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WHITE PAPER

March 2010

China's Red Flags

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In the aftermath of the credit crunch, the outlook for most developed economies appears pretty bleak. Households need to deleverage. Western governments will have to tighten their purse strings. Faced with such grim prospects at home, many investors are turning their attention toward China. It's easy to see why they are excited. China combines size – 1.3 billion inhabitants – with tremendous growth prospects. Current income per capita is roughly one-tenth of U.S. levels. The People's Republic also has a great track record. Over the past thirty years, China's Gross Domestic Product has increased sixteen-fold.

So what's the catch? The trouble is that China today exhibits many of the characteristics of great speculative manias. The aim of this paper is to describe the common features of some of the great historical bubbles and outline China's current vulnerability.

Section One: Identifying Speculative Manias and Financial Crises

Can we confidently identify a speculative mania before the bubble bursts? Is it possible to spot an incipient financial crisis before it explodes in our faces? Based on the performance over the last decade of most leading economists, central bankers, and Wall Street pundits, the answer to these questions is surely a resounding NO!

In fact, bubbles can be identified *ex ante*, as the economists like to say. There also exists an interesting, if rather neglected, body of research on leading indicators of financial distress. A few years ago, many of these indicators were pointing to rising economic vulnerability in the United States and other parts of the globe. Today, those red flags are flying around Wall Street's current darling, The People's Republic of China.

Past manias and financial crises have shared many common characteristics. Below is an attempt to list ten aspects of great bubbles over the past three centuries.

1. Great investment debacles generally start out with ***a compelling growth story.*** This may be attached to some revolutionary new technology, such as railways in the nineteenth century, radio in the 1920s, or more recently the Internet. Even when the new technology is for real, prospective rates of growth may be exaggerated.[1] Early growth spurts are commonly extrapolated into the distant future.

   Alternately, the growth story may be spun around the exciting prospects of a particular economy. A country's potential ascendancy to economic dominance has on several occasions proved an alluring snare to investors. Investors in the Mississippi Bubble of 1719 were attracted by the promise that John Law's *Compagnie des Indes* would make France the master of Europe. In the late 1980s, investors flocked to Tokyo believing that Japan was about to unseat the United States as the world's leading economic superpower.

2. A blind ***faith in the competence of the authorities*** is another typical feature of a classic mania. In the 1920s, investors believed that the recently established Federal Reserve had brought an end to "boom and bust." In the "New Era" of the twenties, stocks were

[1] This occurred during the Internet bubble. It was widely put around at the time that Internet traffic was doubling every three months. Yet as Professor Andrew Odlyzko wrote in November 2000 *(Information Impacts Magazine)* "The story of Internet traffic doubling every three months is a fable that seems to have arisen from a rather brief spurt of traffic growth in 1995-1996. The astronomical growth rates of the popular fable can be dangerously misleading in leading to poor choices in technology and unnecessary costs."

considered to have become less risky and valuations soared. A similar argument was trotted out in the mid-1990s when it was widely believed that the Greenspan Fed had succeeded in taming the business cycle. The "New Paradigm" disappeared in the bear market of the new millennium. It was soon replaced with the "Great Moderation" thesis of Ben Bernanke, which suggested that high levels of mortgage debt made sense because monetary policymaking was so vastly improved. Alas, the Great Moderation turned out to be yet another example of that always deluded but oft repeated claim that "this time is different."

3. ***A general increase in investment*** is another leading indicator of financial distress. Capital is generally misspent during periods of euphoria. Only during the bust does the extent of the misallocation become clear. As the nineteenth century economist John Mills observed: "Panics do not destroy capital; they merely reveal the extent to which it has been previously destroyed by its betrayal in hopelessly unproductive works."[2]

   During the British railway mania of the 1840s, three separate train lines were built between London and Peterborough. One would have sufficed. After the tech bubble collapsed, new fiber-optic pipelines experienced tremendous overcapacity that lingered for years. A recent IMF World Economic Outlook observes that countries with a high investment share of GDP tend to suffer the steepest and most prolonged economic downturns.[3]

4. Great booms are invariably accompanied by a ***surge in corruption.*** As the great Victorian journalist and economist Walter Bagehot put it, "All people are most credulous when they are most happy; and when money has been made ... there is a happy opportunity for ingenious mendacity."[4] In his book *The Great Crash,* John Kenneth Galbraith described a cycle of fraudulent behavior, which he termed the *bezzle.* "In good times people are relaxed, trusting, and money is plentiful. But even though money is plentiful, there are always many people who need more. Under these circumstances the rate of embezzlement grows, the rate of discovery falls off, and the bezzle increases rapidly."[5]

5. Strong growth in the money supply is another robust leading indicator of financial fragility. ***Easy money*** lies behind all great episodes of speculation from the Tulip Mania of the 1630s – which was funded with IOUs – onward. Low rates lead investors to chase after higher yielding and riskier investments. According to Walter Bagehot, "John Bull can stand many things, but he cannot stand two per cent." When interest rates fell to this meagre level, he commented, people were driven to "invest their careful savings in something impossible – a canal to Kamchatka, a railway to Watchet, a plan for animating the Dead Sea, a corporate for shipping skates to the Torrid Zone."[6]

6. ***Fixed currency regimes*** often produce inappropriately low interest rates, which are liable to feed booms and end in busts. This lesson was ignored by the creators of the European Monetary Union, which brought low rates and real estate booms to its smaller members, Spain and Ireland. A fixed exchange rate regime also contributed to the Asian crisis of 1997. Large capital inflows are another leading indicator of financial instability.

