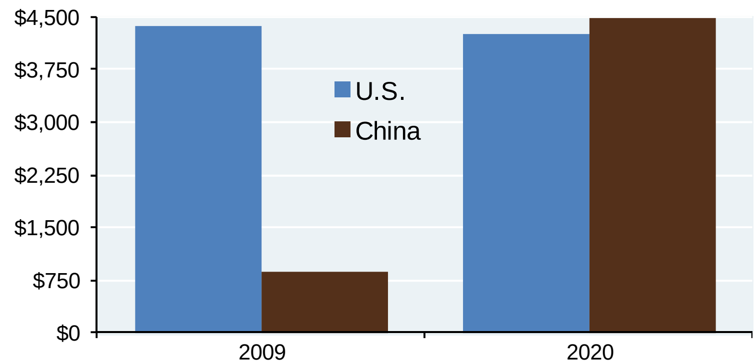
An update on Chinese consumption and related investment opportunities

The frugal giant. When we interviewed Dr. Kissinger in Beijing last year on the 40th anniversary of his 1972 trip to China, he recounted how Chinese officials did not have the required audio-visual equipment to hold a press conference after meetings between Nixon and Mao; it had to be flown in from abroad. In 2012, Huawei surpassed Ericsson as the world's largest telecom equipment company. Such transitions are commonplace as we look at 21st century China. When I was there a couple of weeks ago, Beijing was a reminder of the yin and yang of Chinese growth: activity was booming, but the city looked like Monet's paintings of London in fog (the fog was actually particulate matter from the burning of fossil fuels that was 22x the safety level set by the World Health Organization). Another example: according to calculations by Vaclav Smil for an upcoming book on materials in modern civilization, China emplaced more concrete in its roads, railroads, dams, bridges, factories and buildings in the three years between 2009 and 2011 than the US did in the infrastructure that it built during the entire 20th century. Kind of mind-boggling, right? Great for growth, but it has a potential cost: according to Smil, 2011 CO_2 emissions from Chinese cement production alone were almost as large as all CO_2 emissions in Japan from burning of fossil fuels. The topic of this week's in-depth note: **the gradual rise of Chinese consumption and related investment opportunities**.

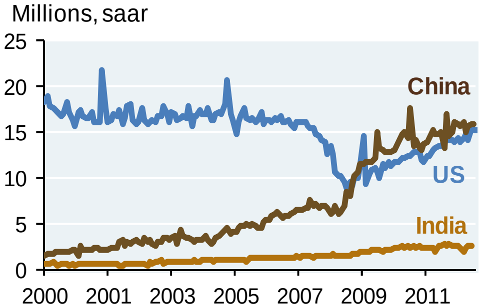
Throughout the last decade of booms and busts, Chinese consumption kept on rising. A by-product of urbanization, modernization, near-universal literacy and rising wages, Chinese consumption emerged relatively unscathed from the global recession. Increased consumption is one goal of the incoming government, announced during the 2012 annual Central Economic Work Conference. In 2011 and 2012, for the first time in a decade, consumption made a larger contribution to growth than capital spending. **By 2015, for the first time in 300 years, the number of middle class consumers in Asia is projected to be the same as in Europe and North America**[1]. The driver of this transition is China. Over the next few years, Chinese middle class consumption is expected to surpass the US, a function of a growing middle class, and a modestly growing propensity to spend.

Total middle class consumption
USD billions, 2005 purchasing power parity basis



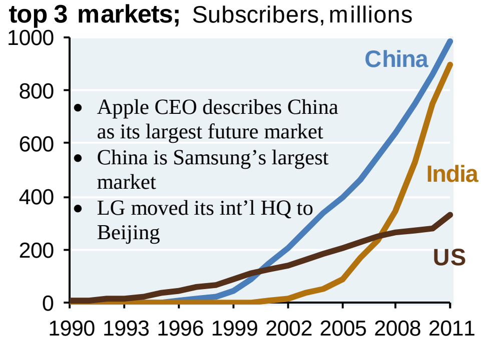
Source: Wolfeson Center for Development at Brookings.

