I grew up in Murmansk, Russia...
Murmansk is home for Red October
China – The Mother of All Gray Swans

Japan – Past the Point of No Return

March 2011

Vitaliy N. Katsenelson, CFA
Chief Investment Officer

Investment Management Associates, Inc.
CHINA - THE MOTHER OF ALL GRAY SWANS

THIS TIME IS NO DIFFERENT – THE OVER-INVESTMENT BUBBLE

Vitaliy N. Katsenelson, CFA
Chief Investment Officer
Investment Management Associates, Inc.
BLACK SWAN

- high impact
- rare
- random

GRAY SWAN

- high impact
- rare
- predictable (but don’t know when)
Overcapacity
+ Late-Stage Growth Obesity

You Lie!  
Super Steroids-R-Us

1998  2008  2009  Today
1998 – 2008, Economy grew at 10% (real growth) a year. When building new plants, made assumption that past growth would continue into the future.

The natural (unlevered) demand for its goods from the developed world was lower. Actual demand was driven, in large part, by heavy borrowing by US and European consumers – China provided the financing. Similar to Lucent in 1999 financing dotcoms that were buying Lucent’s equipment.

Future growth will be significantly lower – China’s customers (the US and Europe) are overleveraged and are deleveraging.

Result: overcapacity (economy is geared for much higher global and internal growth)
Example:

EXCESS CAPACITY

China > India + Japan + USA

source: Pivot Capital
Example:

STEEL

2008

IDLE PRODUCTION

China

S. Korea

Japan

source: Pivot Capital
Pre Great Recession: Late-Stage Growth Obesity

Growth is **high**, but its quality is **low**

Starbucks is a good example of Late-Stage Growth Obesity

<table>
<thead>
<tr>
<th></th>
<th>1999</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company-Owned Stores</td>
<td>2,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Opened Stores a Year</td>
<td>447</td>
<td>1,403</td>
</tr>
<tr>
<td>Opened Stores a Biz Day</td>
<td>1.8</td>
<td>5.5</td>
</tr>
</tbody>
</table>
Consequences for Starbucks

- Opened **too many stores**, in wrong locations (too close to each other, wrong side of the street etc.), signed expensive leases
- Hired **McDonalds-caliber employees**, not the Starbucks baristas
- Management took their eye off innovation

Starbucks Addressed these Issues

- **Closed stores**, terminated leases (took charges)
- **Slowed** store openings
- **Laid** off employees
- **Focused** on innovation
- **Sales stagnated** for 3 years
China: Quality of decisions was poor

1/3 of the Chinese economy controlled by Government through stated owned enterprises (SOE)

**Government intervention**, corruption, political capital-allocation decisions **take things to a new level of financial insanity**. Provinces are given growth targets that they must meet.

- **Invisible** hand directs capital towards highest use.
- **Visible corrupted** hand of command economy directs capital towards **highest bribe**.
Example:

**South China Mall**, the second largest shopping mall in the world (second only to Dubai Mall). 1,500 store capacity, 7.1 million sq feet, opened in 2005. 99% of space **empty**.
Empty, empty, empty....

Source: SBS.com.au
Built a ghost town: **Ordos** in Inner Mongolia, for **1 million** residents on spec.

“The Kangbashi district began as a public-works project in Ordos, a wealthy coal-mining town in Inner Mongolia. The area is filled with office towers, administrative centers, government buildings, museums, theaters and sports fields—not to mention acre on acre of subdivisions overflowing with middle-class duplexes and bungalows. The only problem: the district was originally designed to house, support and entertain **1 million people**, yet hardly anyone lives there.”

*Time Magazine*
Here is another ghost town: Zheng Zhou New District, Henan
And another ghost town: Daya Bay

According to state-owned media 70% of apartments are empty

Source: SBS.com.au
Global economy is declining. You’d think the Chinese economy would be declining. **Wrong!** China is still *showing* positive industrial production growth of 6-8%.  

1998 Q2 – 1999 Q1: During Great Recession
How does China achieve growth in this environment?

It doesn’t.
During Great Recession – You Lie!