7. Crises generally follow a period of ***rampant credit growth.*** In the boom, liabilities are contracted that cannot subsequently be repaid. Economists at the Bank for International Settlements have shown that sharp deviations of credit growth from past trends have predicted financial crises with an 80% success rate.[7] A more recent academic study of numerous credit booms over the last century and a half concludes that "lagged credit growth turns out to be a highly significant predictor of financial crises."[8]

8. ***Moral hazard*** is another common feature of great speculative manias. Credit booms are often taken to extremes due to a prevailing belief that the authorities won't let bad things happen to the financial system. Irresponsibility is condoned. During Alan Greenspan's tenure at the Fed there was a general

[2] J. Mills, "On Credit Cycles and the Origins of Commercial Panics," *Transactions of the Manchester Statistical Society*, 1867-68.

[3] IMF World Economic Outlook, October 2009.

[4] W. Bagehot, *The Collected Works of Walter Bagehot*, Volume IX.

[5] J.K. Galbraith, *The Great Crash*

[6] W. Bagehot, *The Collected Works of Walter Bagehot,* Volume IX

[7] "Asset Prices, Financial and Monetary Stability, Exploring the Nexus," Claudio Borio and Philip Lowe, BIS, July 2002.

[8] Credit Booms Gone Bust: Monetary Policy, Leverage Cycles and Financial Crises, 1870-2008," Moritz Schularick and Alan Taylor, NBER, November 2009.

understanding that the central bank would cut rates and flood the markets with liquidity whenever speculators ran into trouble. The "Greenspan put" underwrote both the tech bubble of the late 1990s and the real estate mania of the new millennium.

9. A rising stock of debt is not the only cause for concern. The economist Hyman Minsky observed that during periods of prosperity, ***financial structures become precarious.*** Investments financed with borrowed money don't generate enough income to either service or repay the loan (what Minsky called "Ponzi finance"). As a result, the financial system becomes increasingly vulnerable to what would normally be considered insignificant events, such as a small rise in interest rates or a decline in asset prices. The highly leveraged investment trusts of the 1920s and, more recently, the subprime CDOs of the last decade, are classic examples of Ponzi finance.

10. Dodgy loans are generally secured against collateral, most commonly real estate. Thus, a combination of strong credit growth and ***rapidly rising property prices*** are a reliable leading indicator of very painful busts.[9] Real estate collapses are made worse when there's been a large amount of new building, as homeowners in Spain, Ireland, and the U.S. can testify from fresh experience.

In summary, researchers find that rapid credit growth is the most important leading indicator of financial instability. The presence of an asset price bubble is the second most reliable crisis indicator. Low interest rates and strong money growth are also good warning signs. Real estate busts often produce severe and long-lasting economic downturns, while investment booms may result in a misallocation of capital. Classic manias have often been accompanied by a compelling growth story and an uncritical faith in the competence of the authorities. They are exacerbated by moral hazard and accompanied by rampant corruption.

Section Two: Analyzing the China Dream

It would be pleasant to think that the wrenching experience of the Global Credit Crunch and Great Recession would have brought a return to financial sobriety around the world. Unfortunately, this doesn't seem to be the case. Another bout of easy money hasn't succeeded in reflating the moribund U.S. housing market. On the other side of the world, however, China is showing many of the classic symptoms of a great speculative mania alongside several of the leading indicators of financial fragility.

1. ***The China Dream.*** For centuries, foreigners have pondered how to make money from China's vast population.[10] Today, the China Dream is more vivid than ever. The People's Republic has more than 1.3 billion citizens, making it the world's most populous nation. China's rural population is gradually moving into its cities. A further 300 million country-dwellers – that's roughly the same size as the U.S. population – are expected to head toward towns and cities over the next decade. *It is generally assumed that the Chinese economy will continue to grow by around 8% annually in the coming years.*

   In recent months, China has overtaken Germany as the world's number one exporter and Japan as the world's number two economy. China is also the world's largest market for many commodities and recently surpassed the U.S. as the largest national car market. Chinese workers currently earn around one-tenth the wages of their American counterparts. However, their future income growth is expected to converge with Western levels, following the path of Japan in the three decades after 1960.

   The inevitability of China's ascent to world economic primacy is reflected in the titles of recently published books, such as Martin Jacques's *When China Rules the World.* Confidence is high. At the 60th anniversary of the founding of the People's Republic in Beijing last October, the crowd chanted, "Nothing can stop us! Go! Go! Go!"[11]

   Forecasts for urbanization and economic growth make for a compelling Wall Street pitch. If they are correct, then demand for industrial commodities and consumer goods in China will rise exponentially in the years to come. Yet like the projections for internet growth back in the late 1990s, there's a possibility that these forecasts may be exaggerated.

   As with the dotcom mania, investors seem to be adopting an uncritical attitude to China's growth forecasts. Take, for instance, the claim that the urban

[9] "Asset Price Booms and Monetary Policy," Carsten Deks and Frank Smets, ECB Working Paper, May 2004.

[10] See *The China Dream the Elusive Quest for the Last Great Untapped Market on Earth,* by Joe Studwell.

[11] *Financial Times.* October 3, 2009

population will grow by another 350 million by 2025, approaching the magical 1 billion mark by that date.[12] For a start, it's possible that China's current rate of urbanization is understated because many designated rural areas in China already have a high density of population by Western standards.[13] The matter is made more complicated by the fact that many rural migrants to the cities may not be counted in official statistics as they lack residency status. Officials are rewarded on GDP growth per capita in their districts, so they may have an interest in understating the denominator.[14]

Many new urban dwellers lack residency status (they are known as "non-hukou" migrants), are poorly paid, and have seen little real wage growth over the last decade. Non-hukou workers comprise an economically cyclical workforce (often housed in dormitories); they come to the cities when there's work to be found and leave when jobs vanish. Migrant workers have provided China with cheap labor to sustain its export growth and build its infrastructure. However, as an academic expert on Chinese demography writes, "equating the expansion of the urban population with the growth of the middle class is simplistic."[15]

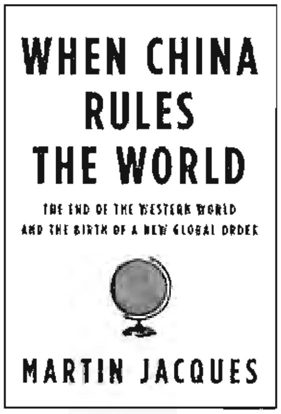
Wall Street also tends to downplay the darker aspects of the Chinese demographic story. China's population is set to decline in 2015. The worker participation rate will peak this year. It's anticipated that the number of people joining the workforce will fall off quite rapidly. Yet it's this section of the population that tends to move to the cities and has provided China with an apparently limitless supply of cheap labor.