Motor vehicle sales
Millions, saar



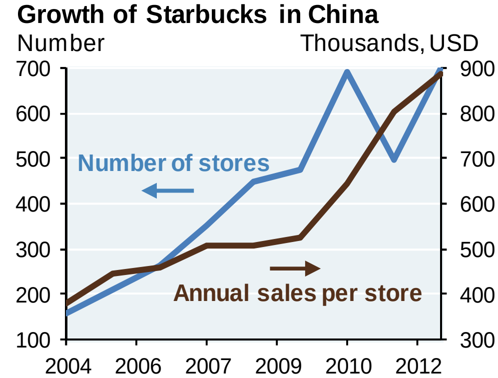
Source: BEA, China Automotive Information, SIAM, J.P. Morgan Securities.

Mobile phone subscriber growth in top 3 markets; Subscribers, millions



Source: World Bank.

Growth of Starbucks in China



Source: Company filings.

These trends are well-entrenched across sectors. In 2012, China became the world's largest car market. In 2004, GM sold one car in China for every ten cars in the US; its ratio is now 1:1. Last year, China also became the largest cell phone market with over 1 billion subscribers, and the largest smartphone market (China accounts for 27% of smartphones shipments, vs the US at 18%). Starbucks is another example of a China strategy yielding higher sales per store even as the company expands.

A "China consumer" investment strategy is not based on the view that Chinese consumers will match spending habits of Western counterparts on a per capita basis. Chinese savings rates are notoriously high (see chart below), in part due to a smaller government safety net for education, healthcare and retirement. For example, according to the World Health

[1] This citation refers to Brookings' "The *New Global Middle Class: A Cross-Over from West to East*", which defines middle class as being between lower middle class in Portugal, and 2x median income of Luxembourg, adjusting for purchasing power differences. In "*The Chinese Dream: The Rise of the World's Largest Middle Class*", Helen Wang defines middle class as urban professionals and entrepreneurs aged between 25 and 45 with college degrees and annual income between $10,000 and $60,000, a universe of 300 million people.

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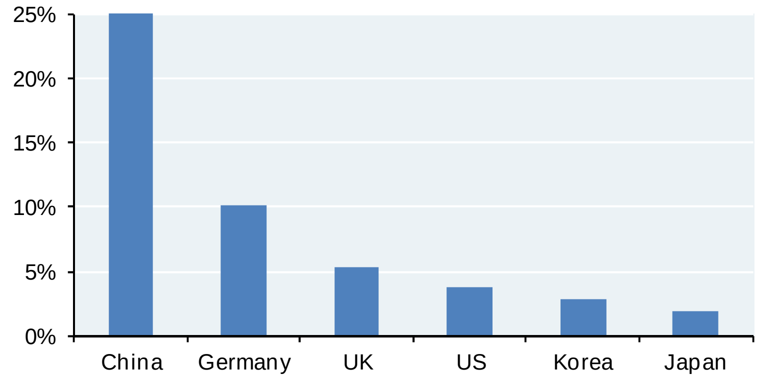
Organization, the US government spends over $4,000 per capita on health care, while in China the same figure is $200, putting China in the same league with Albania, Algeria, Ecuador, Namibia and Tunisia. The surplus of males to females (likely a result of the one-child policy) may also explain China's high savings rates[2]:

> "…as competition intensifies in the marriage market, men or parents with sons raise savings rates with the hope of improving their relative standing in the marriage market. Because the biological desire to have a partner of the opposite sex is strong, this effect is **quantitatively important enough to reveal itself in the aggregate savings rate and the current account balance**."

A frugal giant

2012 household savings rate, % of disposable household income



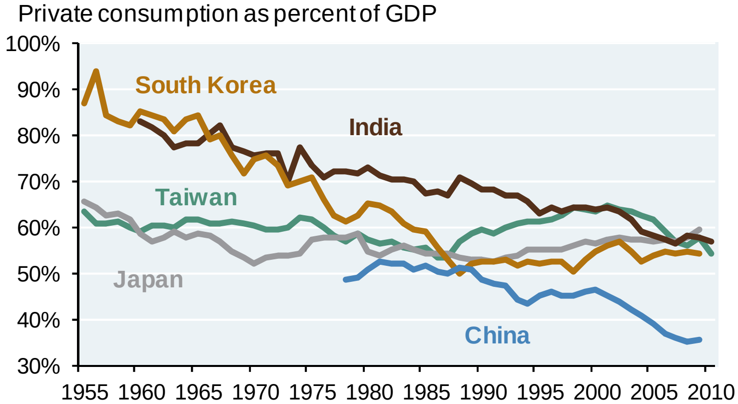
Source: OECD, Federal Reserve Bank of St. Louis.