- Global economy is contracting (its customers are buying a lot less)
- Exports are down over 25%
- Tonnage shipped in China by railroads down double digits
- Electricity consumption is declining

![Power output in October was the worst in the past 20 years](image-url)

Source: CEIC, Credit Suisse estimates
The **Chinese government lies**. The government cares deeply about **ideology**: it **censors** media and internet, sends people to **jail** for writing anti-government articles. Making up GDP numbers is just one of many tools.

Another school of thought: local authorities are afraid to report the true “local GDP” numbers, thus they lie when they report their number to Federal government.
Post-Great Recession – Super Steroids-R-Us
China will do anything to grow its economy – here is why:

- Communist China has less socialism than the US, that should be good for the economy, except: Farmers moved to cities in search for jobs. No social safety net – lose a job, no unemployment insurance, hospital only accepts cash. This explains the high savings rate.

- Hungry people don’t complain, they riot – government is afraid of political unrest.

- Chinese chose growth at any cost, even if it was profitless, with bad loans and uneconomical projects.

- Once you look at what’s taking place in the Chinese economy through this lens, the decisions of its leaders start making sense, or at least become understandable.
Hence comes the stimulus package

- **Stimulus is at 14% of GDP** – the largest, in percentage terms, in the world

Unlike the developed world, China has **much greater control over its economy**:
- It can **force banks to lend**.
- It can **force State-Owned Enterprises** (1/3 of the economy) to **borrow** and **spend**.
- Not a touchy-feely democracy, it can **build** bridges, highways, skyscrapers a **lot faster with less paperwork** and fewer property rights considerations.
- **Lending goes vertical**

![Graph showing change in Chinese bank lending](image)

- **In 2009 lending was 29% of GDP**

- **Home mortgage lending up 48%** in 2009 (Source: [China Daily](https://www.chinadaily.com.cn))
• Despite the rest of the world still battling recession and its exports declining, China started to grow, but this growth is completely stimulus-driven.

• The most efficient way (if your goal is to have full employment) to inject money into the economy is through construction projects.
National average property prices up 20% in 2009

Source: WSJ, January 19, 2010

Floor space constructed is up 100% in 2009

Source: WSJ, January 19, 2010

“There's currently 30 billion square feet of Chinese real estate in the works, which would work out to a 5x5 cubicle for every man, woman, and child in the country.” – Jim Chanos
• The quality of loans that are pumped into an economy through a fire hose cannot be good.

Analyzing the Chinese economy while it is growing at superfast rates is like analyzing a bank during an economic expansion – all you see is reward. But the defaults – the risk – are masked by constantly increasing new business that is profitable at first (or did not have a chance, yet, to default). The true colors of that growth only appear after the economy slows down and new accounts mature.

• Real estate projects are funded not based on expected cash flows but on collateral. Land is the primary collateral. If/when real estate/land prices decline collateral will not be sufficient to cover the loan. (Sounds very similar to what took place in Japan in late 1980s).

• Here is what Jamie Dimon, CEO of JP Morgan, thinks of Chinese banks and their lending:

“… too difficult to know what you are buying: many of them do not yet have integrated systems, possibly a meaningful amount of political loans…” [emphasis added] (Source: email uncovered by TheStreet.com)
Housing affordability is horrible

Housing property value / annual disposable income nationwide is 8 times

This ratio for Tokyo at the peak of the Japanese bubble was 9 (source GMO)

In the US at the height of the bubble this ratio peaked at 2.3 (source: WSJ)
“estimates from electricity meter readings that there are about 64.5 million empty apartments and houses in urban areas of the country, many of them bought up by people wagering on a constantly rising property market.”

Yi Xianrong, an economist at the Chinese Academy of Social Sciences, a government think tank in Beijing

64.5 million doesn’t sound like much, it is about 15% of Chinese dwellings
Property Investment % of GDP:

- Japan at the peak – about 9%
- The US at the peak – less than 6%
- China 2009 – 10%

Source: Citi
Here is why command economy results in overcapacity in industrial sector, a hypothetical example:

Hypothetically 100 bridges needed to be built

- If 10 bridges a year built 1 steel mils required – **10 years** required to build all 100 bridges – no idle capacity

- If 100 bridges **commanded** to be built in **1 year**, 10 steel mills are **idle for 9 years**. Steel mills are very specialized thus idle capacity will be idle.
Beware of False Axioms

An axiom is a proposition that is not proved but considered to be self-evident and doesn’t require proof.