Real wages will likely rise if the flow of rural labor dwindles, which would allow workers to consume more. But for an export-oriented economy like China, this may be double-edged, since the country's international competitiveness might be harmed. In recent years, urbanization has been a major source of China's productivity growth. If this slows, then future economic growth will have to come from a more efficient use of the factors of production.

2. ***In the Communist Party of China We Trust.*** Twenty years ago, it was argued that "Japan is different" and that Tokyo's economic policies were better than the West's. A number of best-selling books lauded the land of the rising sun. One bore the infamous title, *Japan as Number One*. Today, similar claims are made about the singularity of the Chinese economy and the superiority of Beijing's policies. And similar expectations are entertained about China's inexorable march to economic primacy.

Illustration 1

China as Number One



WHEN CHINA RULES THE WORLD

THE END OF THE WESTERN WORLD AND THE BIRTH OF A NEW GLOBAL ORDER

MARTIN JACQUES

China's transition from a communist economy has been much more successful than that of the former Soviet Union. Beijing has confounded critics for what seems an eternity. For thirty years, China's economic growth has compounded at the remarkable annual rate of 10%. At the beginning of the last decade, the authorities resolved a domestic banking crisis without the economy grinding to a halt. In recent years, Beijing has built up a vast treasury of foreign reserves, which at last count amounted to $2.4 trillion. These reserves lend China its current aura of invincibility.

The global financial crisis, which China appears to have sidestepped, has further enhanced the reputation of policymakers. Despite a collapse in its export markets, last year the Chinese economy easily surpassed Beijing's 8% GDP growth target.

[12] See "Preparing for China's Urban Billion," *McKinsey Global Institute*, February 2009

[13] See Morgan Stanley Research, "One Country, Three Economies: Urbanization as a Primary Driver of Growth," Qing Wang and Steven Zhang, March 3, 2010. "One of the criteria that China uses to define an urban centre is population density of above 1,500 people per square kilometer, but this is too high a threshold and leads to the urbanization rate in China being understated, because based on this criterion, many metropolitan areas in western countries would be technically classified as rural areas."

[14] Kam Wing Chan, "Measuring the Urban Millions," *Chinese Economic Quarterly*, pp 21-26, March 2009

[15] Ibid.

A prominent British investor recently announced that he was coming out of retirement to run a China fund. Among his reasons for being bullish was the "effectiveness of central planning." One of the wonders of modern China is that it has turned some of the world's most ardent capitalists into fervent admirers of an economy managed by communists.

Both economic theory and history, however, argue against the notion that central planning is the optimal mode of economic development. China has certainly developed rapidly over the past three decades. But under the direction of Beijing's visible hand, its economy has become lopsided. In the years up to the credit crunch, China's economic growth was largely dependent on rising exports. China's exports to the West are already at twice the level achieved by Japan in its heyday. The country cannot continue growing its trade surplus with the West without inviting protectionism. This threat has become particularly acute since the onset of the Great Recession.

Very high levels of investment also create the risk of a misallocation of capital (a subject discussed in more detail below). There are further problems relating to the state's extensive involvement in the economy. Beijing imposes a GDP growth target on local governments. The problem with targets imposed by a central authority is that they are liable to being gamed. Goodhart's Law states that whenever an economic indicator is made a target for conducting policy, then it loses the information content that would qualify it to play such a role.[16] In China, GDP growth is no longer the outcome of an economic process; it has become the object.

Anecdotal evidence suggests that many decisions of local governments, whether to endorse new infrastructure projects or real estate developments, are driven by the necessity of meeting their growth targets. In many ways, this is reminiscent of the earnings growth targets set by U.S. corporations in the bull market of the late 1990s. When the allocation of resources, whether at the corporate or national level, becomes all about "making the number" then poor outcomes are to be expected. Beijing's policies also appear to stifle domestic enterprise. Although the role of state-owned enterprises (SOEs) has declined, they still receive preferential access to credit from state-controlled banks. They are also treated favorably compared to private businesses, which are forced to borrow at much higher rates outside of the formal banking system. A recent study by researchers at the Hong Kong Monetary Authority finds that aggregate profits of the SOE sector would have been wiped out if these businesses had borrowed at the rates paid by the private sector.[17] The same study found that more than half of all private businesses had no access to bank credit.

A book by MIT professor Yasheng Huang describes China's shift from entrepreneurial capitalism in the 1980s toward a more state-directed capitalism, with its focus on trophy investment projects (such as the development of the Pudong financial district by Shanghai), foreign direct investment, and exports.[18] China has procured much wonderful new infrastructure during this period, but economic development has been accompanied by rising income inequality, a fall in the consumption share of GDP, and declining innovation (as measured by patent issuance in Shanghai). Professor Huang argues that China's rapid growth is deceptive because the state can invest resources more quickly than the private sector. However, the quality of investment is lower.

3. ***Investment Boom.*** In a market-oriented economy, investment might be expected to fall during a period of uncertainty and economic turbulence. Yet in 2009, Chinese fixed asset investment climbed by 30% and contributed 90% of last year's economic growth.[19] Investment rose to a record 58% of GDP.[20] These are remarkable figures. The key question is: how well was this money spent?