However, given the gap between Chinese and Western savings rates, there's room for Chinese consumption to rise without major structural changes in the way Chinese society functions. With such a large population, small changes in savings rates combined with rising disposable income can unleash a large amount of disposable income towards consumption. Another factor affecting spending: improved mobility of Chinese citizens and creation of modernized transportation infrastructure, like the high speed Wuguang Harmony Express that travels from Wuhan to Guangzhou. At 300 km per hour, this train covers the distance from Chicago to Washington DC in less than 4 hours (Amtrak does the same distance in 18 hours), and is part of China's strategy to develop an integrated national consumer market with lower inventory and shipping costs. The Wuhan-Guangzhou line is part of a planned 16,000 km of high speed trains by 2020, with 4 north-south and east-west corridors and 19 inter-city lines. As for all rail expansions, 120,000 km are planned by 2020 which will connect all provincial capitals and cities with populations exceeding 500,000 people.

Looking at the data. China consumer trends are sometimes obscured by the decline in household consumption as a % of GDP. However, this is mostly a consequence of *relative* measurements. China's reliance on capital formation and exports has dominated its GDP growth since 1990, even more than in Germany, Japan and South Korea during their respective post-war industrializations. As shown below, falling private consumption to GDP is consistent with patterns seen in other industrializing Asian countries. Even so, **since 1996 Chinese retail sales (both nominal and per capita) have grown at ~13%, a pace that is well above China's reported average headline inflation of 2.5% over the same period**. As China's labor force peaks (entrants into the job market will fall by a third in the next decade), the government should be able to scale back policies focused primarily on job creation, and focus on policies which favor consumption as well as capital formation.

Consumption ratios in major Asian economies

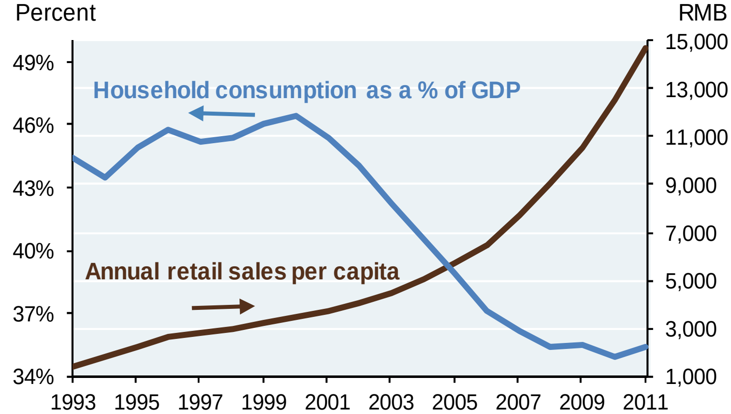
Private consumption as percent of GDP



Source: IMF, OECD, Gavekal Dragonomics.

Household consumption and retail sales per capita

Percent



Source: IMF, China National Bureau of Statistics.

While on paper China's retail sales growth is higher than in the UK, Japan or the US (see next chart), the Chinese concept of retail sales is an imperfect measure of consumption. Retail sales data from the China Bureau of National

[2] "*A Sexually Unbalanced Model of Current Account Imbalances*", Du and Wei, Columbia University/NBER, March 15, 2010. I must have been selected by my spouse for love rather than money since I had very little of the latter. In 1991, she had just returned from a 3-week African safari, dehydrated and a bit ragged, which explains her vulnerability at the time.