In the US a false axiom was: *Real estate prices never decline nationwide.*

- **Used by all market players** in the US: the Fed, rating agencies, banks, etc...
- It was **supported by 50+ years** of data.
- **Unconditional belief** in this axiom lead to its violation, as it resulted in overbuilding (**overcapacity**) and **over-indebtedness**.
Chinese false axiom: *The economy will enjoy strong growth.*

“Office vacancy levels are at about 20% in Beijing and 16% in Shanghai. Those are high rates by U.S. and European standards, but the new space is expected to be absorbed quickly thanks to the strong growth of the Chinese economy.”


Past 30+ years of growth doesn’t equal future growth: significant overhang from overcapacity, future bad debt, lower demand from the US and Europe
What if the Chinese economy doesn’t grow?

- **High operational leverage** – it is a manufacturer to the world. This is further exacerbated by excess capacity everywhere you look.

- **High financial leverage** – debt, easy loans are a choice of financing.

- High financial leverage + high operational leverage = **high total leverage**

- Like the movie *Speed* with Keanu Reeves, **China is a bus with 1.3 billion Chinese** on board. If the economy slows down below a certain level (or declines) the result will be ____ . I’ll let you fill in the blank.
Additional points:

- China’s economic system is not superior to ours, its government just has more control over its economy. We don’t trust our government being involved in the economy; the Chinese government is not any better.

- Economic bubbles are usually just a good thing taken too far (think railroads in 1870s, internet in 1990s).

- Everyone wants a shortcut to greatness, but there isn’t one. It would be great if the word (economic) cycle only existed in a singular form, and the only cycle we had in the economy was happy expansion. But as heaven couldn’t exist without hell, or capitalism without failure, economic expansion can’t exist without recession.

- I’m facing a lot of skepticism today about China. The same way, if in 1989 I was telling you that the Japanese economy was on the verge of severe decline. We know how the Japanese story played out: a bust of banking, a real estate bubble, a contracting economy, deflation, ballooning debt, etc.

- China was a significant beneficiary from global growth and will suffer lower future growth.
Quality of growth is more important than quantity. When Egyptians built pyramids 4,000 years ago I am sure their economy registered growth. But pyramid have 0 return on capital. After pyramid is built it doesn’t help economy. Empty apartments have similar return on capital as pyramids, except pyramids are tourist attraction 4,000 years later.
China will build 8,100 miles of high speed rail; it will cost close to $400 billion

“a study by the First Survey and Design Institute of China Railways in 2008, coal-fired power plants on the mainland could produce enough high-quality fly ash for the construction of 100 kilometres of high-speed railway tracks a year. But more than 1,500 kilometres of track have been laid annually for the past five years.”

Source: South China Morning Post

“A person with ties to the ministry said ... system’s tracks were so cheaply made... that trains would be unable to maintain their current speeds of about 217 miles per hour for more than a few years. In as little as five years, lower speeds, possibly below about 186 miles per hour, could be required as the rails become less straight, the expert said.”

Source: NY Times, February 18, 2011
Command-Controlled Economy vs. Free-Market Economy

West Germany vs. East Germany
State-Owned Enterprise vs. Free Market

After WWII Germany is divided into 2 parts, East and West: same people, same language, same culture, BUT different economic system.

- West: Free-market enterprise
- East: Command-controlled economy, 98% of economy in the hands of state-owned enterprises

- 1989: West Germany is one of the richest nations; East nearly bankrupt.
- Chinese government is not any better ‘managing’ its economy than the East German (or any other) Government. Free-market economies will always win in the long run.
Will the Chinese consumer pick up the demand slack for the US and European consumers? This may happen, but it will take decades. US and European consumers are two-thirds of much larger economies. The Chinese consumer is only one-third of the Chinese economy.

