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# China Economics

## Chinese Economy through 2020 (Part 3): A Golden Age for Consumption

**Chinese economy can prepare for a golden age for consumption over the next decade.** While we expect economic growth to decelerate, consumption will accelerate to take the baton from investment and exports to power headline growth, as both empirical evidence and theoretical analysis suggest that the Chinese economy is at an inflection point beyond which consumption is likely to outperform strongly over the next decade.

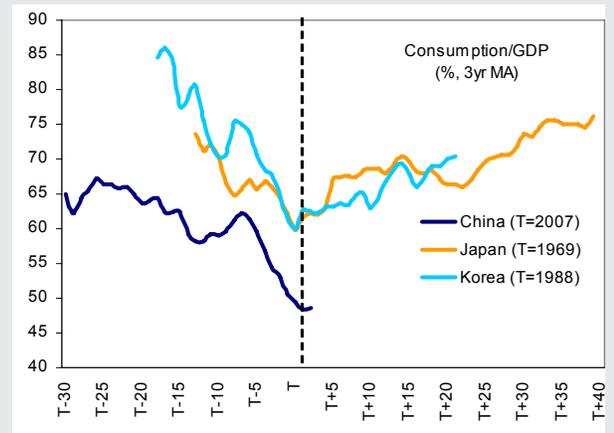
**Our base case scenario is that China's total consumption will reach two-thirds of that of the US and account for about 12% of world total by 2020.** In terms of incremental consumption, China overtook the US in 2008 and will represent 20% of world consumption by 2020.

**A golden age for consumption would feature two key aspects: a) the strong expansion of consumption; and b) a profound evolution of consumption structure.** To realize the former would entail strong household income growth and/or lower saving ratio. We identify eight drivers that would help usher in such an age: 1) economic growth; 2) wage increase; 3) development of service industries; 4) public expenditure; 5) income redistribution; 6) aging population; 7) level of economic development and 8) urbanization. We group these eight drivers under three underpinning pillars: a) rising income; b) lower saving ratio; and c) consumption upgrade.

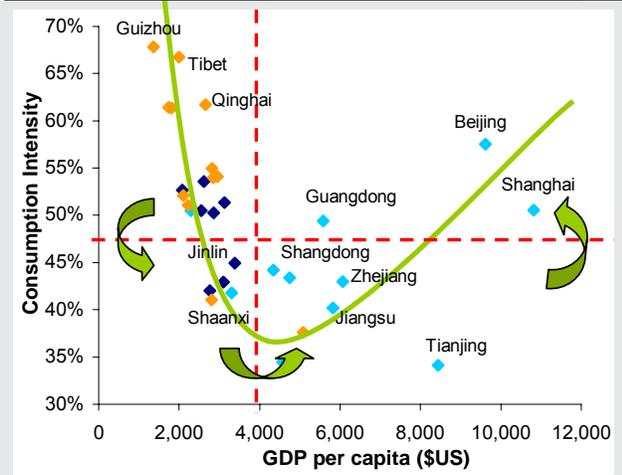
**Large regional disparities make China special.** To this end, we develop a framework to help understand the dynamic evolution of consumption by regions.

**We revisit the issue of 'under-consumption' in China and reiterate our call that China's private consumption is substantially underestimated.**

### Consumption Is Poised to Enter A Golden Age...



### ...with Diverse Regional Dynamics



Source: CEIC, Morgan Stanley Research

**For important disclosures, refer to the Disclosures Section, located at the end of this report.**

## Chinese Economy through 2020 (Part 3): A Golden Age for Consumption

### Introduction and Overview

What are the megatrends that could define the Chinese economy through 2020, in terms of both growth trajectory and the structure of the economy? To what extent can we extrapolate China's economic success of the past three decades to the coming one? What are the potential pitfalls and risks down the road? How can investors best position themselves for the potentially profound transition and transformation of the economy?

We aim to address these issues in a series of reports under the umbrella "Chinese Economy through 2020." In the first, argued that China's economic growth rate potential is set to slow but should nevertheless average 8% per annum through 2020, with a profound structural evolution that leads to rising shares of consumption-GDP, service sector-GDP, and labor income-GDP ([Chinese Economy through 2020: Not Whether but How Growth Will Decelerate, September 20, 2010](#)).

In the second installment (*Chinese Economy through 2020 (Part 2): Labor Supply to Remain Abundant, October 10, 2010*), we made the case that China will continue to benefit from a low demographic dependency ratio and abundant labor supply through 2020. The expected deceleration in the growth of the working-age population is unlikely to become a headwind to overall economic expansion in China.

This third report aims to assess how consumption will take off over the next decade as a driver of growth. We make the following key points:

- 1) Chinese economy can prepare for a golden age for consumption over the next decade. While economic growth potential is set to decelerate, consumption will accelerate to take the baton from investment and exports as the power for headline growth, as both empirical evidence and theoretical analysis suggest that Chinese economy is at an inflection point beyond which consumption is likely to outperform strongly over the next decade.
- 2) Our base case scenario is that China's total consumption will equal two-thirds that of the US level and account for about 12% of world total by 2020. In terms of incremental consumption, China overtook the US in 2008 and will represent 20% of world consumption by 2020.

- 3) A Golden Age for consumption would feature two key aspects: a) the strong expansion of consumption; and b) a profound evolution in the structure of consumption. To realize the former would entail strong household income growth and/or lower saving ratio. We identify eight drivers that would help usher in a golden age for consumption in China: 1) economic growth; 2) wage increase; 3) development of service industries; 4) public expenditure; 5) income redistribution; 6) aging population; 7) level of economic development and 8) 7) urbanization. We group these eight drivers under three pillars that underpin a golden age for consumption in China: a) rising income; b) lower saving ratio; and c) consumption upgrade.
- 4) Large regional disparities make China special. To this end, we develop a framework to help understand the dynamic regional evolution of consumption.
- 5) We revisit the issue of 'under-consumption' in China and reiterate our belief that China's private consumption is substantially underestimated

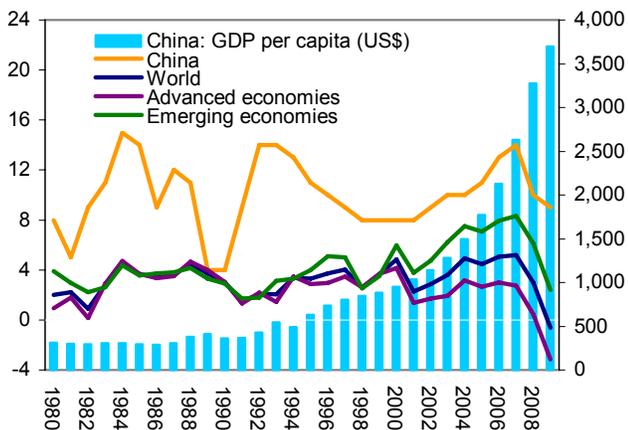
### China's Consumption Has 'Underperformed'

China's economic achievements since the launch of economic reform in 1978 have been extraordinary. By 2009, China's nominal GDP had reached US\$3,679 in 2009, or 16 times 1978's level of US\$226, representing a real GDP CAGR of 9.5% across the period, outperforming not only the developed economies but also developing peers by a wide margin (Exhibit 1).

Investment and exports have been the primary drivers of China's strong growth, while consumption growth has underperformed: its share of GDP declined by nearly 14 percentage points over from 2000 to 2009 (Exhibit 2).

Exhibit 1

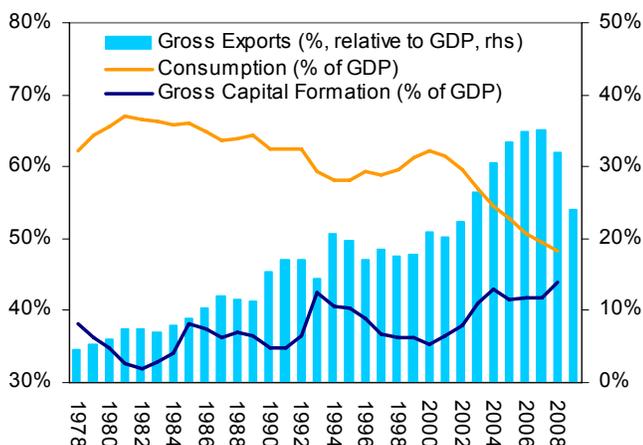
## China: Outperformance in Overall Economic Growth



Source: IMF, Morgan Stanley Research

Exhibit 2

## China: Consumption Underperformed as a Growth Driver



Source: CEIC, Morgan Stanley Research: [Chinese Economy through 2020: Not Whether but How Growth Will Decelerate, September 20, 2010](#)

In consequence, by 2009, China's Consumption-GDP ratio was significantly below not only those of high-income countries (e.g., US) and middle-income peers (e.g., Malaysia) but also those of low-income ones (e.g., India) (Exhibit 3).

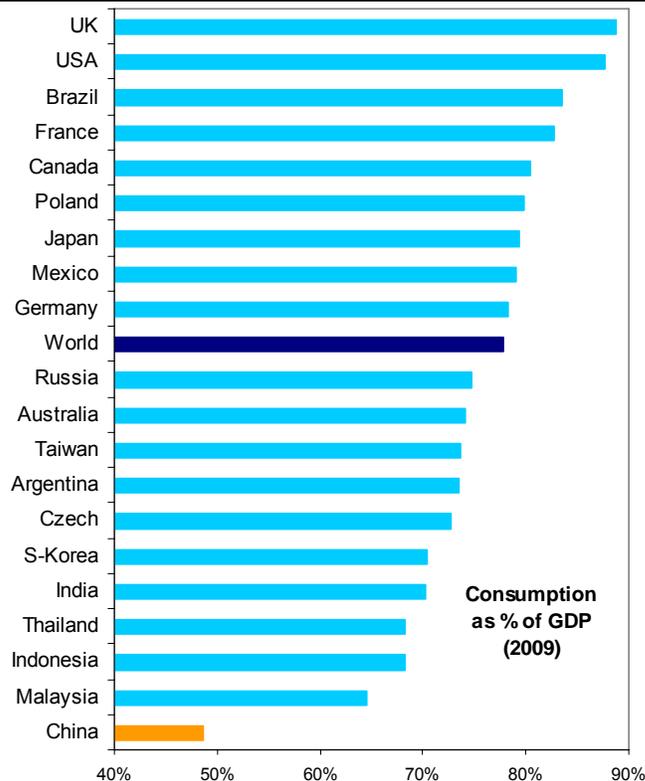
These comparisons have helped form a consensus among most China observers that there is serious under-consumption in China and that a substantial boost to consumption is required to ensure more sustainable and balanced growth. On this subject, some China observers have become much more

concerned as they fear that this is not only an issue of rebalancing China's economy over the long run but also of economic stability in the short run. Some China bears even predict that Chinese economy is about to implode, as the consumption-GDP ratio in China is simply so unusually high and thus fragile that economic growth could easily collapse in face of a major shock.

