in the tax and insurance department.

Pharmaceuticals:

GlaxoSmithKline

Brian O'Driscoll, *Consumer & Pharmaceutical HR Director*

Before the downturn hit, GSK global strategy already aimed to change the company's business model to a more centralized organization, involving a reduction in staff from 100,000 to 55,000.

There are three sites in Ireland (Dublin, Cork and Dungarvan) employing 2,000 people in consumer products (energy drinks and dental care) and over the counter drugs.

The Sales and Marketing department is located in Dublin and production is in Cork.

There have been three restructuring plans in recent years involving 40 job cuts. There are now 256 people in Dublin, 125 in Consumer and 131 in Pharmaceuticals.

Staff turnover has gone from 1.5 % to 3 % (layoffs included) and absenteeism was 1.4 % in 2009 (up 4% on 2008).

Staff are happy to work at GSK, are highly results-oriented and teleworking is widespread.

Impact of the downturn

Restructuring has been ongoing for several years, the downturn only reinforces a situation of continual change.

There was a sharp drop in consumer sales as of Spring 2008., particularly in OTC products. Employees are concerned for their jobs and apply themselves more to remain employed.

GSK implemented a preexisting plan to deal with the downturn. This was a two-day programme for senior executives called *Stress Management*. It was cut to a half day monthly workshop, renamed *Resilience* and extended to all staff on a voluntary basis (70% of staff are currently taking the program). Facilitated by HR and internal delegates (trust being a condition for the success of the initiative), it enables staff to manage pressure using emotional, physical and spiritual energy and is backed up by a confidential helpline. An effectiveness study is planned for the end of the process.

GSK has been ranked in the 50 best companies to work for over six consecutive years and this is seen as an external measurement of trust within the company.

Overall the training budget has been cut by 50%, mainly because of the reintegration of previously outsourced soft skills training. External training ("it costs a lot of money") has been maintained for mobile and competent key talent.

GSK has always communicated about strategy in a comprehensive and transparent manner, so no specific communication process has been put in place for the downturn.

The *Individual Empowerment* program has taken a hit as the downturn compromises the tolerance of managers towards mistakes of their teams inherent in learning new responsibilities.

GSK's target is summarized in the phrase "better performance with fewer people".

Schering-Plough Ireland

Les Richards, *Senior Director HR*; Triona Joyce, *HR Manager*

Schering-Plough employs 30,000 people worldwide. It is the global number two healthcare company and has 1,800 staff in Ireland (of which 20 in HR) with plants in Bray (veterinary), Brinny (biotechnology) and a sales and marketing located in Swords. Local business accounts for 1% of sales so the operation is dependent on growth in the global market.

As part of the company's global efficiency and cost-reduction program begun in April 2008 to deal with global over-capacity, the Bray plant will be closed in 2011 with the loss of 240 jobs.

Eight of the top ten global pharmaceutical companies have operations in Ireland, mainly due to the tax advantages.

Impact of the downturn

At mid-2009 no effects linked to the downturn had been observed - "illness still exists" - but HR is anticipating that there may be an impact in the future.

Current challenges facing Schering-Plough relate primarily to the competitiveness of Irish sites in the global group, due to high labour costs. The pipeline of new drug development is weak and there is a departure of talent (mainly to Australia) with a resulting loss of investment in recruitment and training.

Schering-Plough Ireland is implementing a number of measures to meet these challenges.

- Right Sizing to balance employee numbers to the volume of work
- Talent management to hire, train and retain key people with the right skills
- Regular and transparent communication
- Job-sharing and flexible working hours to enhance work life balance

Despite the announcement of the closure of the Bray plant, staff turnover dropped from 13% to 7%, with Swords seeing a drop from 6% to 2%. The training budget was reduced from 4% to 3% of payroll and there is an increased use of fixed term contracts for better internal mobility.

Career breaks are being encouraged and 8 of the 550 people in Swords are currently using this opportunity.

In the long term, Schering-Plough Ireland is expecting the downturn to have a delayed impact on the healthcare sector, due to reduced public and private health budgets and financial problems in health insurance, leading to a drop in sales. The first sign of this is that year to date sales are down 25% compared to last year.

Dealing with this threat requires continuous and transparent communication (especially with the unions) on the company's financial situation and developments in the healthcare sector to make staff aware of potential measures. These will include a pay freeze, a 50% reduction in bonuses, review of performance standards, restructuring and right-sizing with up to a 20% reduction in staff at Swords. High pension costs (20% of labour costs) also need to be addressed, possibly by a switch to flexible benefit schemes.

HR strategy for the downturn is to focus on commitment and motivation, with special rewards for high performers.