   Infrastructure accounted for more than two-thirds of

[16] See Goodhart, Charles, (1975), "Monetary Relationsbips: A View from Threadneedle Street " Papers in Monetary Economics (Reserve Bank of Australia)

[17] "Honor Thy Creditors Before Thy Shareholders: Are the Profits of Chinese State-Owned Enterprises Real?" Giovanni Ferri and Li-Gang Liu, Hong Kong Monetary Authority, April 2009.

[18] *Capitalism with Chinese Characteristics*, Yasheng Huang, Cambridge University Press, 2008

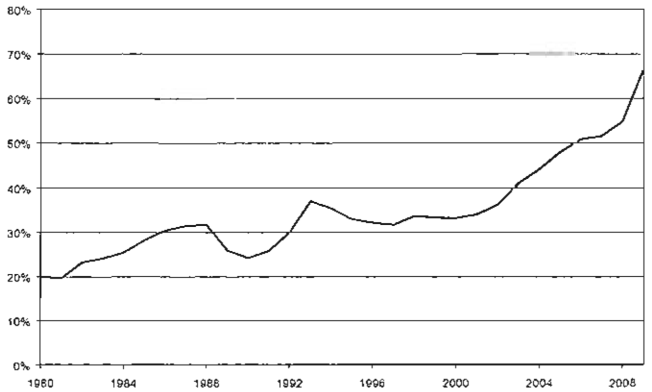
[19] CLSA, February 3, 2010.

[20] National Bureau of Statistics of China (source data at http://www.stats.gov cn/english/statisticaldata/monthlydata/t20100301_402623481.htm and http.//www.stats.gov cn/english/statisticaldata/Quarterlydata/ t20100301_402623502.htm).

last year's stimulus spending.[21] Roughly a quarter of all investment was government-directed.[22] Many projects, however, were clearly intended to meet the government's GDP growth target. A news clip on YouTube (originally from Al-Jazeera) shows the newly constructed "ghost town" of Ordos, in Inner Mongolia. An interviewee suggested that building this empty city, with housing for a million, had enabled local officials to meet their growth targets.

Illustration 2

Chinese fixed asset investment share of GDP



Source: Andrew Hunt Economics   *As of 12/31/09*

China already possesses a highly developed infrastructure, given its current state of economic development. Last year, highway usage in China was estimated at 12% of the OECD average.[23] Many smaller airports were running at half capacity. Plans for a national high-speed railway may appear impressive on paper, but the investment returns are questionable. A transport researcher at China's own National Development and Reform Commission has recently warned that the proposed 18,000 kilometres of high-speed railroads would face problems in recouping costs and "might not be able to achieve its minimum passenger loads to break even."[24] Yet most Wall Street analysts remain sanguine. *If China continues growing at its past rate, they say, then all those new roads, bridges, and railways will be teeming with traffic in next to no time.*

Similar problems afflict many of China's heavy industries. When the Great Recession hit, non-export sectors were discouraged from laying off workers. Many industries continued investing despite low levels of capacity utilization. Manufacturing industries, which account for just under a third of total fixed asset investment, boosted capital spending at an annualized 27% rate (from January 2009 to October 2009). A report by the European Chamber last November identified overcapacity in shipbuilding, flat glass, iron, steel, cement, poly-crystalline silicon, and wind power.[25] Capital spending in the cement industry, for instance, increased by two-thirds despite capacity utilization running at an estimated 78%. *Investing at a time of overcapacity is justified by China's high growth expectations.*

With high savings and investment and a huge trade surplus, China has followed what one commentator calls the "Asian growth model on steroids."[26] Yet there are pitfalls to this growth model, as testified to by Japan's malaise over the last two decades. In a celebrated 1994 essay, the "Myth of Asia's Miracle," Nobel laureate economist Paul Krugman suggested that the growth of the Asian Tiger economies had come to depend on ever-increasing investment inputs.[27] Such investment, however, was subject to diminishing returns.

This analysis is equally valid for China, where the efficiency of investment (as measured by incremental GDP growth for every unit of investment) has been on a downward trend.[28] For the Tigers, the extent of the poor investment was only revealed when the crisis hit in 1997. China's problems are potentially greater because its investment share of GDP is higher than any other Asian economy in history.

4. ***Corruption.*** All great speculative manias have been accompanied by rising levels of fraud. Only in the bust do we get to see the full extent of the "bezzle," as the Enrons, WorldComs, and Madoffs come to light. The upturn in China's property and infrastructure spending, however, provides a cyclical spur to

[21] Morgan Stanley, January 21, 2010.

[22] Deutsche, Jun Ma, July 6, 2009.

[23] Ibid

[24] *South China Morning Post*, March 3, 2010.

[25] European Chamber, "Overcapacity in China: Causes, Impacts and Recommendations," November 2009.

[26] Michael Pettis, April 25, 2009, mpettis.com.

[27] Paul Krugman, "The Myth of Asia's Miracle," *Foreign Affairs*, Nov/Dec 1994.

[28] For instance, last year every RMB 5 of investment generated less than RMB 1of growth. Two decades ago, the incremental capital-output ratio was around 2 times.

malfeasance. The People's Republic recently slipped to 79th place in Transparency International's 2009 Corruption Perceptions Index,[29] just below Burkina Faso.