While we share the consensus view that China's consumption is relatively weak, we dismiss the rather alarmist view that the Chinese economy is so seriously imbalanced as to pose a threat to economic stability in the short run. This is because we believe China's official statistics substantially understate the true magnitude of consumption (especially the consumption of services) in China. We address this in "China's Under-consumption Overstated" in this report (see below Special Topic Two).

Exhibit 3

## China's Under-consumption



Source: EUROMONITOR, CEIC, Morgan Stanley Research

## China's Consumption at an Inflection Point: Empirical Evidence

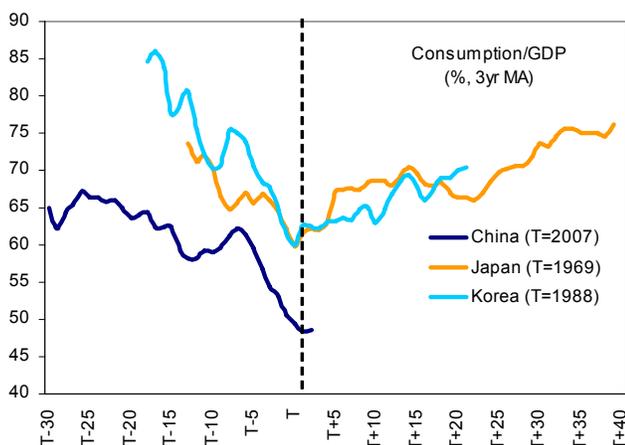
China's economy is at an inflection point beyond which we believe consumption is likely to outperform strongly over the next decade.

As argued the first installment of the "Chinese Economy through 2020" series, the Chinese economy is at an inflection point similar to that of Japan in 1969 and of Korea in 1988. ([Chinese Economy through 2020: Not Whether but How Growth Will Decelerate, September 20, 2010](#)). History suggests that, beyond this inflection point, the economic structure tends to undergo profound transformation, with the three key ratios of the economy--consumption-GDP, service sector-GDP, and labor income-GDP--rising rapidly.

For instance, Japan's consumption-GDP ratio increased from 60% in 1969 to 69% in 1979, and Korea's from 60% in 1988 to 65% in 1998, as consumption growth began to significantly outpace overall economic growth.

Exhibit 4

## China's Consumption at an Inflection Point: Historical Precedents



Source: Morgan Stanley Research; [Chinese Economy through 2020: Not Whether but How Growth Will Decelerate, September 20, 2010](#)

## China's Consumption at an Inflection Point: Theory

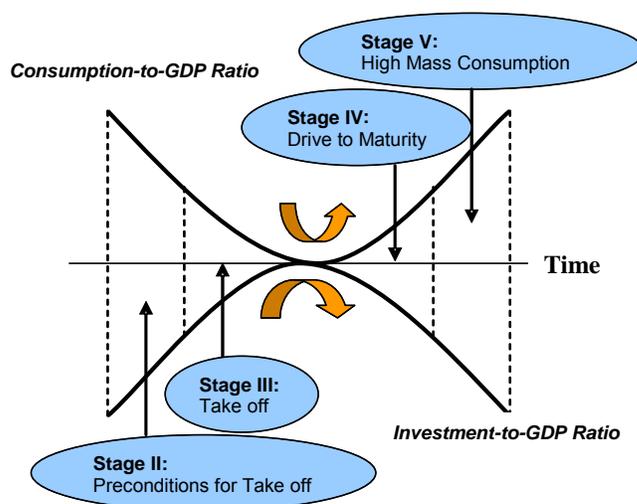
In our view, a country is justified in accumulating physical capital and wealth at early stage of development to pave the way for the transition towards the more consumption-driven growth. For a developing economy, saving is an essential and integral part of industrialization process. History has shown that the only way to industrialize an economy is to increase the capital-labor ratio so that poor farmers can be equipped with

industrial machines and equipment to produce goods that have higher value than farming. To install that piece of machinery, you need to save and invest.

There are a number of theories that shed light on the development stages of a country, with the most popular ones including the "U curve" theory, Rostow's Stages of Growth, and Chenery's Division of Industrialization Stages.

Exhibit 5

## China's Consumption at an Inflection Point: an Analytical Framework



Source: Morgan Stanley Research

- The "U curve" is the most straightforward theory explaining the trajectory of economic transition, in which the investment intensity of the economy (or investment-GDP ratio) keeps rising during the early state of industrialization until an inflection point is reached, beyond which the consumption intensity of the economy (consumption-GDP ratio) starts to bottom out.
- The Rostow's Stages of Growth is one of the major analytical frameworks that explain the pattern of economic development. It postulates that economic modernization occurs in five basic stages of varying length, featuring 'traditional society', 'preconditions for take-off', 'take-off', 'drive to maturity', and 'age of high mass consumption'. Rostow asserts that countries go through each of these stages fairly linearly and describes a number of conditions

that would likely occur to investment, consumption and social trends at each stage.<sup>1</sup>

We unify the two theories--“U curve” and “Rostow’s Stages of Growth”--into one framework to help illustrate the potential consumption trends in China (Exhibit 5). According to Rostow’s Stages of Growth theory, an economy’s development divides into five stages. China appears to be passing Stage III of “takeoff” and poised to transition into the Stage IV of “Drive to Maturity”. The “Drive to Maturity” features as “rebalancing among sectors, great poverty reduction, improving living standard as the society no longer needs to sacrifice its comfort in order to strengthen certain sectors”. Fitting the Rostow’s Stages of Growth into “U curve” framework, the consumption intensity declines in the stages of “pre-conditions for takeoff” and “takeoff” but is set to rebound in the stage of “drive to maturity”.

### Size up China’s Consumption through 2020: Three Illustrative Scenarios

We construct three scenarios to help illustrate how consumption in China will likely evolve through 2020 relative to that of US and the world economies. These scenario analyses are based on the forecasts we laid out in the first installment of the “Chinese Economy through 2020” series, which benchmark the footprints of the transition experiences of developed economies such as Japan and Korea ([Chinese Economy through 2020: Not Whether but How Growth Will Decelerate, September 20, 2010](#)).

Exhibit 6

#### Assumptions for Forecasts under Different Scenarios

	Real GDP Growth (%)	CPI Inflation Growth (%)	Incremental Consumption Intensity (ppt)	USD/CNY Rate (end 2020)
	(average change per annum)			
Base-case	8.0	3.5	0.7	5.5
Alternative I	9.5	2.5	-0.5	6.0
Alternative II	6.5	4.0	1.4	5.0

Source: Morgan Stanley Research

The key parameters under different scenarios are summarized in Exhibit 6:

- **Base Case (70% probability):** We expect annual real GDP growth and CPI inflation at 8.0% and 3.5% per year

<sup>1</sup> W. W. Rostow. *The Stages of Economic Growth: A Non-Communist Manifesto* Cambridge University Press (1960)

in our base case. Meanwhile, benchmarking with the experiences of Japan and Korea during the takeoff period of consumption, the increment of consumption intensity per year is set at 0.7ppt per annum, which would bring consumption intensity to 56% by 2020 from 49% in 2009. The USD/CNY exchange rate is expected to reach 5.5 by 2020.

- **Alternative Scenario I – current trends continue (20% probability):** the Chinese economy continues ‘business as usual’ with no material change from the previous decade – featuring strong growth (GDP: 9.5% YoY), modest inflation (CPI: 2.5% YoY), and no meaningful transformation of the economic structure (consumption intensity slide 0.5pp per annum to 44% in 2020). RMB exchange rate mechanism reform is slower-than-expected such that the USD/CNY rate reaches 6.0 by 2020.
- **Alternative Scenario II – a Japanese-style adjustment (10% probability):** a Japan-style transition featuring a drastic deceleration of growth (GDP 6.5% YoY) and structural adjustment (consumption intensity improve 1.4pp per annum to 63% in 2020). Such a scenario could be catalyzed either by very proactive (perhaps draconian) policy intervention to artificially correct the structure of the economy or external such external shocks as a complete meltdown in external demand and sustained surge in international commodities prices due to supply shocks. The pace of RMB FX reform accelerates under Alt II (RMB/USD at 5 by 2020).

Exhibit 7

#### Assumptions for Forecasts for US and World Economies

	Real GDP Growth (%)	CPI Inflation Growth (%)	Incremental Consumption Intensity (ppt)
	(average change per annum)		
<b>US</b>	2.7	1.6	-0.5
<b>World</b>	4.5	2.9	0.0

Source: IMF, Morgan Stanley Research

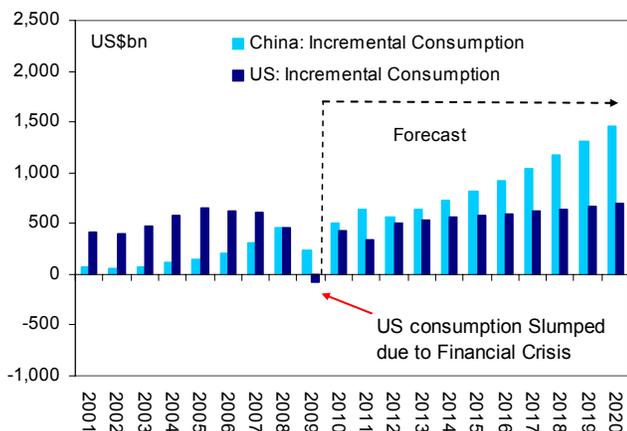
**US/World Growth:** in the aftermath of the global financial crisis, we assume that US’s trend growth to be low, averaging 2.7% of real GDP growth and 1.6% of CPI inflation during 2010-2020. This assumption is based on IMF’s latest World Economic Outlook for 2010-15 with moving average of previous three years for 2016-20. Meanwhile, reflecting the need for US households to repair their balance sheet by saving more, we assume that the consumption intensity in the US would decline 0.5ppt per annum. Finally, we assume the trend growth of

world GDP of 4.5% with 2.9% of average CPI inflation during 2011-2020 (IMF forecasts during 2010-15 and rolling average of previous three years for 2016-20), while the consumption intensity would stay unchanged at its current level (Exhibit 7).