Conclusion - Best HR Practice in the Downturn

The goal of this project was to discover the best practices of exemplary Irish companies in managing performance during the downturn. We conclude with a summary of our findings using as a framework three of Ulrich's HR role models: Business Partner, Employee Champion and Change Agent.^{xi} All of the corporates we met demonstrated an ability to take proactive steps to handle the consequences of the downturn. What is striking is the similarities in the strategies adopted by players in each of the chosen sectors. Cisco and Paypal have adopted an aggressive stance, seeing the downturn as an opportunity to be seized rather than a threat to be confronted. Neither firm has turned to downsizing, layoffs or pay cuts as a way of dealing with the changed economic environment but both demonstrate a firm belief in their respective business models. Cisco continued its strategy of growth through acquisition and PayPal pursued organic growth and continued to hire. Microsoft, while it has reduced staff numbers somewhat and suspended pay increases, has maintained its system of performance-based bonuses.

The consulting firms have adopted a strategy combining cost-cutting and flexibility, focusing on payroll costs. Accenture froze pay and suspended bonuses, while Deloitte and PwC actually cut pay and slashed bonuses. Reductions in staff were reported by all three firms.

The most drastic measures were observed in pharmaceuticals, although for both GSK and Schering-Plough the right-sizing strategy appears to have been on the cards before the downturn hit.

Despite these differences, all of the HR executives we met showed a commitment to the principles of transparency, communication and equity in their performance management. We now turn to a presentation of our findings under three headings borrowed from the Ulrich model: Business Partner, Employee Champion and Change Agent.

Business Partner - "Right Sizing"

Training

- Reduce external training budgets (up to 50%)
- Refocus on internal management training & mentoring
- Use e-learning
- Transpose training into immediate action

Flexibility

- Only use mass layoffs a last resort
- Encourage voluntary departures
- Favour sabbaticals
- Use part time
- Use up all leave
- Shared responsibility for the same post
- Teleworking

Remuneration

- Gradually reduce total payroll
- Across the board cuts
- Remunerate performance only
- Maintain purchasing power for low salaries
- Free shares instead of stock options
- Prepare post-downturn salary policy

Performance management

- Focus on low performers (identify, develop, control)
- Focus HR policy results and objectives
- Redefine Balanced Score Card in function of strategy and associated performance indicators

Cost cutting

- Readjust workspace (flexible office and work)
- Cut costs (travel & entertainment, fringe benefits)

Employee Champion - "*Care about people*"

Communication Pull

- Mailbox for questions & feedback
- Employee satisfaction surveys
- Ensure follow-up of feedback
- Open days with CEO

Managing departures

- Identify activities that will not be part of future core business
- Highlight financial context that justifies layoffs
- Set up services to accompany laid off staff

Managing survivor syndrome

- Good management of departures reassures employees who stay
- Set up a stress management program at all levels
- Provide support to employees in difficulty

Compensation

- Show exemplarity and solidarity by cutting senior executive salaries by a higher percentage
- Do not cut lowest salaries
- Keep symbolic rewards (Christmas functions, prizes)

Workplace

- Favour work/life balance
- Set up stress management units open to families of staff
- Favour preventive health care

Change Agent - "Act quickly to implement change"

Communication Push

- Objective: everyone at every level should buy into the message
- Make your communication transparent, coherent and ongoing
- Communicate about the stakes for the business and HR strategy
- Master communication by training managers, they are your communication vectors
- Stay in contact with unions who understand the context

Talent management

- Look after and develop key talent, not necessarily by remuneration
- Continue hiring, but only for key positions

Mobility

- Promote internal mobility even if the employee/post fit is not optimal
- Manage transition using fixed term contracts for job openings
- Set up inter-functional mobility
- Post staff to subsidiaries in development until the market improves

Innovation

- See the downturn as an opportunity to speed up rollout of innovative projects
- Use HR practices to improve work efficiency
- Listen to employee proposals about innovation and let them take part in implementing them

Employer brand

- Build internal trust to
 - Develop employee ability to innovate, create and take risks.
 - Enhance productivity and profitability
- Build external trust to
 - Get more qualified applications
 - Lower staff turnover
 - Raise customer satisfaction and loyalty