The real estate boom provides huge opportunities for corruption. Land is often seized and handed to developers without compensation for former occupants.[30] The financial sector is plagued by kickbacks.[31] Infrastructure spending allows local officials to line their pockets, while they condone the use of shoddy building materials or turn a blind eye to enforcing regulations.[32] China is the fastest-growing market for luxury goods. Yet the *New York Times* estimates that up to half of sales are given as bribes.[33]

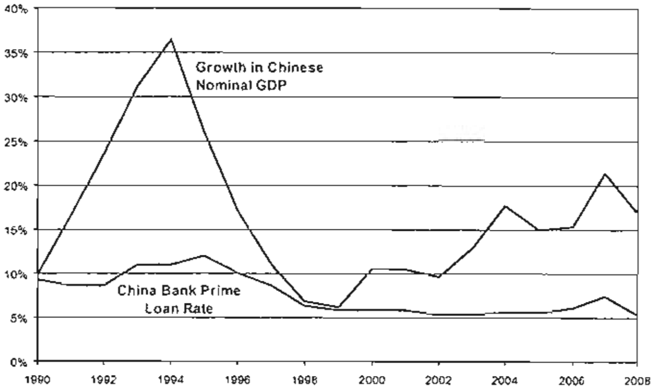
China provides an example of what Professor Minxin Pei calls "decentralized predation."[34] Systemic corruption has lowered the quality of China's economic growth, just as it afflicted some Asian countries, most notably Indonesia, prior to the 1997 crisis. "Endemic corruption," writes Pei, "steadily increases a country's systemic risks. As a result, its financial system is fragile, its environment degraded and vulnerable, its law enforcement establishment tainted and ineffective, its infrastructure insecure, its public health service unresponsive, and its regulatory system creaky."[35]

5. ***Easy Money.*** Nobel laureate Friedrich Hayek differed from his great rival J.M. Keynes. While the latter argued that bubbles were the result of turbulent "animal spirits," Hayek claimed that asset price inflation followed from excessively low interest rates. Easy money, said Hayek, fed through to monetary and credit expansion, leading to inflation, either in the general price level or in asset prices. When rates were kept below their "natural" level, businesses had an incentive to invest in projects whose returns lay in the more distant future. This resulted in a misallocation of resources or "malinvestment."

   The natural rate of interest is not visible. But a rule of thumb suggests that rates should track economic growth over the medium term. That's been the case in the U.S., where the prime rate has averaged around 1 percentage point more than U.S. nominal growth over the past forty years. By contrast, since 1990 the Chinese prime rate has averaged around 9 percentage points *less* than GDP.

Illustration 3

Interest Rates Kept Below Their "Natural" Level



Source Datastream, Bloomberg

   Low interest rates are part of Beijing's policy to promote investment and subsidize the SOEs. Low rates also drive Chinese households into speculating in stocks and real estate, as Bagehot would have predicted. China's easy money policy over the last couple of decades has contributed to relatively high inflation and a sequence of booms and busts in the country's asset markets. In the most recent bubble, stocks in the Shanghai Composite rose more than four-fold from early 2006 before peaking in October 2007 and subsequently shedding over 70% of their value.

   Last year, the money supply grew by nearly 30% while interest rates were maintained well below the economy's nominal growth rate. Once again, Chinese savers found themselves caught between the fear of inflation and an appetite for higher returns. Once again, bubbles look to have formed in China's asset markets.

6. ***The Fixed Exchange Rate and Capital Inflows.*** The Chinese currency, the renminbi, is pegged to

[29] http://www.transparency.org/policy_research/surveys_indices/cpi/2009.

[30] The Ministry of Land Resources found in 2005 that half of the land used in development had been acquired illegally.

[31] See *China's Trapped Transition The limits of developmental autocracy* by Minxin Pei, Harvard University Press, 2006.

[32] "In China, you don't rob a bank, you rob infrastructure," says American academic Professor Pei (telephone conversation with Professor Pei).

[33] *New York Times*, March 13, 2009

[34] *China's Trapped Transition The limits of developmental autocracy* by Minxin Pei, Harvard University Press, 2006.

[35] Ibid.

the U.S. dollar. An undervalued exchange rate has boosted exports and kept interest rates low. It has also encouraged massive capital inflows, mostly in the form of foreign direct investment. Capital controls have limited inflows of hot money, although speculative inflows have picked up recently.

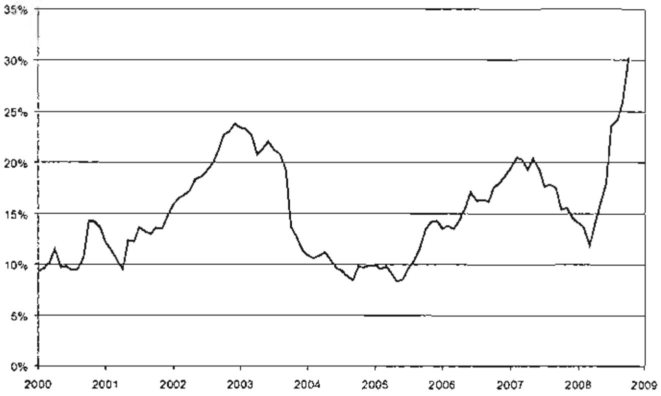
Because many emerging market crises are exacerbated by runs on the currency, many commentators take comfort from China's huge foreign exchange reserves, which reached $2.4 trillion at the end of last year.[36] Yet this mountain of dollars should be considered a cause for concern. It reflects the profound imbalances of an undisciplined international currency system. The Dollar Standard has allowed some countries, in particular the United States, to consume more than they produce and run up vast external debts. Other countries, mostly in Asia, have enjoyed perpetual trade surpluses and acquired huge foreign exchange reserves.

It's mistaken to think that China's enormous forex reserves render its economy invincible. These reserves can be used to buy foreign assets, pay for imports, or defend a currency under attack. What they can't cure is the type of problems that normally follow the collapse of an asset price bubble, such as a broken banking system or a legacy of bad investments. As one commentator has pointed out, the only two countries which have previously accumulated such large foreign exchange reserves relative to global GDP were the United States in 1929 and Japan in 1989.[37]

7. ***The Credit Boom.*** In response to the global financial crisis and the collapse of export orders, Beijing ordered its banks to go out and lend. Last year, new bank lending increased by nearly RMB 10 trillion, a sum equivalent to 29% of GDP.[38] These loans largely went to fund infrastructure projects, property developments, and state-owned enterprises in a number of industries. It was as if the economy had received an enormous adrenaline shot.[39] What most analysts fail to consider is the hangover that generally follows a credit binge. Our own recent experience testifies to how potent such hangovers can be.