![Diagram showing GDP and consumer spending for the United States, European Union, and China.](image)

Rounded numbers for simplicity: actual US GDP is $14.2 trillion and EU GDP is $14.5 trillion; Chinese consumer is about $1.6 trillion (1/3 of Chinese $5 trillion GDP).
Elephants in the Room

1. Low urbanization rate (migration from villages to cities)

2. Low government debt
Migration from villages to cities has helped Chinese economy as peasants moved to a more productive economic activity (i.e. making toys or building skyscrapers vs. milking cows) and thus helped economy to grow. It is a common assumption that due to China’s low (46%) urbanization rate over 300 million people will move to the cities by 2025. Here are some reasons why migration will not be as significant:

1. Not all cities are created equal.

- Chinese definition of a city 1,500 people / km²
- Western definition of a city 400 people / km²

American “Villages”:
- Colorado Springs (767 people/sq km)
- San Antonio (1,084/km²)
- Dallas (1,427/ km²)
- Reno (1,008/ km²) are villages.

Urbanization rate is much higher in China than many expect. (See United Nations report Demographic Yearbook)
2. **Population in cities is understated.** Economic targets set by central governments for municipalities on per capita basis (i.e. GDP per person). Easiest way for local bureaucrats to game the system is to under-report local population.

3. **One-child policy will take its toll.** Population will peak by 2015. Workforce participation is expected to peak in 2010. (source GMO)
Actual debt is not so low. The world focuses on Chinese financial strength of $2.4 trillion of foreign reserves. Myopic way of analyzing a country (or a company) as it only focuses on the asset side of the balance sheet but ignores liabilities – government-backed loans which are in trillions of dollars as well. Also, foreign reserves are a testament to the lopsidedness of its economy.

- $1.5 Trillion debt of local governments
- $1 Trillion debt of “policy” banks guarantee

Source: Victor Shih, Northwestern University
Ireland was one of the least indebted countries in Europe in 2007, before the financial crisis.

It chose to bail out its private banks, now it is an “I” in PIIGS.

China “owns” its banks, bailout will not be a choice, Debt to GDP will rise.

Source: (Irish) National Treasure Management Agency
Consequences of the Bust of the Chinese Bubble

• What happens in China **doesn’t stay in China** (not any more); it spills over to the rest of the world.

• China will turn from a **wind** in the sails of the global economy to its **anchor**. The impact will be felt in many, and unsuspected, places.

• It will **tank the commodity markets**, commodity producers, and commodity-exporting nations. (Incremental demand from China collapses, oil prices follow, taking the **Russian** and Middle Eastern oil-centric economies with it). According to GaveKal Research, China accounts for 15% of **Brazil’s** exports (up from 1.5% a decade ago).

• Demand for **industrial** goods will **fall off** the cliff. China consumes a lot of those goods – $550 billion worth annually (according to GaveKal Research).

• China accounts for **2/3 of global iron ore demand** (Source: Reserve Bank of Australia)

• Chinese appetite for our fine currency will diminish, driving the dollar lower against the renminbi and **boosting** our **interest rates** higher. No more 5% mortgages or 6% car loans.
Japan – Past the Point of No Return
Japanese GDP Growth Comes to an End in the Early 1990s

Source: World Bank
Government Cuts Taxes and Increases Expenditures to Stimulate Economic Growth

Tax Revenues vs. Government Expenditures

Budget Deficit Is Growing

Source: Japan Ministry of Finance
Accumulated Government Bonds Outstanding

Gross Government Debt Used to Fill in the Budget Gap. Debt Triples. This doesn’t include debt of local municipalities.

Source: Japan Ministry of Finance
Here is the official explanation by the Japan Ministry of Finance of what took place from the early 1990s to 2000; the same story continues till today.