Epilogue

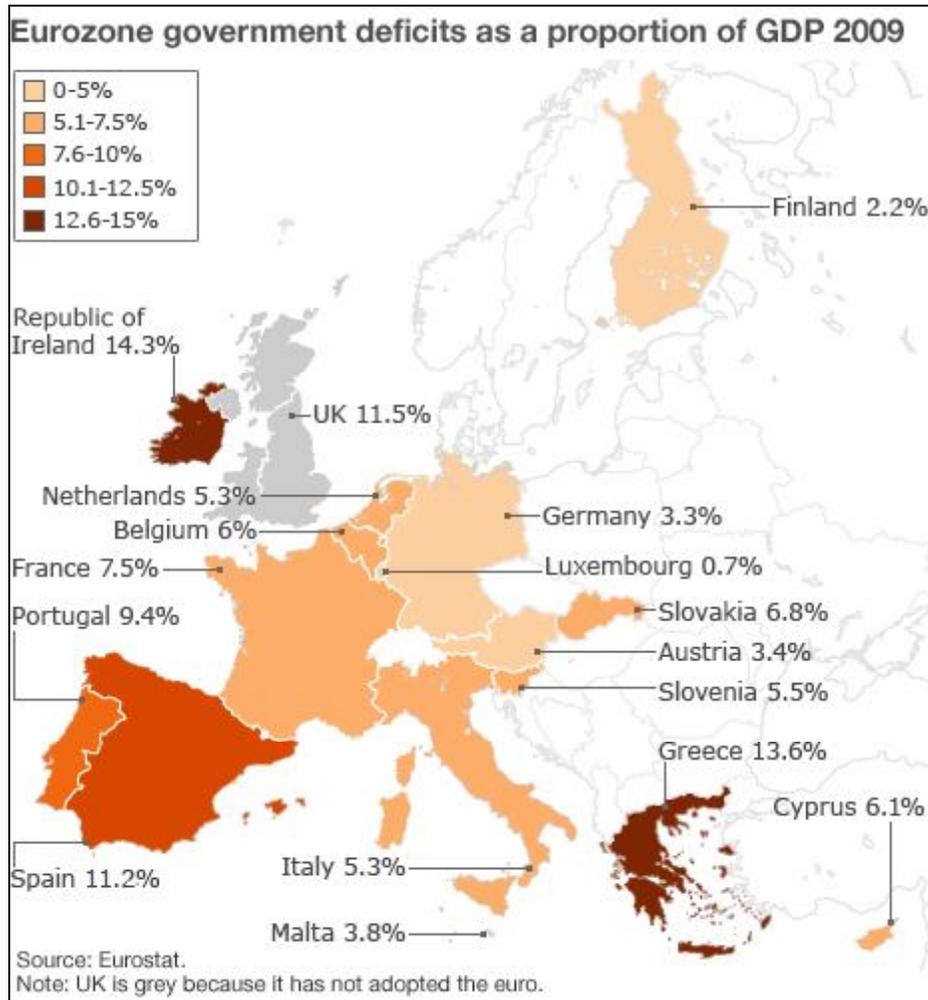
We have noted above that the expected impact of the current downturn on performance would be observed principally in employee motivation and commitment, with the inherent risks of disengagement and the manifestation of survivor syndrome among those who held on to their jobs. For HR management, we identified three main areas of concern - goal setting, talent management and training. The field study not only confirmed these hypotheses, but demonstrated that the HR professionals in the corporates we studied were ahead of the curve both in anticipating the consequences of the downturn and taking appropriate measures to minimize its impact on performance.

The key principle that emerged was to contain costs without demoralizing staff or compromising their development. Thus, cost reduction in training budgets focused on reducing extraneous costs (replacing expensive external providers with internal ones, making greater use of e-learning and mentoring) while continuing to recognize that training is a key factor in the creation of future corporate value. The cost of performance management and compensation was reduced by achieving greater efficiency, with a stricter focus on results as a condition for promotion and bonuses and a concerted effort to deal with low performers. Reductions in staff were characterized by creativity and flexibility, evidenced by the widespread use of voluntary departures, sabbaticals, redeployment and an emphasis on work-life balance.^{xii} The role of talent management was reinforced both in terms of retention and recruitment as it was recognized that it is only by using the talent of its workforce that a corporate can continue to deliver results when times are tough. The downturn was also seen as an opportunity to accelerate change by implementing organizational innovations, mobility and enhancement of the employer brand.

The twin pillars supporting HR strategy in these corporates were found to be communication and equity, both of which are essential to build a climate of transparency and trust and reinforce employee engagement, upon which business performance ultimately depends. The HR professionals who contributed to this study all showed that they are guided by these principles, seeing the downturn as a transformational experience in order to emerge in a stronger position when the upturn comes.

Our study has also demonstrated that culture is a determining factor in how a workforce reacts to corporate management of a downturn. This point is starkly illustrated by the contrasting behavior of the Irish and Greek working populations^{xiii} to the austerity measures imposed by their governments in response to the 2010 debt crisis and subsequent bailout.

Figure 11 - Eurozone Deficit Map



For managers in emerging economies such as China, performance equates principally to hard outcomes - what quantities the employee produced. In advanced economies, it is more a question of competence and behavior - commitment, teamwork, flexibility. The successful management of performance by the companies we have studied shows that this ability to adapt to changing circumstances is a crucial factor for corporate survival and growth.