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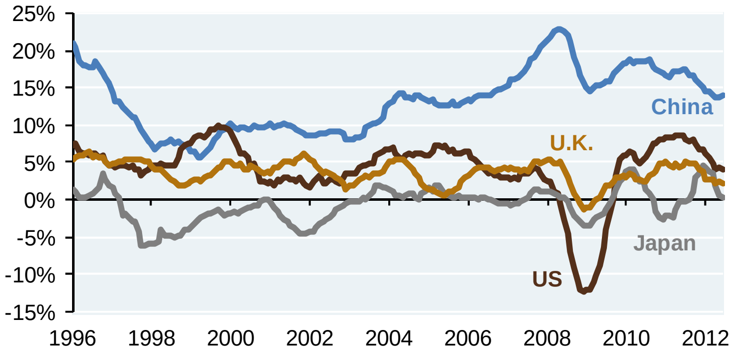
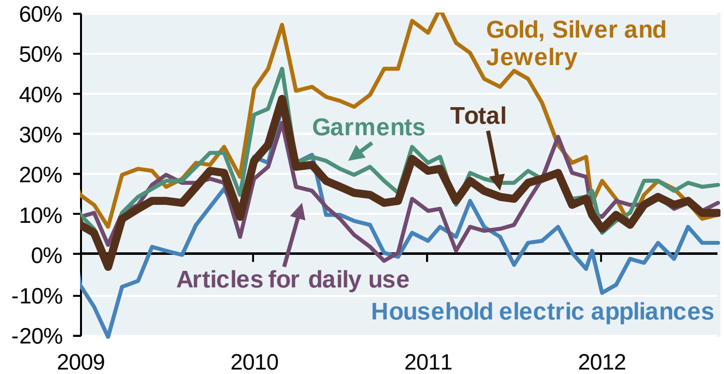
Statistics *includes* government and business purchases of consumer goods, and *excludes* consumer purchases of services. It's not useless, but it has flaws if you're trying to study consumer trends in isolation[3]. As a result, we also look at various components of consumer retail sales as well, many of which are available on a monthly basis from China's 200 largest retail enterprises. As shown in the second chart below, the top 4 categories have been rising at 10% - 15% over the last 3 years.

Retail sales growth rate by country
% change, YoY, 6 month moving average



Source: U.S. Census, METI, China National Bureau of Statistics, U.K. Office for National Statistics.

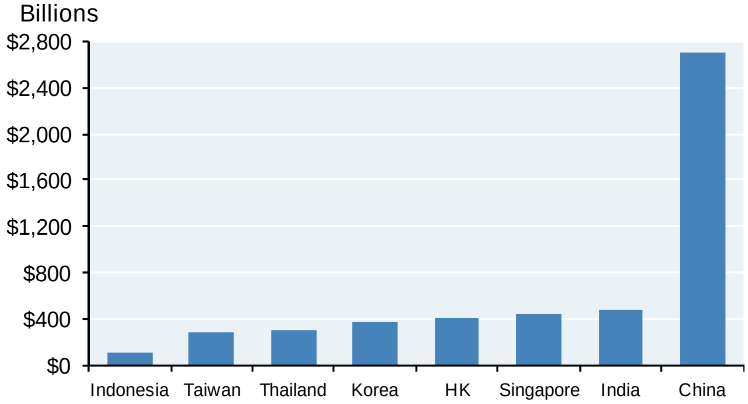
Retail sales growth for 4 top categories at 200 largest retail enterprises, Percent, YoY, 3-month moving average



Source: China General Chamber of Commerce.

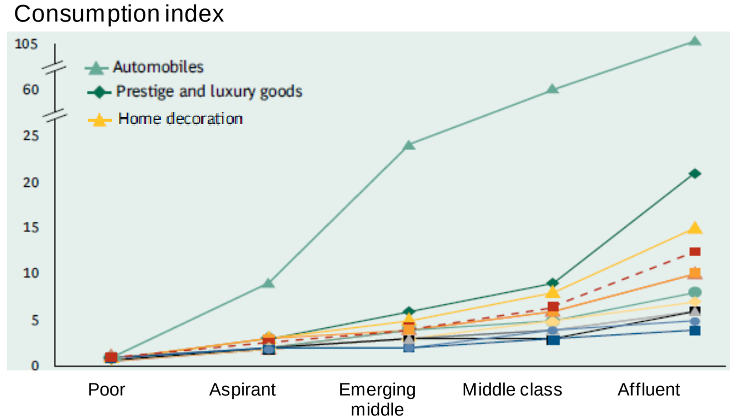
While other countries in Asia offer attractive opportunities for reaching wealthy and middle class consumers, as shown in the next chart, China's scale offers a unique opportunity for reaching larger numbers of potential customers.