It all sounds like this: **Economy doesn’t grow:**

1) **cut taxes**
2) **increase government spending**
3) **raise debt**

- **Early 1990s:** “Japan experienced a serious economic downturn. ... Government initiated various economic measures, including a series of large-scale public work programs ... these measures required further issuance of bonds....”
- **1994:** “A major tax reduction amounting to ... 1.3% of GDP was carried out, with the gap financed by the issuance of special deficit-financing bonds.”
- **1995:** “A major tax cut amounting to ¥5.5 trillion was carried out... Furthermore... the Government decided to initiate the largest ever economic stimulus package... As a result ... government bond issues ... reached ... 28.0% of total government expenditures.”
- **1996:** “A major tax cut on the same scale as that in 1994 and 1995 was continuously carried out. ... the amount of government bonds issued was ... 28.8% of total government expenditures.”
- **1997:** “the Government decided not to continue the temporary tax cut, and instead raised the consumption tax rate from 3% to 5%. ... However; due to the severe economic downturn ... decided to carry out a temporary tax cut ... government bond issues reached ¥18.5 trillion, or 23.5% of total government expenditures.”
- **1998:** "Fiscal Structural Reform Act ... given the still stagnant economic situation, the Government announced two more economic packages, one in April ... ¥16 trillion, and ... in November... of over ¥27 trillion... bonds issued totaled a record high of ¥34.0 trillion, and the ratio of bond issues to total expenditures reached an all-time high of 40.3%.”
- **1999:** “Budget was compiled with priority on promoting economic recovery ... the amount of government bonds to be issued was ... 6.3% of GDP... 37.9% of total government expenditures... Government took measures to deal with the continuous economic slump.... announced Emergency Employment Measures ... in light of weak private demand and a severe employment situation, the Government decided to use contingencies for public works amounting to ¥500 billion...”
- **2000:** “... providing utmost assurance to the Government’s economic management in putting the economy back onto the track to a full-scale recovery... budget continued to be stimulative... bond issuances reaching ¥32.6 trillion, or 38.6% of total expenditures ... a policy package for New Economic Development towards the Rebirth of Japan was issued... As a result, government bond issuances for the year increased to be ¥33.0 trillion, or 36.9% of total expenditures... [Source: Japan Ministry of Finance. Emphasis added and text truncated for brevity.]
Japanese Debt to GDP by Far THE Highest in the Developed World *

* Second to Zimbabwe if you count developing countries

Source: Japan Ministry of Finance
90% of Debt Financed Internally through Very High Household Savings Rate ... But Savings Rate is on Decline

Japanese Savings Rate
Japan Has the Oldest Population in the World – Bad for Savings. Japanese Savings Rate is Approaching Zero.

Today almost 1 in 4 Japanese is over 65 years old

As people get older their incomes start to decline, their expenses (health care) rise, their savings rate drops. Their demand for bonds will drop as well – Japanese will become net sellers of bonds.
## Age Structure of Population by Country

<table>
<thead>
<tr>
<th>Country</th>
<th>2005</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-14 years</td>
<td>15-64</td>
<td>65 and over</td>
</tr>
<tr>
<td>Japan</td>
<td>13.7</td>
<td>65.8</td>
<td>20.1</td>
</tr>
<tr>
<td>Germany</td>
<td>14.3</td>
<td>66.8</td>
<td>18.9</td>
</tr>
<tr>
<td>Italy</td>
<td>14.2</td>
<td>66.2</td>
<td>19.6</td>
</tr>
<tr>
<td>France</td>
<td>18.4</td>
<td>65.1</td>
<td>16.5</td>
</tr>
<tr>
<td>Korea, Rep. of</td>
<td>19.1</td>
<td>71.6</td>
<td>9.3</td>
</tr>
<tr>
<td>Canada</td>
<td>17.6</td>
<td>69.3</td>
<td>13.1</td>
</tr>
<tr>
<td>Sweden</td>
<td>17.4</td>
<td>65.4</td>
<td>17.2</td>
</tr>
<tr>
<td>U.K.</td>
<td>18.0</td>
<td>65.9</td>
<td>16.1</td>
</tr>
<tr>
<td><strong>U.S.A.</strong></td>
<td><strong>20.8</strong></td>
<td><strong>66.8</strong></td>
<td><strong>12.4</strong></td>
</tr>
<tr>
<td>Russia</td>
<td>15.1</td>
<td>71.1</td>
<td>13.8</td>
</tr>
<tr>
<td>China</td>
<td>22.0</td>
<td>70.4</td>
<td>7.6</td>
</tr>
<tr>
<td>Brazil</td>
<td>27.5</td>
<td>66.3</td>
<td>6.2</td>
</tr>
<tr>
<td>India</td>
<td>33.1</td>
<td>62.3</td>
<td>4.6</td>
</tr>
</tbody>
</table>