### The Results from Scenario Analyses:

- China's incremental consumption** in US dollar terms overtook that of the US for the first time in 2008 (Exhibit 8). While incremental consumption for the US was negative in 2009 as the result of financial crisis, China still managed to maintain expansion, suggesting that it had replaced the US as a primary driver of global consumption growth. Going forward, we expect China's incremental consumption to dwarf that of the US thanks to faster headline GDP growth and rising consumption intensity as the underlying economic structure evolves. By 2020, we estimate China's annual incremental consumption should be roughly double the US's under our base-case scenario (Exhibit 8).

Exhibit 8  
**China: Illustrative Forecasts of Incremental Consumption under Base-case Scenario**



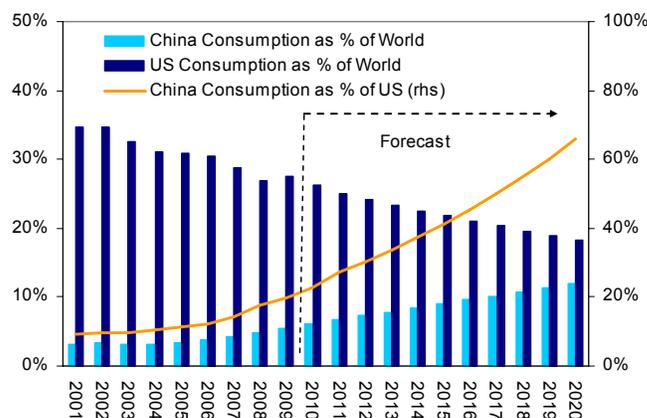
Source: CEIC, Morgan Stanley Research

- Total consumption:** In our base-case scenario, China's consumption would reach two-thirds of the US's level by 2020 from about 9% in 2000 and 20% in 2010. Meanwhile, the contribution of China to world total consumption will rise to 12% by 2020 from 3% in 2000 and 5.4% in 2010 while US's contribution will decline to 18.3% by 2020 from 27% in 2010 (Exhibit 9).
- Additional Colors from Alternative Scenarios:** In terms of incremental consumption, China will reach 1.2 times of

US and 12% of world total under Alternative Scenario I but 2.5 times of US and 24% of world total under Alternative Scenario II. In terms of total consumption, China will reach 49% of US and 9% of world total under Alternative Scenario I but 74% of US and 14% of world total under Alternative Scenario II.

- Of particular note, we envisage Alternative Scenario II would feature a "Japanese style adjustment", namely despite a relatively sharp slowdown in headline GDP growth, consumption growth remained very robust, as the consumption-GDP ratio rose rapidly after the inflection point was crossed (Exhibit 4).

Exhibit 9  
**China: Illustrative Forecast of Total Consumption under Base-case Scenario**



Source: CEIC, Morgan Stanley Research

Exhibit 10  
**China: Illustrative Forecasts of Consumption**

	Incremental Consumption as % of US		Incremental Consumption as % of World	
	2010	2020	2010	2020
<b>Base-case</b>	117%	210%	13%	20%
<b>Alternative I</b>	117%	123%	13%	12%
<b>Alternative II</b>	117%	246%	13%	24%
	Total Consumption as % of US		Total Consumption as % of World	
	2010	2020	2010	2020
<b>Base-case</b>	20%	66%	5%	12%
<b>Alternative I</b>	20%	49%	5%	9%
<b>Alternative II</b>	20%	74%	5%	14%

Source: Morgan Stanley Research

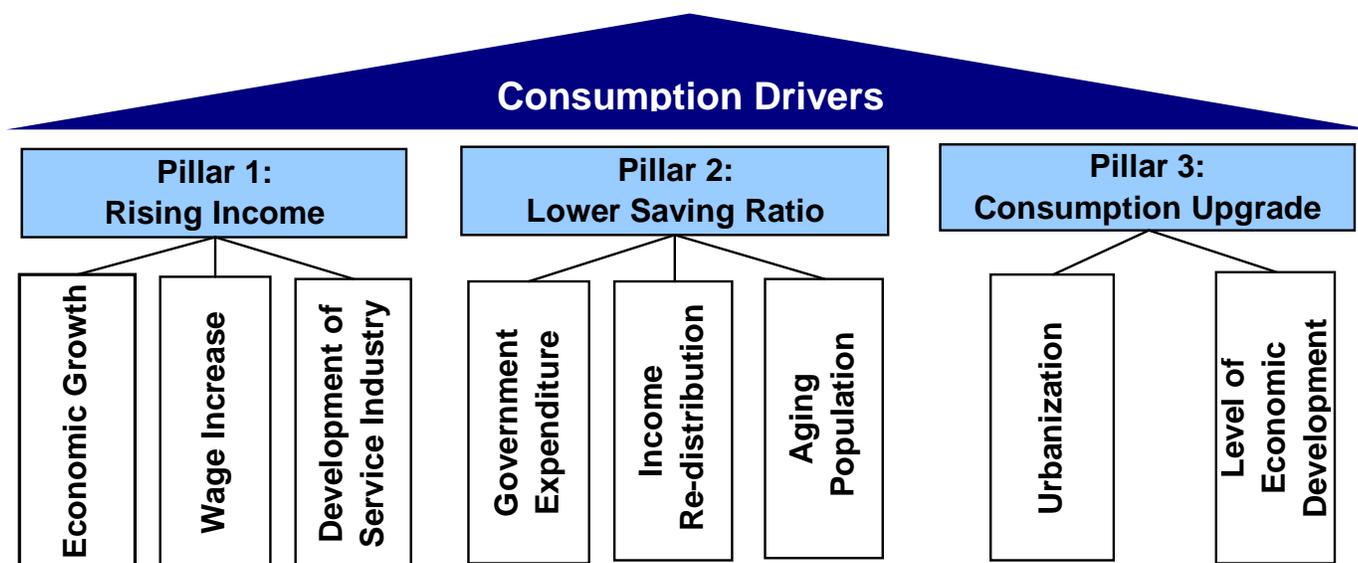
**A Golden Age for Consumption: Three Pillars**

China’s consumption is at an inflection and we believe China is about to enter a Golden Age for consumption, in our view. We come to this conclusion by drawing on the development experiences of Japan and Korea, which, we believe, are most relevant to gauging the long-run outlook for China. While the analyses under different scenarios help quantify the potential size of aggregate consumption in China through 2020, they are mostly for illustration purpose. The key remaining question is how this Golden Age for consumption will materialize. More specifically, what are the potential drivers for consumption in practice?

A Golden Age for consumption would feature two key aspects: a) strong expansion of consumption; and b) profound evolution of consumption structure, in our view. To realize the former would entail strong household income growth and/or lower saving ratio. We identify eight drivers that would help usher in a Golden Age for consumption in China: 1) economic growth; 2) wage increase; 3) development of service industries; 4) public expenditure; 5) income redistribution; 6) aging population; 7) urbanization; and 8) level of economic development. We group these eight drivers under three pillars that underpin a golden age for consumption in China: a) rising income; b) lower saving ratio; and c) consumption upgrading (Exhibit 13).

Exhibit 13

**Three Pillars Underpin a Golden Age for Consumption through 2020**



Source: Morgan Stanley Research

**Pillar I: Rising Income**

The primary source of consumption growth stems from household income growth. Since compensation of labor is the most important source of income for the vast majority of Chinese households, household income in China is primarily a function of overall economic growth, labor-intensity of the economy, and wage rates. Looking ahead, we expect all three factors will provide robust support to rapid income growth over the next decade.

**(1) Economic Growth**

Under the base case scenario, we believe the Chinese economy will still be able to maintain an average of 8% growth per annum over the next decade: That is a slowdown of slightly more than 2 percentage points from the average growth achieved in the previous decade. We expect the deceleration in China’s growth to be slower than that displayed by either Japan or Korea. Average CPI inflation over the next decade would be 3.5%, a significant acceleration from the average inflation rate of 1.9% over the previous decade. The higher

inflation rate mainly reflects a labor market that is increasingly normalized. At this pace of development, China's nominal GDP would triple from its current size, reaching Rmb103tn.

Assuming an average 3% appreciation of the Renminbi against the US dollar per annum, Chinese nominal GDP in US dollar terms would quadruple its current size, reaching US\$20tn by 2020 ([Chinese Economy through 2020: Not Whether but How Growth Will Decelerate, September 20, 2010](#)).

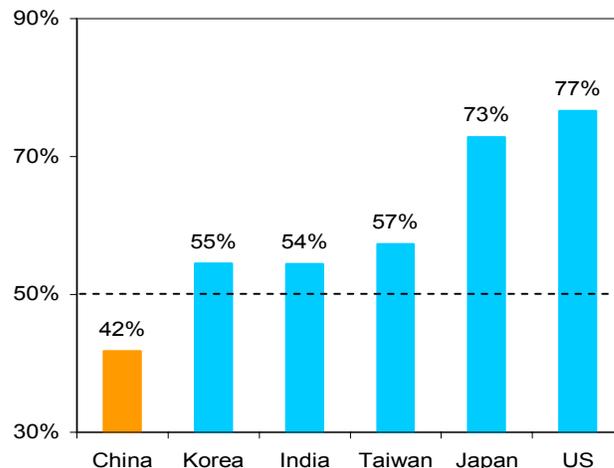
## (2) Development of Service Industries: Job-rich Growth

China's service sector is underdeveloped. Since the sector tends to be labor intensive, this has made China's growth largely 'jobless'. Looking ahead, as service sector develops, the labor intensity of the economy will increase, helping to boost household income growth, in our view.