Illustration 4

Annualized growth of Chinese private sector credit



Source: Datastream As of 6/30/09

The size of this credit expansion is worrying in itself. It beggars belief that lending could have expanded so rapidly without some decline in underwriting standards. In fact, many accept that China's banking system is threatened by another surge in non-performing loans, as occurred in the late 1990s. However, *conventional wisdom holds that if China maintains its phenomenal economic growth, then last year's loans need not turn bad.*

8. ***Moral Hazard.*** The major Chinese banks are controlled by the state. They have a history of poor lending decisions. However, the markets believe the banks (and implicitly their shareholders) will be spared any ill consequences this time around. China's leading banks, among the world's largest by market value, are seen as too big to fail. They are a key instrument of Beijing's economic policy. *Ergo*, nothing bad can come to them.

The deleterious consequences of moral hazard on a banking system should be familiar to old Asia hands. In the 1980s, large Japanese banks were also seen as fulfilling the policy objectives of the Ministry of Finance and as being protected from future losses. At the time, Japanese banks enjoyed the largest market capitalizations in the world. This faith turned out to be misplaced. During the "lost decade," Japan's banks generated losses equivalent to twice their

[36] Bloomberg.

[37] "The Myth of China's Blithe Consensus," by Michael Pettis, mpettis.com, January 26, 2010.

[38] National Bureau of Statistics

[39] This credit-fueled stimulus "makes everyone happy – the government, the corporate sector and households all have a lot to spend," David Cui of Merrill Lynch ("A Big Misperception About China" by David Cui et al, February 23, 2010).

initial capital. Moral hazard and state influence over financial systems have likewise been blamed for poor lending decisions by several Asian countries in the run-up to the 1997 crisis.[40]

Policy lending to state-owned enterprises has landed China's banks in trouble before. At the turn of the century, Standard & Poor's estimated Chinese non-performing loans at around 50% of total outstanding loans.[41] The banks were recapitalized and bad loans hived off into so-called asset management companies. This bail-out appeared relatively painless.[42] Some are betting that Beijing can pull off this trick again. Others argue there's no cause for concern because Chinese banks have been modernized and now apply modern risk management methods. If they were really profit-maximizing why do the banks still engage in massive policy lending at Beijing's behest?[43]

9. ***Risky Lending Practices.*** The credit crunch of 2007-8 revealed the painfully bad lending decisions of many banks in the United States and Europe. It turned out that these financial institutions had lowered their underwriting standards while the music was still playing. Many loans couldn't be paid off from their underlying cash flows. In order to be validated, they needed further asset price appreciation. When the markets turned down, these Ponzi finance structures blew up. Much recent lending in China appears to belong to this category.

   Take, for instance, the loans that have been used to finance infrastructure projects, such as new railroads, toll roads, and bridges. These projects are sponsored by local governments. However, such authorities are forbidden by law from guaranteeing the debts. Instead, they have set up funding vehicles whose equity capital is generally supplied by local government. The rest of the money is provided by banks. It is estimated that up to half of last year's bank loans went to local government funding vehicles.[44] Many of these infrastructure loans appear to have little or no current cash flows.[45]

   So how will they be paid off? Well, *if the economy continues growing at its past rate, then it's assumed all of those new airports and toll roads will generate future revenues.* Alternately, local governments could finance the loans with receipts of future land sales. The trouble is that land sales currently account for some half of local government revenue. So if the real estate market tanks, then the local authorities may have trouble fulfilling their implicit obligation to make good the infrastructure loans.

   Wall Street analysts are given to claiming that China's credit system is robust because loans are not securitized *à la subprime.* Yet Chinese banks have their own curious practices. Fitch Ratings calculates that many bank loans are repackaged and sold on to retail investors, other financial institutions, and corporations. "Selling banks," writes Fitch, "will sometimes enter into a counter agreement to repurchase the loan at a later date. In these instances, the loan may not appear on either the seller's or the buyer's financial statements."[46] These off-balance sheet loans allow banks to stay within official lending growth targets.

   No one can gauge the robustness of the credit system since Chinese banks appear particularly reluctant to report problematic loans. Ernst & Young published a 2006 report that estimated non-performing loans (NPLs) at $900 billion.[47] This report was subsequently withdrawn. NPLs continued to decline in 2008 even as the stock market imploded and exports crashed. Fitch has suggested Chinese banks have been rolling over, or "ever-greening," problematic loans.[48] Bank employees have their own reasons for burying bad loans. A loan officer who reports problem debts is

[40] For instance, in 1994 the Indonesian Ministry of Finance announced that it would not let a state bank default. Subsequently, the asset quality of the country's state banks was found to be far worse than the private banks.

[41] *The China Dream*, Joe Studwell, Grove Press, 2003, page 208

[42] The asset management companies acquired the bad loans at face value and issued government-backed notes to the banks. When the 10-year notes of one asset management company became due the other day, the bank holding the notes quietly rolled them over.

[43] An interesting contrast is found between the behavior of China's state-controlled banks and that of Hong Kong banks operating on the mainland. While the former ramped up their lending in the first half of 2009 at Beijing's behest, five leading Hong Kong banks contracted new loans in the People's Republic by 13.2% (data from Citigroup).

[44] Bank of America/Merrill Lynch, David Cui, January 28, 2010.

[45] A report from Goldman Sachs ("China Banks," October 2009, Ning Ma and Richard Xu) stated that cash flows from infrastructure projects 'may not be sufficient to pay debt principal and sometimes even interest payments, and subsidies from local government are usually a substantial source of their revenues.' The report cites the example of the Hefei City Construction Investment Corporation, whose revenue is comprised entirely of a local government subsidy. Interest payments on these loans accounted for 3% of the government's core revenue.

[46] Charlene Chu, "Chinese Banks – Annual Review and Outlook," Fitch Ratings, December 2009.