Population is on Indefinite Decline – Horrible for the Economy and Savings

Need to have 2.1 births per woman to maintain population size.
Japan 2009 birth rate: 1.21
One of the lowest birth rates in the world. Pay is based on seniority. Elders make too much money, young too little. Young don’t want to start families. 
(Source: Woodrow Wilson Center)

There is no immigration to soften very low birth rates (Japan is a closed society).

Declining and aging population doesn’t bode well for economic growth. Economic growth is paramount for the economy, whose debt obligations are increasing and interest expense soon will be rising (you’ll see).

Trends in Interest Payments and Interest Rates

Source: Japan Ministry of Finance
<table>
<thead>
<tr>
<th>Country</th>
<th>10YR</th>
</tr>
</thead>
<tbody>
<tr>
<td>UST 10YR</td>
<td>3.46</td>
</tr>
<tr>
<td>FRENCH 10YR</td>
<td>3.63</td>
</tr>
<tr>
<td>GERMAN 10YR</td>
<td>3.28</td>
</tr>
<tr>
<td>GREEK 10YR</td>
<td>12.32</td>
</tr>
<tr>
<td>ITALIAN 10YR</td>
<td>4.75</td>
</tr>
<tr>
<td>SPANISH 10YR</td>
<td>5.15</td>
</tr>
<tr>
<td>JAPAN 10YR</td>
<td>1.24</td>
</tr>
<tr>
<td>AUSTRALIA 10YR</td>
<td>5.48</td>
</tr>
<tr>
<td>NEW ZEALAND 10YR</td>
<td>5.61</td>
</tr>
</tbody>
</table>

Greek bonds yield 10x higher than Japanese.
Japan is in a death trap: it cannot lower interest rates; they are already scratching zero. Higher interest rates will cripple the economy.
Additional thoughts:

- Current interest expense at 1.4% interest rate is 9.8 trillion yen; current expenditure of Education & Science, Public Works, and National Defense ministries is about 5 trillion yen each (source: Japan Ministry of Finance). If interest rates double (i.e. rise to 2.8%) interest costs increase by 9.8 trillion – Education & Science and National Defense both lose funding.

- Today, interest expense is 26.4% of tax revenues (using 2010 estimates). If rates double, interest-rate expense will be 52.8% of tax revenues.

- As Japan starts looking for new (external) investors for its bonds, it will be competing with much higher global interest rates and better sovereign credit profiles. This will lead to a higher cost of debt.

- Population is aging and shrinking, taxes will be going up, interest rates rising – this crashes the budget deficit, and a sovereign debt downgrade will follow – further increasing cost of borrowing – putting additional pressure on Japanese interest rates. Somewhere in between, government starts printing money – this torpedoes currency.

- As a consequence interest rates will rise globally. Japan is the largest holder of the US debt. Normally, yen should substantially depreciate against the dollar, but Japan is the largest holder of US Treasuries ($768 billion). Japan will have to liquidate at least part of dollar reserves; this should mitigate some of the yen depreciation.
Beware of False Axioms

In Japan the false axiom is: **Japan will always be able to issue cheap debt**. Fifteen years of data support this false axiom. However, prolonged reliance on a *false axiom* will lead to its invalidation.
Chapter 15 of my recent book discusses the US, Chinese, and Japanese economies.
Thank You!

To sign up for complimentary articles via email visit

www.ContrarianEdge.com or click here

You can email me at vk@imausa.com

Investment Management Associates Inc.
7979 E. Tufts Ave, Suit 820, Denver, Co 80237

303.796.8333 / www.imausa.com