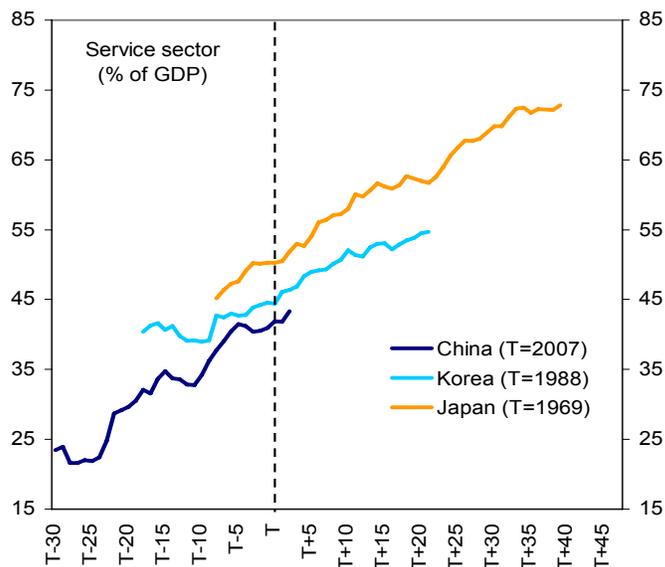
- Despite three decades of rapid development, the tertiary industry (service) represented just 42% of total GDP in 2009, not only far below the advanced economies (such as US and Japan) but also developing peers (e.g. India) (Exhibit 14). Even compared to the levels in Japan 40 years ago and Korea 20 years ago, China's service sector is lagging (Exhibit 14).
- The service sector is labor intensive, thus its lack of development helps to explain the 'jobless' growth in China over the past two decades (Exhibit 15) ([Chinese Economy through 2020 \(Part 2\): Labor Supply to Remain Abundant, October 2010](#)).
- Looking ahead, we expect service sector growth to outpace overall economic growth such that service-sector as percent of GDP will keep rising, by following the developmental experiences of Japan and Korea (Exhibit 14).
- Development of service sector will help improve the labor intensity of the economy and boost the share aggregate labor compensation in national income (Exhibit 16).

Exhibit 14

### Service Sector Is Underdeveloped in China...



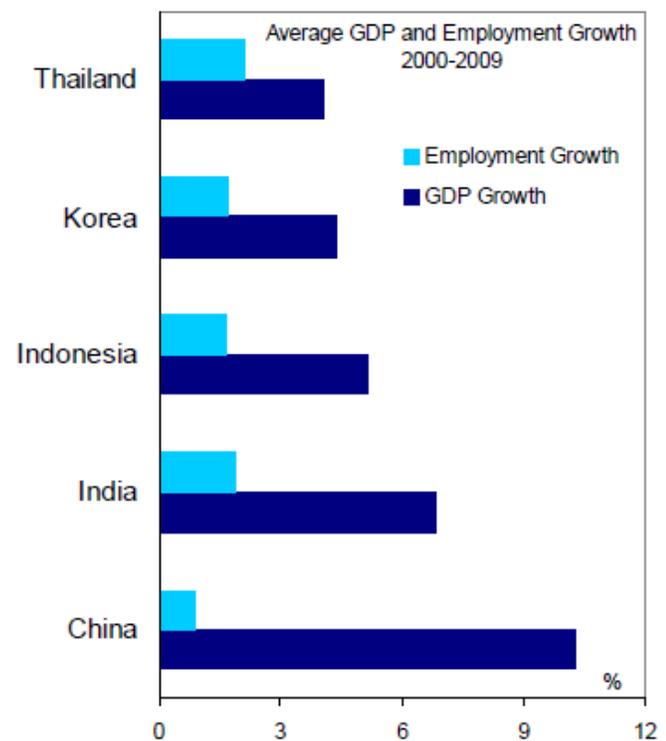
### ...Even Compared to Japan and Korea at Similar Stage of Development



Source: CEIC, Morgan Stanley Research

Exhibit 15

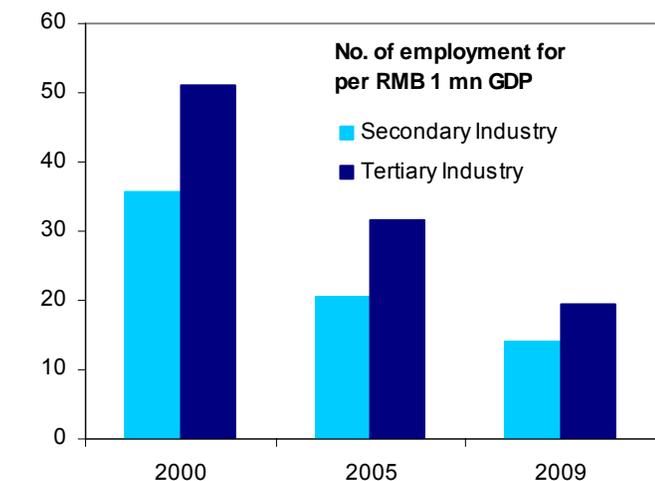
## China's 'Jobless' Growth



Source: CEIC, Morgan Stanley Research

Exhibit 16

## Development of Service Sector Is Job-rich Growth



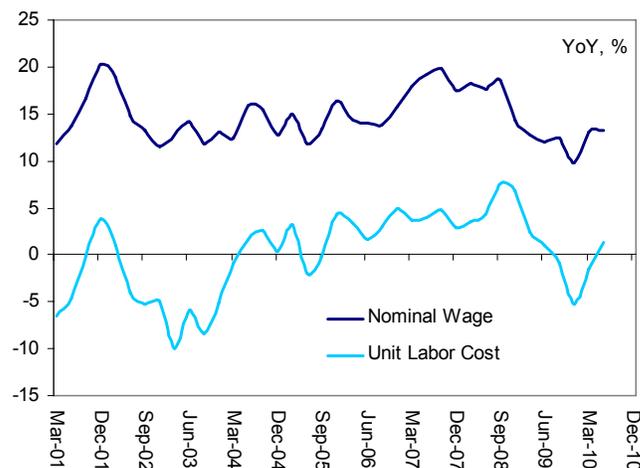
Source: CEIC, Morgan Stanley Research.

## (3) Wage Increases

Labor market normalization has been under way for several years in China, which should underpin sustained wage growth over the long run. The unit labor cost in the industrial sector start to register largely positive growth since 2004, which represents the beginning of the end of surplus labor supply in China, in our view (Exhibit 17). Moreover, since then, seasonal labor shortage especially in coastal areas (i.e., around Chinese New Year) has become the norm instead of the exception ([China Economics Should We Be Worried about Large Minimum Wage Hikes? June 7, 2010](#)).

Exhibit 16

## Wage Growth in Industrial Sectors



Source: CEIC, Morgan Stanley Research

Looking ahead through 2020, we believe labor supply in China will remain abundant and unlikely become a binding constraint that would cause overall economic growth to slow down sharply ([Chinese Economy through 2020 \(Part 2\): Labor Supply to Remain Abundant, October 2010](#)). That said, as labor market normalization is under way, wage growth in China is more likely to be strong--in line with labor productivity growth--instead of being depressed by the large pool of surplus labor, which has been the case over the past 30 years, in our view.

On the policy front, a key policy priority under the 12<sup>th</sup> Five-year Plan is to make sure labor compensation to increase in line with overall economic growth. To this end, a large majority of provinces in China raised local minimum wages this year, and the authorities are reportedly mulling approving a Wage Bill, which features a collective wage negotiation mechanism.

## Pillar II: Lower Saving Ratio --Household Saving Ratio to Peak Out

A declining saving ratio would boost consumption growth, given income growth. We expect Chinese households' saving ratio to peak out and even start to decline through 2020. The potential trends of three important factors over the coming decade will help bring about a lower household saving ratio, in our view. First, more government expenditure on public goods (e.g., express rail train, social housing) and services (e.g., education, healthcare) would help lower the precautionary savings of households. Second, income redistribution would help lower overall saving ratio, as the saving ratio of high income households tend to be higher than that of low-income households. Third, as population aging kicks in, the average saving ratio tend to decline.

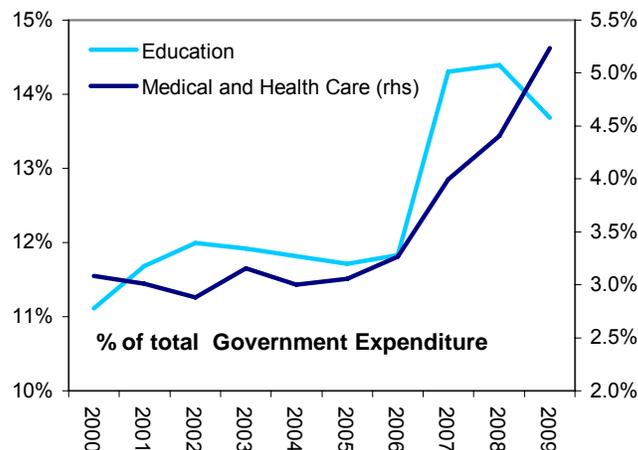
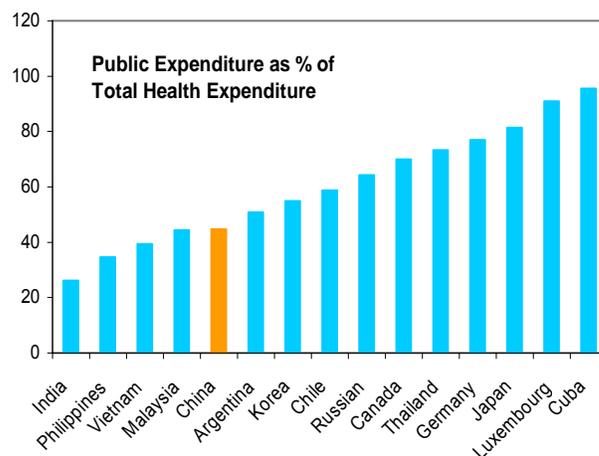
### (1) Government Expenditure on Public Goods and Services Helps Reduce Precautionary Savings

Government expenditure helps to reduce precautionary savings by households. The social welfare system has gone through profound changes during China's transition from planned to market economy. Under the planned economy, social welfare such as education, medical service, housing and pension were largely free such that personal expenditures on those were almost negligible. The subsequent reform of the public welfare system has made education, medical services, and housing much more expensive than before or even unaffordable for the poor. Consequently, households have to save more to pay for those used-to-be public goods and services. Precautionary savings increase sharply as a result, crowding out consumption. For example, given low penetration of commercial medical insurance in China, the portion of health expenditure financed by government (45% in 2007) was very low in China, which requires household to set aside noticeable amount of additional saving for the health expenditures of family members (Exhibit 17).

In recent years, Chinese government has realized the importance and urgency to mend its social welfare system to unlock the consumption. Ambitious plans are being implemented in (1) Health care reform aiming at full coverage of basic medical services; (2) Pension reform to address the problems stemming from aging society; and (3) aggressive push-forward in Social housing program to provide affordable housing to low-income households. As these policy initiatives are being progressively carried out, it would reduce uncertainty and boost confidence of households and therefore lower the current precautionary savings ratio.