[47] "Global Nonperforming Loan Report," Ernst & Young, 2006.

[48] Charlene Chu, "Asset Quality Under Pressure as Credit Cycle Turns," Fitch Ratings, January 9, 2009.

liable to have his salary reduced to below that of a migrant worker.[49] *Few seem to care about the practice of concealing nonperforming loans since it's generally assumed that so long as the economy continues growing quickly, bad credits will turn good over time.*

10. ***The Bubble.*** Surging credit has revived the animal spirits of Chinese investors. The Shanghai stock market recovered sharply in the first half of last year. On a single day in late July, turnover of "A-shares" in Shanghai exceeded the combined trading of the New York, London, and Tokyo stock exchanges. Chinese IPOs accounted for nearly two-thirds of global issuance by market value in the third quarter of last year.[50] Chinese companies accounted for seven of the ten largest IPOs in the world. New issues were often massively oversubscribed and saw huge first day "pops." In October, a Nasdaq-style exchange, named "ChiNext," opened in Shenzhen. On the first day's trading, the 28 stocks listed on ChiNext rose between 76% and 210%, pushing their price-earnings ratios to an average of 150, according to the *Wall Street Journal.*

    High stock turnover, a rising number of new share issues, strong early trading gains, and the establishment of new stock exchanges are all classic signs of speculative euphoria. As the market peaked last summer, the Shanghai composite was trading on 38 times historic earnings. *High valuations on Chinese stocks were justified by the country's tremendous growth prospects.* Yet the stock market was really just a sideshow. The real action was taking place in the China's overheating property market.

    Many of the red flags discussed in this paper are fluttering around China's frenetic real estate market: there's a compelling growth story (of ongoing urbanization and high rates of future economic growth); the building boom helps Beijing achieve its GDP growth target; low-cost credit flows into the real estate sector; corruption is extensive; and moral hazard is implicit in the commonly held view that the government will support the property market from future collapse. Animal spirits are reflected in over-stretched property valuations and widespread speculation.

The Residential Real Estate Market

Given low rates on cash and the wild volatility of stocks, property appears a much more attractive bet to Chinese savers. Over the course of the last decade, national home prices rose at an annual rate of 8% according to Morgan Stanley. This consistent performance has fostered a widespread belief that the property prices can only go up.

Boosting the housing market was a key element in Beijing's stimulus package: lending rates were cut and banks were ordered to open the credit spigots; the maximum loan to value for mortgages was raised; buyers of second homes were offered discounted mortgage rates; and further tax benefits were extended to homeowners. State-owned enterprises were also encouraged to enter the residential property market. Local governments offered free housing vouchers and residency permits to homebuyers. They also contributed nearly half of the funding for new developments.[51]

These measures worked their magic. Last year, sales of residential properties in the People's Republic climbed to RMB 3.8 trillion, up 87% on 2008.[52] Average home prices rose by 8% in 2009.[53] Several local markets saw stronger gains, rising by 20% or more.[54] Residential construction has also taken off. New housing starts (as measured by floor space) climbed 16% in the year to November.[55] In 2010 housing construction is expected to rise another 20%.[56] This raises a question about potential oversupply. *The consensus view is that new supply will be gobbled up as the economy continues expanding and the rural population flocks to the cities.*

Migrant workers, however, can't afford the prices that prevail in the major cities. Ownership ratios in the cities have already climbed to 70%.[57] Residential completions in Beijing have grown faster than the population. Much of this excess supply is being

[49] Bank of America/Merrill Lynch, David Cui, January 21, 2010.

[50] Global IPO Report, Ernst & Young, October 2009.

[51] The National Bureau of Statistics ranks the sources of property funding by category. Its category marked "internal sources" – referring to local government funding – contributed 48% of total funding in 2009, up from 40% the previous year (Goldman Sachs, email correspondence).

[52] Morgan Stanley, China Property, March 2, 2010.

[53] Ibid.

[54] CLSA, China Realty Research, January 27, 2010 (presentation).

[55] CLSA, "Greed & Fear," December 11, 2009.

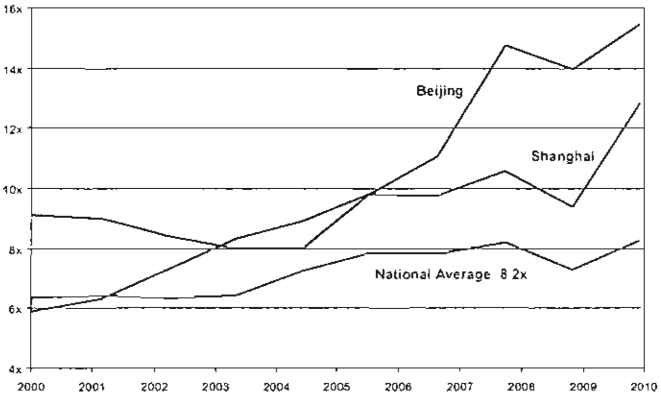
[56] Ibid

[57] Deutsche Bank, Jun Ma, July 6, 2009.

held off the market by property "investors." A recent survey found that nearly a fifth of all recently sold properties were kept vacant.[58] Since new apartments tend to fall in price if they are rented out, many of these investor properties are kept empty. Photos of fancy new apartment buildings at night reveal the unlit properties of the property speculators.

Illustration 5

China nationwide property value/annual disposable income per urban household – cities



Source CEIC, Morgan Stanley, GMO calculations As of 12/09

Real estate prices have become very stretched. Morgan Stanley estimates that despite the requirement for large downpayments, servicing a new mortgage consumes around 43% of average incomes. Nationally, home prices have climbed to around 8 times income. Since income distribution is skewed, this probably understates the affordability problem. In Beijing, the house price to income ratio has climbed above 15 times (its average 2000-2008 was 10 times). By comparison, Tokyo condo prices peaked in 1990 at 9 times average household incomes. First-time buyers reportedly borrow from family members to make an initial down payment. Inter-generational mortgage loans were also a feature of Japan's property market in the late 1980s.