Total investable wealth of high net worth individuals
Billions



Source: *"Asia-Pacific Wealth Report 2012"*, Capgemini.

What Chinese people buy when they get wealthier
Consumption index



Source: Boston Consulting Group, March 2010.

Spending patterns of Chinese consumers. As shown on page 1, car purchases have risen in China, in part due to government subsidies. But there's more that aspirational consumers desire than cars. The chart above shows what emerging and middle class consumers often purchase after they buy a car: prestige and luxury goods, and home furnishings. On luxury goods, the next chart shows the number of new stores opened from 2008 to 2011 by brand. China is fast becoming one of the world's largest meccas for luxury goods spending, accounting for 27% in 2012. Both store openings and luxury goods consumption slowed markedly in 2012 due to a slowing economy, declining corporate profits and consumer confidence, and emerging restrictions on gift-giving to public officials. Bain estimates that luxury goods spending rose by only 7% in 2012. However, Bain and other firms expect a partial rebound in 2013. By 2015, Chinese consumers are expected to account for 35% of total global luxury goods consumption. These projections derive in part from the optimism of Chinese consumers, 74% of whom strongly believe that their household income will significantly increase in the next five years. For comparison's sake, in the US the same statistic is less than 50%.

[3] The "urban household consumption" statistic is also flawed, as it covers a limited population of 66,000 households, and is a *survey* of consumption rather than a *measurement* of actual spending. **Some China analysts believe reported consumption is understated** (and savings overstated) due to the size of China's underground cash economy; since household expenditures are often subsidized by companies, and hence show up as business expenses rather than consumer spending; and due to systematic underestimation of imputed rent on owned homes [Jun Zhang, China Centre for Economic Studies at Fudan University].

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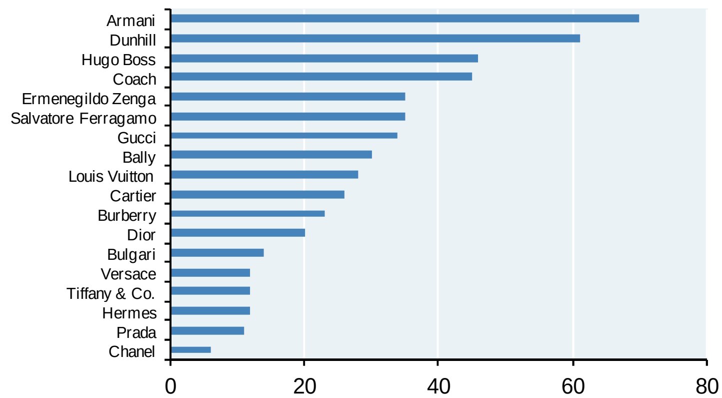
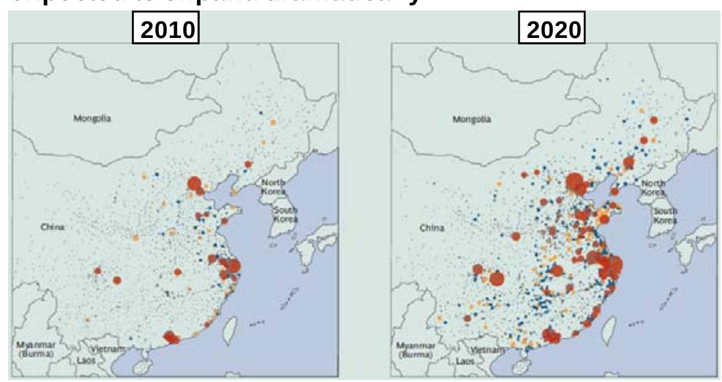
Number of new stores opened since 2008 (by Nov. 2011)



Source: *"2011 China Luxury Market Study"*, Bain & Company, Dec. 2011.

Number of locations with significant affluent populations expected to expand dramatically



Source: Boston Consulting Group.