Exhibit 17

### China: Generally Low-level Public Expenditure in Healthcare Has Led to Policy Shift



Source: World Bank, CEIC, Morgan Stanley Research

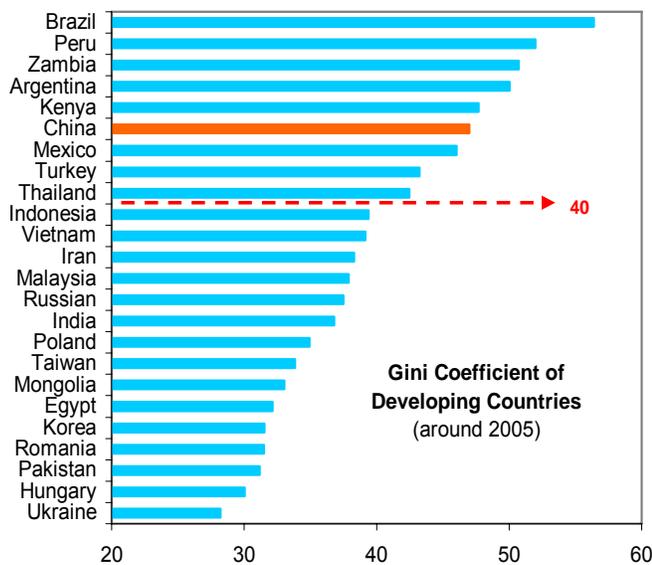
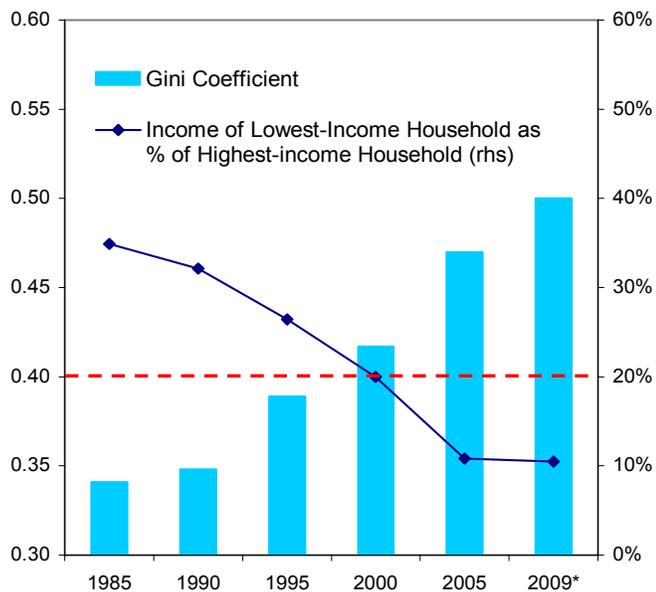
### (2) Income Redistribution

Income inequality in China has widened during over the past decade. Addressing this has become, and will remain, a key policy priority.

- The Gini Coefficient, the measure of the income inequality, has been rising since the debut of economic reform in late 1970s. The indicator has passed the red line of "40%" in 2000s, suggesting that income disparity in China is already quite serious (Exhibit 18). While China stopped publishing Gini Coefficient in 2005, we estimate that this indicator may have reached over 50% by 2009, or close to the levels of Latin-American countries such as Brazil, Peru, and Argentina (Exhibit 18).

Exhibit 18

## Deterioration in Income Inequality



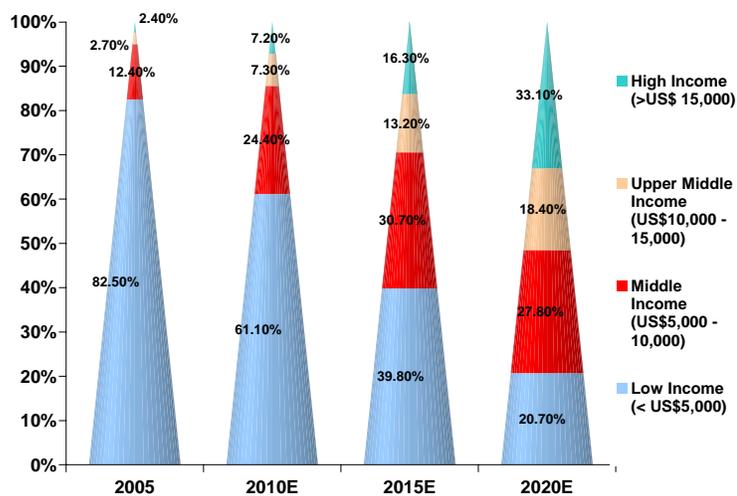
Source: CEIC, Morgan Stanley Research \* 2009 Gini Coefficient was an estimated figure.

- Since the propensity to consume is much higher in low-income households than high-income ones, the rising income inequality has a negative impact on consumption growth. There is empirical evidence that every increase of 1pp of Gini Coefficient would reduce the propensity to consumption by 0.5-0.7pp.

- Chinese authorities have realized the importance of income distribution to sustainable economic growth, especially the underpinning of consumption growth. Besides strengthening social safety net that is targeted at the poor, we expect several tax measures to be expected to be implemented soon: a) the minimum threshold for personal income tax will be raised substantially to reduce the tax burden on middle- and low- income households; b) the marginal tax rate for high income bracket will be raised to a quite high level; and c) real estate tax, or some special forms of property tax, could be implemented in 2011, as a means to tax the stock of wealth (as opposed to flow of income) owned by the rich.
- With these policy measures in place, they would help China achieve a more balanced income distribution featuring a large pool of middle-class households by 2020, according to MS Asia/EM equity strategy team led by our colleagues Jonathan Garner (Exhibit 19).

Exhibit 19

## China's Household Income Distribution



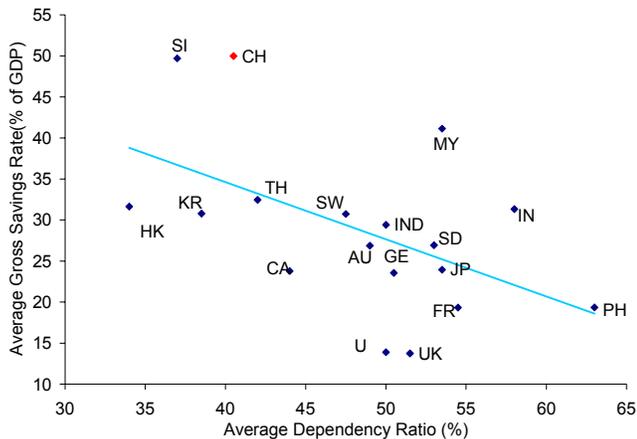
Source Euromonitor, Morgan Stanley EM/Asia Equity Strategy Team

### (3) Aging Population

Demographic profile is perhaps one of the most important factors in explaining the evolution of saving rates for an economy, especially a developing or emerging market economy. In particular, cross country data show a clear pattern that as a country's dependence ratio rises, her saving ratio tends to decline (Exhibit 20).

Exhibit 20

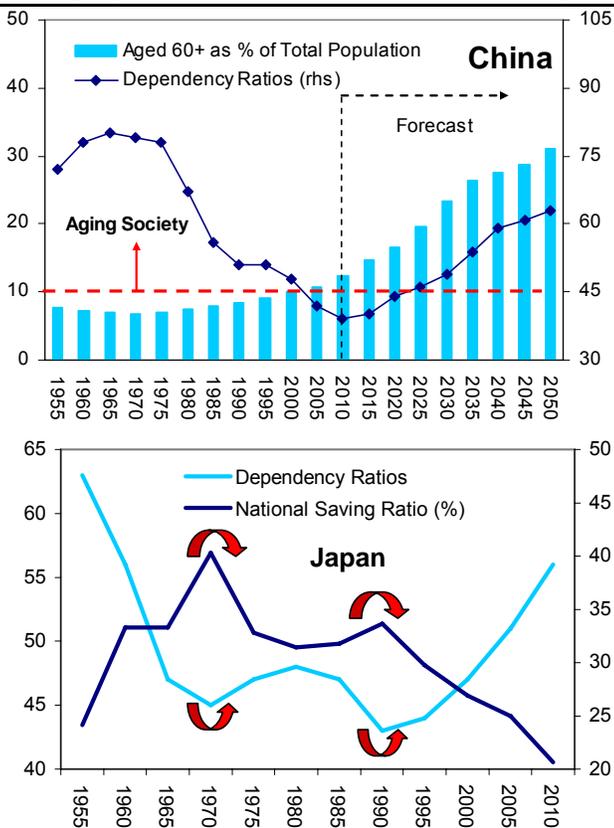
## High Dependence Ratio; Low Saving Rate



Source: Morgan Stanley Research

Exhibit 21

## Demographics and Inflection Point for Saving Rate



Source: World Bank, CEIC, Morgan Stanley Research

China formally became an “Aging Society” in 2005, according to the UN definition of >10% of the total population being aged above 60 (Exhibit 21). According to the UN, China’s

dependency ratio will bottom in 2010 and triple to 31.1% by 2050. The rising dependence ratio suggests that the overall saving ratio in China will peak out in the coming years and start to decline perhaps as early as the 2<sup>nd</sup> half of the next decade.

## Pillar III. Consumption Upgrade

A Golden Age for consumption in China would have two key aspects: a) the rapid expansion of aggregate consumption; and b) a profound and rapid change in the structure of consumption, or consumption upgrade. Consumer’s preference and taste for different products and services typically reflects the *level* of economic development. In this regard, China is perhaps special in that as the economy develops, a massive structural shift is also taking place. That is rapid urbanization, which will have important impact on the structure of consumption beyond the implications of the level of development.

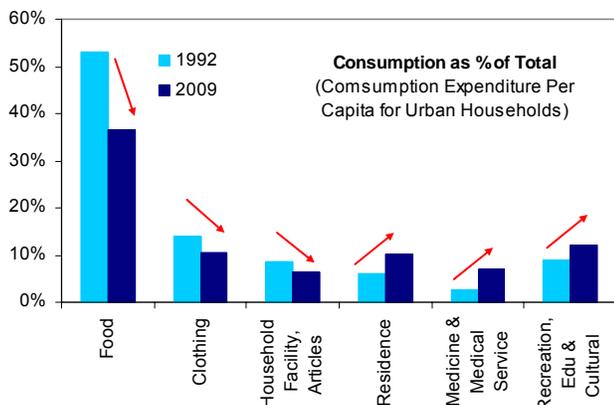
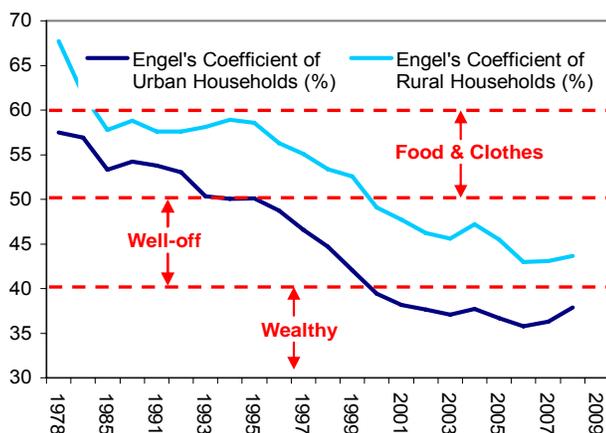
### (1) Level of Economic Development

Reflecting sustained economic growth, the living standards of Chinese households have improved substantially since early 1980s.