Appendix 1 - Research Team

Anne de Beauschesne, Pierre Baudry, Patricia Benamou, Laurence Bennet, Saad Berrada, Mederic Bertail, Sandrine Bion, Claire Blaizot, Aurélie Blanchet, Yann Cariou, Arnaud Chabert, Christelle Colas, Frédéric Cormier, Arielle Delfosse, Anne-Sophie Dubois, Nicolai Ebmeyer, Nathalie Emmenecker, Mickaël Evrard, Laurence de Faveri, Nora Fess, Anne Findelair, Sidonie François, Ghislain de Gestas, Clarisse Gibert, Sylvie Grastilleur, Charlène Herry, Nadine Hobbs, Karine Jenck, Laure Juilliere, Rachel Jung, Chantal Lair, Florence Lerot-Calvo, Laetitia Marny, Sophie Nègre, Aurore Ouillon, Carole Renard, Caroline Robard, Antoinette Rochas, Valentine Rosset, Magali Sane, Fabien Spitz.

Appendix 2 - Questionnaire sent to participating companies

Maintaining Performance during the Downturn

1. Your key figures

- Number and category of employees

- Staff turnover and retention

2. What impact has the downturn had on :

Compensation budgets

Pay-for-performance policy

Training and development

Trust in the workplace

3. Which employee performance metrics (goals, standards, targets, benchmarks, milestones, work outputs, customer satisfaction, performance management software...) are you using to measure the impact of the downturn?

4. How have you responded to the downturn?

Communication (HR surveys, briefings, webcasts, conferences, forums, seminars, Q & A...)

Downsizing

Re-engineering

Operational change

Structural change

Recruitment freeze

Redeployment and mobility

Layoffs

- Unpaid leave (charity work, education...)
- Reducing overheads (please specify)
- Innovation and best practise (please specify)
- Greater use of non-financial benefits (please specify)
- Other (please specify)

5. What impact has the downturn had on your employees?

Positive

- Challenge
- Sharper focus on the job
- Risk-taking
- Extra workload
- Concern with leadership and people management
- Other (please specify)

Negative

- Insecurity
- Stress
- Demotivation
- Resistance to change
- Other (please specify)

6. What are you doing to mitigate the impact of the downturn and maintain performance?

Footnotes

ⁱ Becker, B. E., & Huselid, M. A. (1998). *Higher performance work systems and firm performance: A synthesis of research and managerial implications*. *Research in Personnel and HR Management*, 16, 53-101.

ⁱⁱ The extent to which the job market collapsed is illustrated by the 99% drop in operating profit for fiscal year 2008-2009 posted by CPL Resources, a leading Irish recruitment firm.

ⁱⁱⁱ Appendix 1

^{iv} See questionnaire in Appendix 2

^v *Irish Construction*, October 2006 report by Dermot O'Leary, Goodbody Stockbrokers' Chief Economist .

^{vi} In October 2008 Michael Dell announced that he was closing the Limerick facility and moving to Poland. Over 10,000 people worked for Dell and dependent contract companies and suppliers.

^{vii} Terry Gillen defines performance management as "a process which contributes to the effective management of individuals and teams in order to achieve high levels of organisational performance. As such, it establishes shared understanding about what is to be achieved and an approach to leading and developing people which will ensure that it is achieved." (*Performance management and appraisal*, London: Chartered Institute of Personnel and Development, 2007).

^{viii} <http://blog.mars-lab.com/>

^{ix} Space constraints precluded the presentation of the following participating corporates, whose valuable inputs to the study have been integrated into this article: Irish Business and Employers Confederation (Sheila Tracy, Head of Industrial Relations and HR for health, technology and finance); Institute of Public Administration (Dr. Cedric Chau); Electricity Supply Board (Michael Loughnane, Corporate HR Director and Des Moore, Corporate HR Officer, Learning and People Development); Great Place to Work Institute (Cathal Divilly, Managing Director); Institute of Sport (Gary Keegan, Director of High Performance Management); Central Key and Hardware (Fergus Casey, Manager and Niamh Allman, Office Manager).

^x "When you have command and control by the top 10 people, you can only do one or two things at a time. The future is about collaboration and teamwork and making decisions with a replicable process that offers scale, speed, and flexibility." - John Chambers, Cisco Chairman and CEO, quoted in *Business Week*, March 12, 2009.

^{xi} Ulrich, D. (1997) *Human resource champions: the next agenda for adding value and delivering results*.

^{xii} This is in marked contrast to the response of many corporate HR departments to the downturn of the late 1980s and early 1990s, which in many cases amounted to wholesale downsizing with no consideration of the damaging consequences that would ensue, not only to those who lost their jobs, but to those who remained.

^{xiii} In May 2010 violent political demonstrations and strikes took place in Greece, while in Dublin a demonstration to protest against the austerity measures attracted less than 500 people.