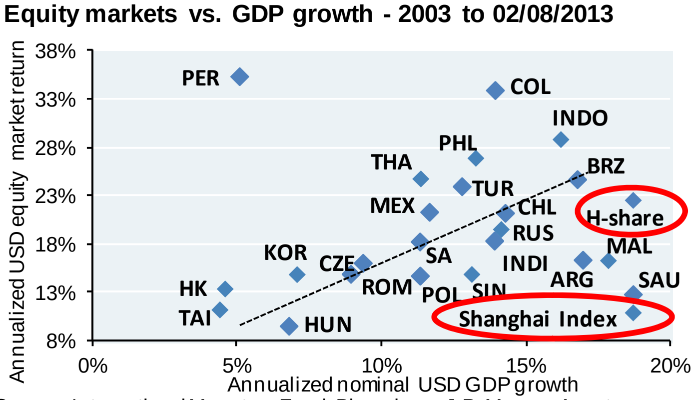
Shanghai and Beijing have as many luxury point-of-sale locations as NYC and Chicago. However, as shown in the map, the opportunity to reach affluent customers is not limited to the eastern seaboard. According to BCG, in 2005, a consumer goods company doing business in 70 locations in China could reach 70% of consumers in the middle and affluent classes. Today, the same coverage would require 280 locations. By 2020, the same scope would require having stores in over 500 locations.

Of course, the presence of millions of potential customers does not guarantee success. In the latest Business Climate Survey from the American Chamber of Commerce, respondents were optimistic about revenues and margins in China. Over 90% of respondents said they expected revenues in 2012 to match or exceed 2011 levels. More than 2/3 expected operating profit margins in China to be the same or higher than margins in the rest of their worldwide operations; and almost 80% rank China among their top 3 destinations for expansion. However, they also cited inconsistent enforcement of laws (particularly intellectual property rights), difficulty in obtaining licenses, regulations limiting market access to sectors that used to be open, and concerns about internet and cyber security. Non-Chinese companies also tend to be held to stricter employment and environmental standards. Since Marco Polo in the 13th century and the British in the 18th century, the realities of doing business in China have proven to be more complicated than people first thought.

Chinese public equities as a way to monetize the China consumer view

Over the last decade, with the exception of a short-lived boom in 2007, publicly traded onshore Chinese equities (listed in Shenzhen and Shanghai) have fared poorly compared to other emerging markets. As shown in the first chart, despite the highest associated GDP growth, China's onshore equities delivered practically the lowest returns in the emerging world. H-shares (Chinese mainland companies listing in Hong Kong) have done better, with returns closer to Asia ex-Japan averages. The second chart shows the de-rating of onshore and offshore Chinese equities, a trend which reflects investor concerns about declining GDP and profit growth, data consistency and a high weighting to companies run for state-oriented objectives as much as for shareholders. One example: a China Enterprise Confederation press release on the top 500 Chinese enterprises showed that the combined profits of the largest 272 manufacturing companies accounted for only 25 percent of total profits. Even so, last fall we became a bit more optimistic on Chinese stocks given cheaper valuations and prospects of an economic recovery.

Equity markets vs. GDP growth - 2003 to 02/08/2013



Source: International Monetary Fund, Bloomberg, J.P. Morgan Asset Management.

Chinese equity valuations

Price to trailing earnings

Source: Bloomberg.

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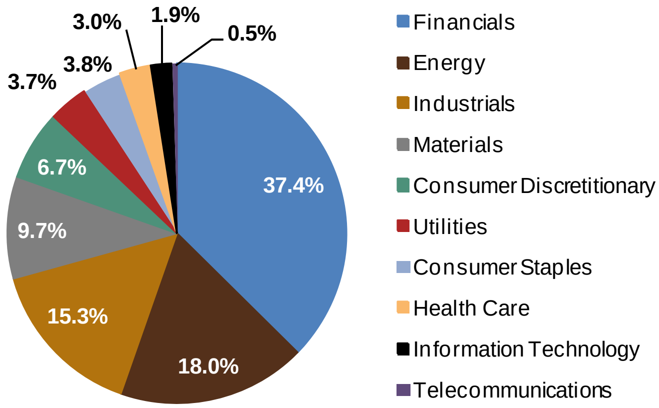
The other challenge regarding Chinese public equity markets is that they don't offer that much opportunity to focus on the consumer. Chinese equity markets are dominated by financials, energy and industrials (for a combined total of 71%), and have a low weight to consumer stocks, particularly compared to other large regional equity markets (see bar chart). As for financials, our contacts in China tell us non-performing and special mention loans have been rising sharply, and that they are understated, suggesting that a banking crisis of some kind could be brewing after all the emergency stimulus in 2008-2009.