- The Engel’s coefficient, which is defined as the proportion of expense on food to the consumption expense and an index used to evaluate the living standards of households, has registered significant decline for both urban and rural residents (Exhibit 22).
- There has been broad-based consumption upgrade. Compared with the consumption structures in 1992 and 2009, while the share of necessities like food, clothes, and home appliances declined, the shares of residence, health care and recreation, education and culture--which represent more advanced-form of consumption--have risen markedly (Exhibit 22).

Exhibit 22

## Declining Engel's Coefficient; Consumption Upgrading in Urban Sector

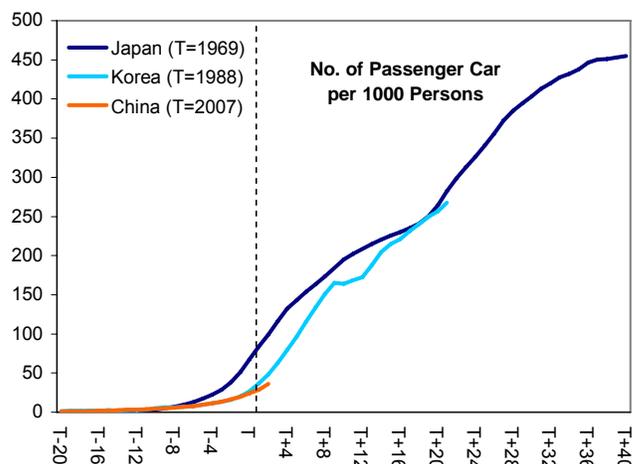
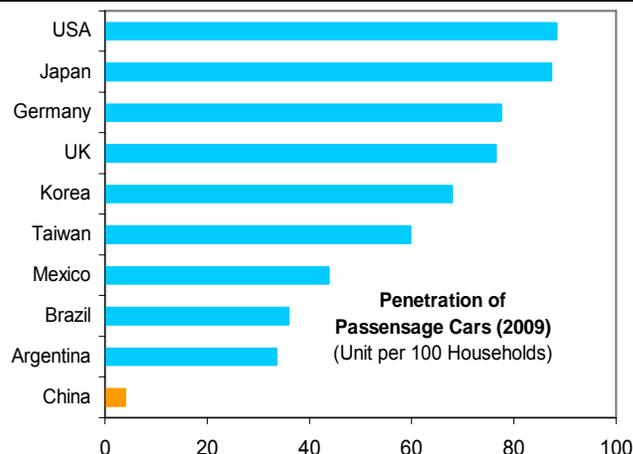


Source: CEIC, Morgan Stanley Research

- Compared with the consumption structure of more advanced economies, the consumption upgrade in China apparently has a long way to go. Passenger car penetration is a case in point (Exhibit 23). During the 10 years after they reached the same level of development as China today, the number of passenger cars per 1,000 persons increased by 3.5 times in Japan and 6.5 times in Korea.

Exhibit 23

## A Long Way to Go with Consumption Upgrade in China: The Case of Passenger Cars



Source: CEIC, Euromonitor, Morgan Stanley Research

- We find that the consumption structure of China's urban households in 2007 was close to that of Japan in 1971 (Exhibit 24). Specifically, food and clothing accounted for 37-38% of total private consumption; and housing was 15-16% for both urban China in 2007 and Japan in 1971. For Health care, transportation & communication and recreation, education & culture, urban China in 2007 was only higher than Japan in 1971 by 1-2 pp.
- Assuming the evolution of China's urban consumption upgrade would follow Japan's pattern, we may envisage what urban China consumption structure would look like in 2020 by benchmarking that of Japan in 1984: the share of daily necessities should continue to fall with food and clothing down 6.4ppt and 1.2ppt, respectively. The top winner is Health Care which will gain 2.6ppt, followed by

Residence (2.1ppt) and Transportation & Communications (2ppt). In another word, health care, property, and auto & telecom will likely benefit most from China's consumption upgrade over the coming decade.

Exhibit 24

## Consumption Upgrade: China vs. Japan

	Japan			Urban China	
	1971	1984	Changes	2007	2020E
Food	29%	23%	-6%	30%	23%
Clothing	8%	7%	-1%	8%	7%
Residence	17%	19%	2%	15%	17%
Healthcare	8%	10%	3%	9%	11%
Transport & Communi	8%	10%	2%	11%	13%
Recreation, Edu & etc	9%	10%	0%	11%	11%

Source: CEIC, Morgan Stanley Research

## (2) Urbanization

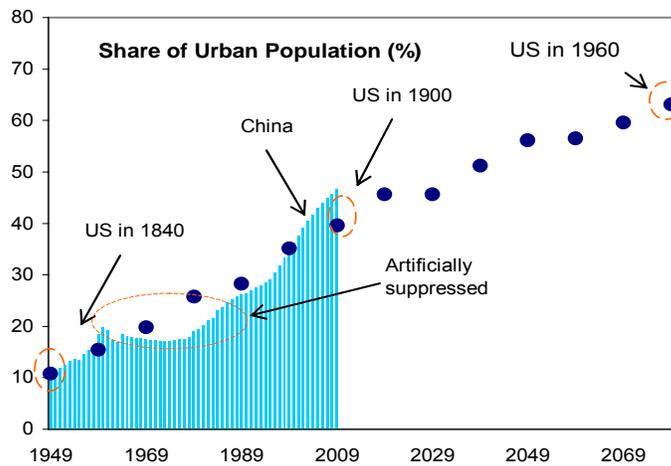
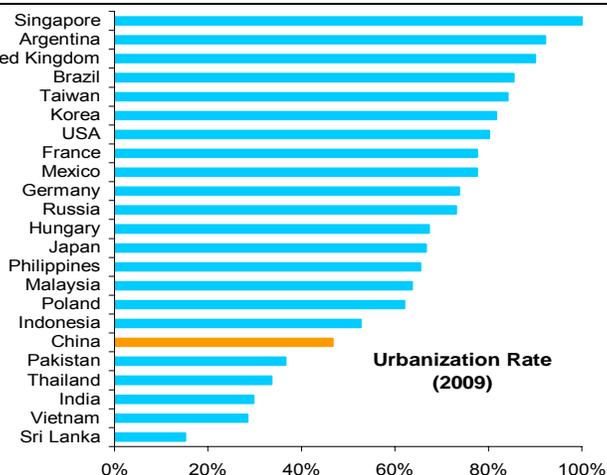
China has been experiencing fast urbanization in the past two decades with urbanization ratio surging from 26.4% in 1990 to 46.6% in 2009, averaging 1% per year. Over 270 million rural residents moved into urban area during 1990-2009, averaging 13 million per year. Nonetheless, China's urbanization remains low not only relative to developed economies like US, Japan, and UK but also to Asian neighbors like Korea, Malaysia and Philippines (Exhibit 25). China's urbanization is still roughly at the same level as that in US a hundred years ago.

If the current pace of urbanization is sustained in the next decade with urbanization ratio rising 1% per year, China's urbanization rate should reach 58% in 2020. If, however, the average pace were to accelerate to 1.5% per year, which is likely especially given that urbanization is now imparted a high policy priority, we estimate that urbanization rate would be able to reach 63% by 2020. This would imply that 12-20 million rural residents would be urbanized per year through 2020 (Exhibit 25) ([China Economics: One Country, Three Economies: Urbanization as a Primary Driver of Growth, March 3, 2010](#)).

There is a large gap in income and consumption levels between urban and rural households in China. In 2009, rural household's income and consumption per capita was only 38% and 51%, respectively, that of urban households. Other than for housing, rural per-capita consumption of major goods and service was barely that 50% of urban households (Exhibit 26). The penetration of major durable goods in rural areas lags far behind that in the urban sector (Exhibit 26).

Exhibit 25

## Under-urbanization in China



Source: CEIC, Morgan Stanley Research

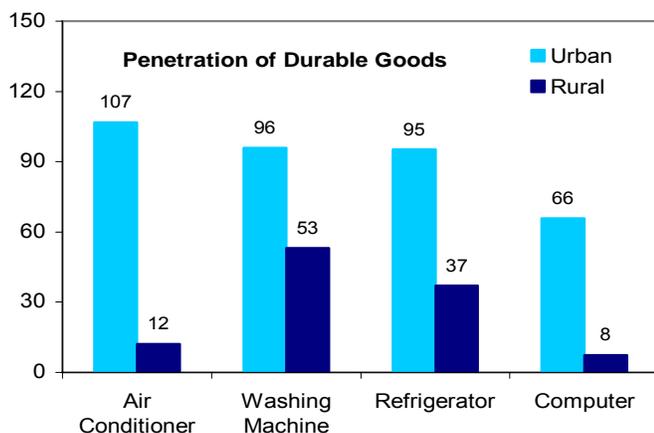
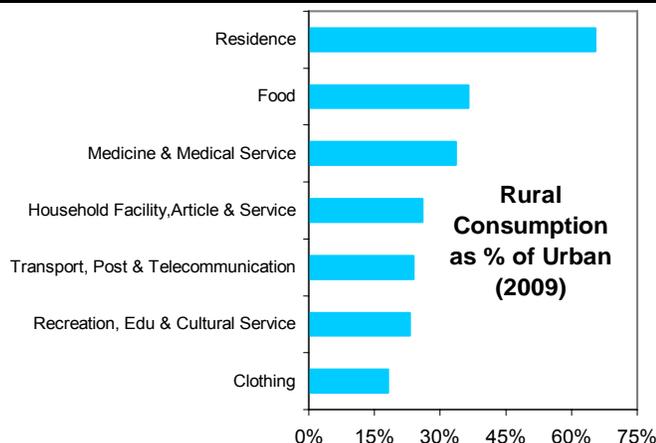
We therefore expect that consumption upgrading in rural areas should mainly be reflected in the improvement in penetration of relatively low-end durable goods (Air Conditioner, Washing Machine, and Refrigerator) which have now largely reached a saturation point in urban sector.