Housing has become a national obsession. In recent months, several leading Chinese real estate developers have expressed their concerns about the bubble in the housing market. Wall Street dismisses these worries. *If the Chinese economy continues growing at its recent rate, then all will be fine,* say the analysts.

The Commercial Real Estate Market

The commercial property market looks similarly overblown. As part of the stimulus package, Beijing allowed developers to take on more debt in order to boost land purchases. Commercial real estate investment grew by 21% last year.[59] The total amount of floor space under construction in China is equivalent in size to Rhode Island.[60]

Commercial rents in the leading cities are expensive by international standards. Last summer, prime space in Shanghai and Beijing was estimated, respectively, at $702 and $532 per square meter. These prices are roughly in line with New York despite the fact that the per capita output of workers in Manhattan is four times as much as their Chinese metropolitan counterparts.

State-owned enterprises have been called upon to support the commercial real estate market. Their bosses, who bid up the price of development land, are hailed as "Land Kings." In September 2009, for instance, China Overseas Land & Investment, a subsidiary of the state-owned China State Construction Engineering Corp, paid RMB 7 billion for a site in Shanghai with an estimated gross floor area of just 313,000 square meters (RMB 22,400 per square meter).[61]

Local governments, which own title to all land in the People's Republic, have been a major beneficiary of the real estate boom. Land sales accounted for around half of their revenue in 2009. Last year, local governments netted some RMB 1.6 trillion from land sales, equivalent to 40% of Beijing's stimulus package or some 5% of GDP.[62] Some of these proceeds have been recycled as loans to developers to acquire more land. As former Morgan Stanley economist Andy Xie has commented, "When state-owned enterprises borrow from state-owned banks and give the money to local governments at land auction, why should the prices be meaningful?"[63]

This explosion of high rise construction is occurring at a time when vacancy rates are already very high

[58] CLSA, China Reality Research, Property Monthly, February 10, 2010.

[59] Source : CEIC via Credit Suisse.

[60] Gross floor area under construction in China rose to 3.2 billion square meters in 2009 (Source: CEIC via Credit Suisse).

[61] Chinastake.com, September 11, 2009.

[62] Merrill Lynch/Bank of America, David Cui, February 10, 2010.

[63] Andy Xie, "China Counts Down to the Next Bubble Burst," July 5, 2009.

by Western standards.[64] In the Pudong district, new building continues apace despite vacancy rates of 50%. Developers can afford to ignore current excess capacity because little pre-leasing occurs and they tend to finance new construction with seven-year bullet loans. *Investors comfort themselves with the thought that if China's economy keeps growing like a weed, then all the empty offices will soon find tenants.*

The Field of Dreams

Three years ago, Premier Wen described China's economy as "unstable, unbalanced, uncoordinated and unsustainable."[65] The Great Recession hasn't cured these imbalances. Rather, China's ensuing investment and credit booms exacerbated them. The real estate market displays the classic symptoms of a bubble – stretched valuations, rampant speculation, and frenzied new construction. Sooner or later, this bubble will burst.

In the past, whenever an economy has exhibited the 10 red flags listed in this paper there has been an unpleasant outcome. Forecasting the end game is no easy task since speculative bubbles can run to extremes. It's made more difficult in this case by the fact that China is not a pure market economy. State-owned enterprises can be called upon to prop up markets. Losses may be concealed or shuffled around like a shell game, as has happened in the past. Such measures, however, won't cure China's problems. They only delay the dénouement.

Just because the timing of any future crisis is imponderable, doesn't mean the risk posed by the real estate bubble should be ignored. The property market plays a very important role in the Chinese economy and financial system. Real estate investment accounts for some 12% of GDP.[66] Construction is the main source of demand for many of China's heavy industries. Around 20% of new bank loans have gone directly to the real estate market, according to the China Securities Regulatory Commission.[67] Local governments rely on property sales for a large chunk of their revenues. The property sector also generated around 20% of Beijing's tax revenues last year.[68] The repayment of infrastructure loans also seems largely dependent on government land sales. Most lending to state-owned enterprises is secured against property collateral. Finally, there is an unknown quantum of property lending outside of the formal banking system.

China's real estate market, and indeed its economy and financial system, have been shaped by a belief that past rates of economic growth will continue into the future. This assumption justifies more investment, which spurs the growth, leading to more investment. China's current situation is reminiscent of the late stages of the dotcom bubble, when investors extrapolated past rates of growth into the future and were bedazzled by the size of the prospective market. As with the Internet frenzy, a surge of investment creates a demand that appears to justify the most optimistic predictions. China has become a field of dreams; a build-and-they-will-come economy.

One commentator compares China to the Hollywood thriller, *Speed*, in which a bus has been planted with a bomb set to detonate if the vehicle slows to below 50 miles per hour.[69] This seems apt. Were China's economy to slow below Beijing's 8% growth target, bad things are liable to happen. Much of the new infrastructure would turn out to be otiose; excess capacity would linger in many industries; the real estate bubble would burst and the banking system would face a rash of non-performing loans. Investors who are immersed in the China Dream ignore this scenario. When the China juggernaut eventually stalls, they face a rude awakening.

[64] Estimated vacancy rates in the third quarter of 2009 were 15% in Shanghai and 22% in Beijing according to CB Richard Ellis (MarketView, "People's Republic of China," Third Quarter 2009).

[65] *Wall Street Journal Asia,* March 16, 2007.

[66] Macquarie Equities Research, "The China Data Diviner," March 8, 2010.

[67] Bloomberg, February 5, 2010.

[68] Macquarie Equities Research, "The China Data Diviner," March 8, 2010.

[69] "China - the Mother of All Black Swans," a presentation by Vitality Katsenelson, February 2010.

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