The still sizable difference in development stage between urban and rural areas suggests that the evolution of China's consumption upgrade will differ from those of other advanced economies like Japan and Korea where the producers of consumer goods have to either look for external demand or retrench production once domestic demand is satisfied. In China, while urban residents are seeking more advanced consumption in the form of high-end durable goods and more services, the consumption upgrade in rural areas in the context of urbanization continues to generate strong demand for goods

that have reached saturation level in urban area. In this context, China's consumption upgrading is expected to benefit the entire industrial chain from low-end to high-end and from goods and even to services.

Exhibit 26

## Consumption Gap in China: Urban vs. Rural



Source: CEIC, Euromonitor, Morgan Stanley Research

## Special Topic One:

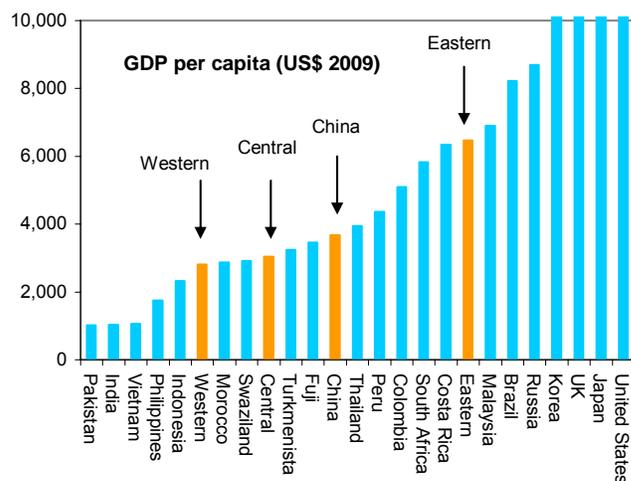
### A Golden Age for Consumption: A Regional Perspective

China is a big country in terms of both territory and population. Equally important is the massive regional disparity in terms of levels of development (Exhibit 27) (see "[Strategy and Economics: One Country, Three Economies: Play the Regional Disparity in China, May 26, 2010](#)"). If we make a case for Golden Age for consumption in China, it is important to examine this issue from a regional perspective. We therefore dedicate a special section to discussing the potential dynamic trajectory of consumption across different regions in China.

Besides the historic reasons, the economy of eastern region took off much earlier than central and western regions, as eastern region was the first to benefit from economic reform and the open-door policy. In terms of GDP per capita, the provinces of eastern region averaged at US\$ 6,468 in 2009, double the average of central (US\$ 3043) and western regions (US\$ 2818) (Exhibit 27).

Exhibit 27

## China's Regional Disparities in a Global Context

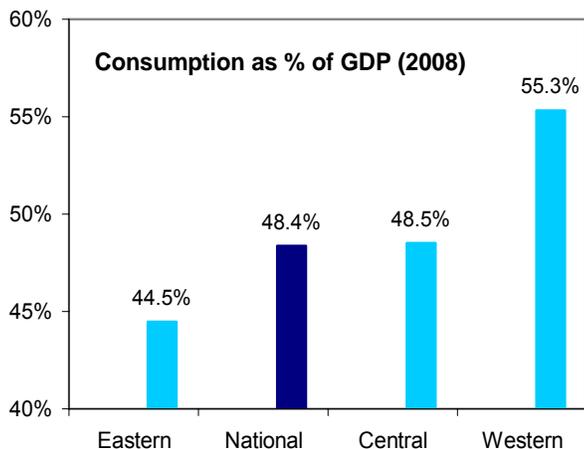


Source: CEIC, Morgan Stanley Research

Since the eastern region is the most developed of the three, it is perhaps natural to expect that the eastern region would have the greatest consumption intensity (i.e., consumption-GDP ratio). In fact, the average consumption share of eastern provinces is lower than for the central and western regions. (Exhibit 28).

Exhibit 28

## The Myth: Low Consumption Intensity in Eastern Region



Source: CEIC, Morgan Stanley Research

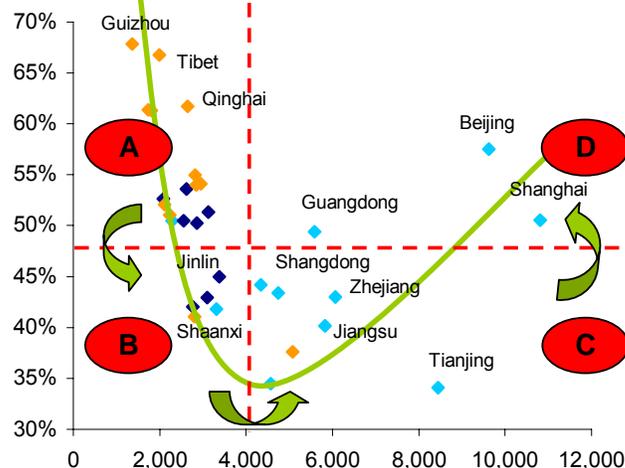
We explain the seemingly perverse relationship between consumption intensity and economic development through the framework of *“The Dynamic Trajectory of Regional Consumption Intensity”* as following (Exhibit 29):

### Construction of the framework:

- 1) If we plot the ratio of consumption to GDP (Y axis) against the GDP per capita (X axis), it is interesting to observe that 36 provinces constitute a conspicuous “U” curve (slightly tilting to the right-hand side).
- 2) Taking a step further, we may divide the space into four quadrants with two lines (Vertical: US\$ 4000 GDP per capita; Horizontal: 48.6%, which is the national average consumption to GDP ratio).
- 3) Then the space is divided into four Quadrants: Quadrant A and D represent that consumption to GDP ratio is above national level while Quadrant B and C are opposite; Quadrant A and D represent that GDP per capita is below US\$ 4000 while Quadrant B and C are opposite.

Exhibit 29

## Dynamic Evolution of Regional Consumption



Source: CEIC, Morgan Stanley Research

### Initial observations:

- 1) The majority of western provinces (yellow spots) and some less-developed central provinces (dark blue spots) concentrate in the “Quadrant A” which features high consumption intensity but low GDP per capita.
- 2) Several central provinces appear in “Quadrant B” which features low consumption intensity and low GDP per capita.
- 3) Majority of eastern provinces concentrate in “Quadrant C” which features low consumption intensity but high GDP per capita.
- 4) Three most developed provinces, Shanghai, Beijing and Guangdong (all from eastern region), are grouped in “Quadrant D” which represents high consumption intensity and high GDP per capita.

### The dynamic relationship between four quadrants:

- 1) The “Quadrant A” is “over-consumption” stage (high consumption intensity but low income) while “Quadrant C” is “under-consumption” stage (low consumption intensity but high income). “Quadrant B” is the “transition” stage between “Quadrant A” and “Quadrant C”. Finally, “Quadrant D” should be “mature” stage with relatively balanced economic structure.

- 2) The “over-consumption” stage here does not suggest the over-growth of consumption but the leanness of the contributions from investments and net exports. This also explains why some less-developed countries are found to have a relatively high consumption intensity than advanced industrial economies.
- 3) For the “over-consumption” provinces to take off would entail aggressive investments and possibly strong growth of net exports, as the result of which consumption intensity may drop significantly and the provinces may move from “Quadrant A” to the “transition” stage in “Quadrant B”, featuring both low consumption intensity and GDP per capita.
- 4) Aggressive investments and exports may bring strong economic growth, which will be reflected in rising GDP per capita. However, since the growth of investments and exports may still outpace consumption by a wide margin, the provinces may enter the “under-consumption” stage in “Quadrant C”, featuring low consumption intensity but high GDP per capita
- 5) When marginal return of investments starts to peter out and export growth falters, the transition of economic growth shall take place by returning to consumption. Then the economy may upgrade from “Quadrant C” into “Quadrant D” in which consumption intensity improves quickly.

## Implications

- 1) The consumption intensity of provinces in different regions should evolve along the “U” curve by following the trajectory of “A → B → C → D”.
- 2) Not all provinces are likely to enter a golden age for consumption simultaneously over the next decade. Provinces in Quadrant C, or ‘under-consumption’ stage, will likely among the first to brace for a golden age for consumption with most rapid consumption upgrade. Provinces in Quadrant B, ‘transition’ stage will likely also register strong consumption growth, but its aggregate expansion is perhaps more profound than structural upgrade. Provinces in ‘Quadrant A’ will unlikely enter a golden age for consumption until perhaps toward end of the next decade.
- 3) It may take longer time for China to achieve a takeoff of consumption (relative to GDP) than Japan or Korea due to pronounced regional differences. This echoes the

point we made in the first installment of “Chinese Economy through 2020” series ([Chinese Economy through 2020: Not Whether but How Growth Will Decelerate, September 20, 2010](#)). This is because while the consumption intensity of eastern provinces in “Quadrant C” will rise when moving into “Quadrant D”, the consumption intensity of western provinces in “Quadrant A” will decline when moving into “Quadrant B”. These two offsetting trends point to a more extended period of rebalancing in China compared to the case for Japan or Korea.

## Special Topic Two:

### Under-consumption Overstated

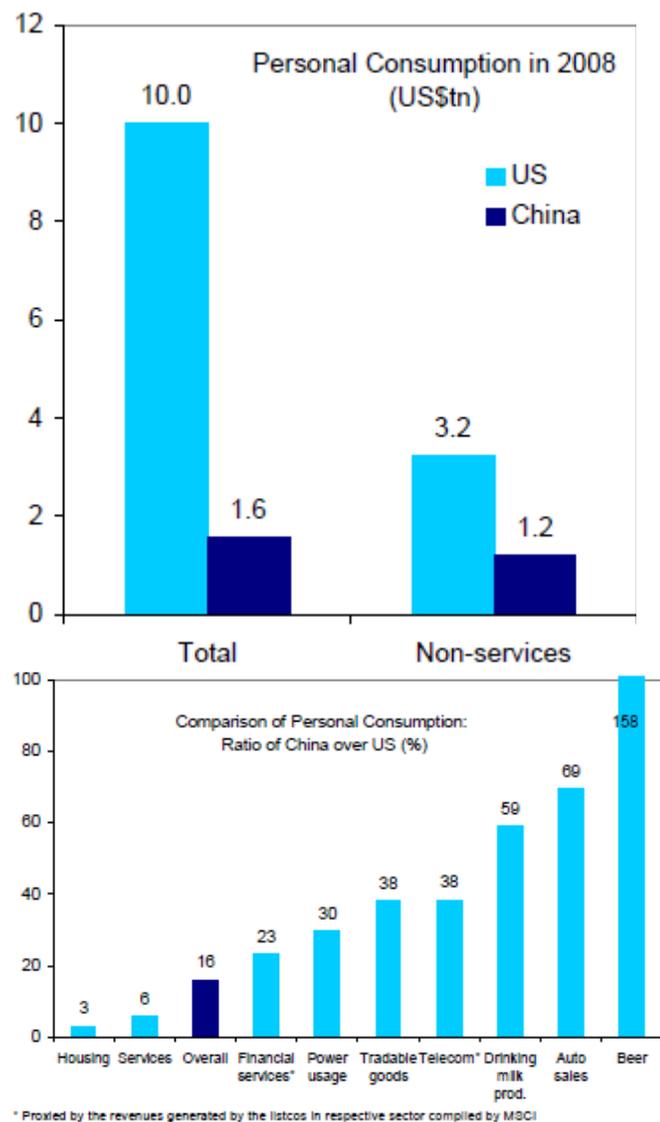
While we share the consensus [view](#) that China’s consumption is relatively weak compared to other economies, we, however, dismiss the rather alarmist view that Chinese economy is so seriously imbalanced as to pose a threat to economic stability in the short run. This is because we believe China’s official statistics substantially understate the true magnitude of consumption (especially consumption of services) in China.

We addressed this issue in a report published in 2009 under the title “China Under-consumption Overstated” ([China Economics: China’s Under-consumption Over-stated, September 13, 2009](#)). In that report, we reached the following conclusions:

- First, Chinese official statistics for personal consumption expenditure substantially underestimate its true magnitude and impact, primarily because of the underestimation of consumption of services – especially housing and health care – in China.
- Second, a comparison of consumption of non-services, tradable goods between the US and China – which is, in our view, more relevant to assessing the impact on the rest of world – indicates the gap between the US and China is much smaller than suggested by headline overall consumption data (Exhibit 30)
- Third, under a bottom-up approach, a like-for-like comparison of specific types of goods and services consumed by households in both countries indicates the magnitude of China’s personal consumption relative to that in the US could be much greater than is commonly perceived by the market (Exhibit 30).

Exhibit 30

## China: Under-consumption Overstated

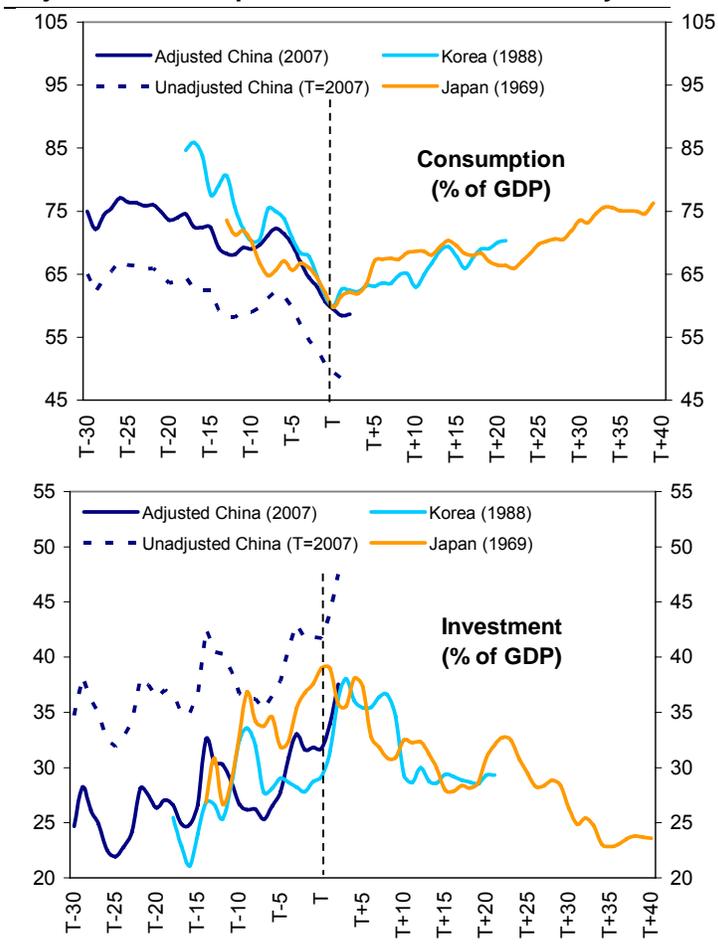


Source: [China Economics: China's Under-consumption Over-stated](#), September 13, 2009

We estimate China's private consumption-GDP ratio could be underestimated by at least 10 percentage points, or personal consumption is underestimated by as much as 30%. In the same vein, we believe China's investment-GDP ratio may have been overstated by the official statistics by as much as 10 percentage points.

Exhibit 31

## Adjusted Consumption and Investment Intensity



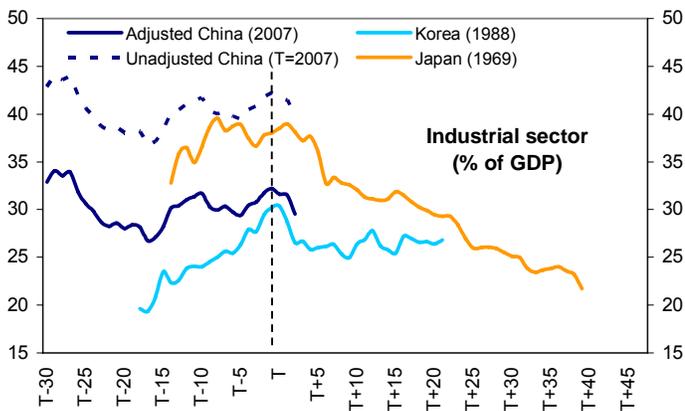
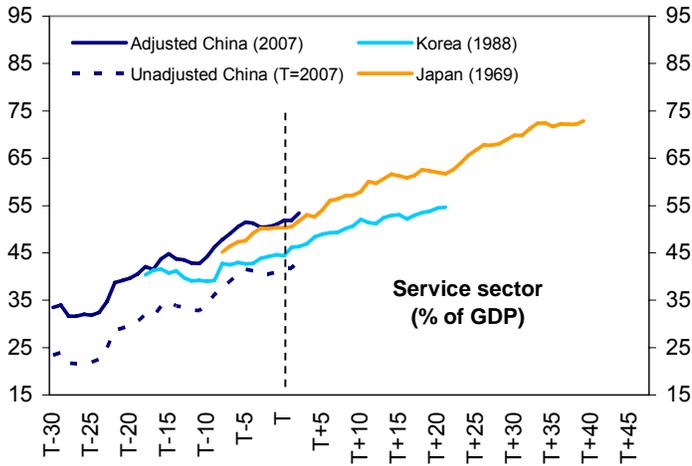
Source: CEIC, Morgan Stanley Research

If we do a simple exercise: adding 10 percentage points to consumption-GDP ratio while subtracting 10 percentage points from investment-GDP ratio. The trends of the adjusted consumption-GDP and investment-GDP ratios are amazingly similar to those of Japan and Korea when the two at a stage of development similar to China today (Exhibit 31).

We believe the bulk of the underestimation is due to underestimation of consumption of services, especially private consumption-related services (e.g., housing). If we do a similar adjustment to the production structure by adding 10 percentage points to service-GDP ratio while subtracting 10 percentage points from the industrial sector-GDP ratio, the trends of adjusted service-GDP and industrial-GDP ratios are also amazingly similar to those of Japan and Korea when the two economies were a similar stage of development (Exhibit 32).

Exhibit 32

## Adjusted Service and Industry Intensity



Source: Company data, Morgan Stanley Research

## Recent China Economic Reports

*AlphaWise Evidence Series: October MS China Business Conditions Index Softened, October 25, 2010*

*Economy Regained Momentum in 3Q, October 21, 2010*

*PBoC Hikes Rates, October 19, 2010*

*China Macro Risk Radar, October 17, 2010*

*Chinese Economy Through 2020 (Part 2): Labor Supply to Remain Abundant, October 10, 2010*

*Chinese Economy through 2020: Not Whether but How Growth Will Decelerate, September 19, 2010*

*August Data Release: Goldilocks on Track, September 12, 2010*

*China Macro Risk Radar, September 5, 2010*

*Renminbi on Summer Break, August 16, 2010*

*Social Housing: Lackluster Growth or Quantum Jump?, August 12, 2010*

*Moderation Continues with Intensified Supply-side Adjustment, August 11, 2010*

*Our Quick Reading of PBoC 2Q Monetary Policy Report, August 5, 2010*

*Chartbook: Soft Landing Well Under Way, July 25, 2010*

*Revising 2010-11 Forecasts, July 19, 2010*

*Goldilocks on Track despite Faster Moderation in Growth, July 15, 2010*

*Chartbook: Headlines Belie Underlying Resilience, June 27, 2010*

*Renminbi Exits from USD Peg and Returns to Pre-Crisis Arrangement, June 20, 2010*

*Can Social Housing Program Help Secure a Soft Landing?, June 17, 2010*

*Moderation in Activity Points to Soft Landing, June 11, 2010*

*Can Recent Policy Campaign Against Property Speculation Cause a Hard Landing?, May 24, 2010*

*Potential Impact of Weak Euro and Euroland Economy, May 19, 2010*

*Chartbook: Perception Gap, May 17, 2010*

*Moderation in Activity; Reflation; and Policy Normalization, May 11, 2010*

*RRR Hike Again, May 3, 2010*

*Campaign Launched To Curb Rapid Property Price Increase, April 18, 2010*

*Goldilocks on Track: Taking Stock of 1Q10 Developments, April 15, 2010*

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*Concerns about China's 'High' Debt Unwarranted, March 25, 2010*

*Chartbook: Rebalancing of Growth Drivers, March 21, 2010*

*Takeaways from Premier Wen's Press Conference, March 14, 2010*

*Hearty Appetite ≠ Overweight: Putting China's 'Overinvestment' In Context, March 5, 2010*

*One Country, Three Economies: Urbanization as a Primary Driver of Growth, March 2, 2010*

*Déjà vu: Dissecting Heightened Uncertainty, February 8, 2010*

*BoP Data Indicates Smaller FX Reserve Accumulation and 'Hot Money' Inflows, February 7, 2008*

*Upgrade 2010 Forecasts on Improved External Outlook, February 3, 2010*

*Chartbook: Recovery in Exports Gains Traction, January 25, 2010*

*Rebalancing, Not Overheating, January 21, 2010*

*RRR Hike Cycle Kicks Off Earlier than Expected, January 11, 2010*

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