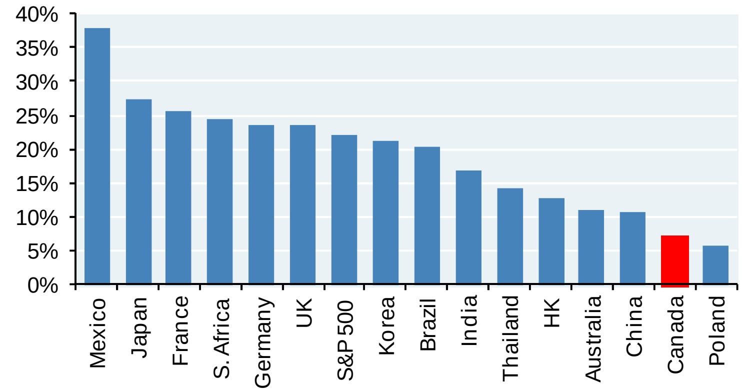
Chinese stock market breakdown by sector



Source: Bloomberg. Note: Shanghai Composite Index shown.

China: not a lot of publicly traded consumer names

Percent, consumer discretionary and staples weight in index



Source: Morgan Stanley Capital International, Bloomberg.

Chinese consumer stocks tend to be more highly valued than US counterparts, although given the overall P/E decline shown on the prior page, that is less true today. The table below shows the largest consumer discretionary stocks in the MSCI China Index, along with various valuation measures.

Largest Chinese consumer discretionary stocks (MSCI China)

Company	Trailing P/E	Next-twelve-month P/E	Long-term earnings GR	PEG ratio
Belle International Holdings	27	22	14%	1.5
Dongfeng Motor Group	8	8	4%	2.2
Great Wall Motor Company	19	12	10%	1.3
Guangzhou Automobile Group	8	11	3%	3.1
Geely Automobile Holdings	15	12	22%	0.5
Golden Eagle Retail Group	20	17	9%	1.9
Intime Department Store	18	15	16%	0.9
Daphne International Holding	18.1	16.1	18.2%	0.9

Largest Chinese consumer discretionary stocks (MSCI China) con't

Company	Trailing P/E	Next-twelve-month P/E	Long-term earnings GR	PEG ratio
Haier Electronics Group	16	13	15%	0.9
Parkson Retail Group	11	12	8%	1.4
Dah Chong Hong	14	11	16%	0.7
Zhongsheng Group Holdings	16	12	17%	0.7
Anta Sports Products	10	14	-5%	NA
Bosideng International Holdings	11	11	8%	1.4
Hengdeli Holdings	10	10	14%	0.7
China ZhengTong Auto Service	21.6	11.3	40.8%	0.3

Source: Bloomberg. "Long Term Growth Forecast" represents consensus analyst expected increases in operating earnings over the company's next full business cycle. In general, these forecasts refer to a period of between three to five years. PEG = P/E to long term earnings growth.

Another approach involves the purchase of global companies with China exposure. One particular strategy we looked at: a changing basket of companies across regions and sectors with high sales exposure to BRIC countries. Over the last 3 years, the basket outperformed everything else we compared it to: emerging market equities, the MSCI global all-country index, Asia ex-Japan and both onshore and H-share Chinese equities. While the basket was not a China strategy per se, Chinese exposure was likely a key driver of its excess returns.

Private equity in China

As a result of the limitations above, Chinese and Asian private equity are often useful complements in a portfolio. Such investments often bear little resemblance to developed market LBOs, and tend to be growth equity. It's hard to imagine that capital could be scarce in a country that experienced such a massive explosion in bank loans. However, Chinese banks often channel capital to large state-owned enterprises, which only represent 5% of all enterprises by number, and which receive 75% of all loans. People's Daily reported in June 2009 that small and medium sized enterprises received less than 5% of loans that year, and in 2012, small and medium sized enterprises received only 20% of bank loans. For Chinese entrepreneurs, capital often has to take the form of private equity rather than bank loans.

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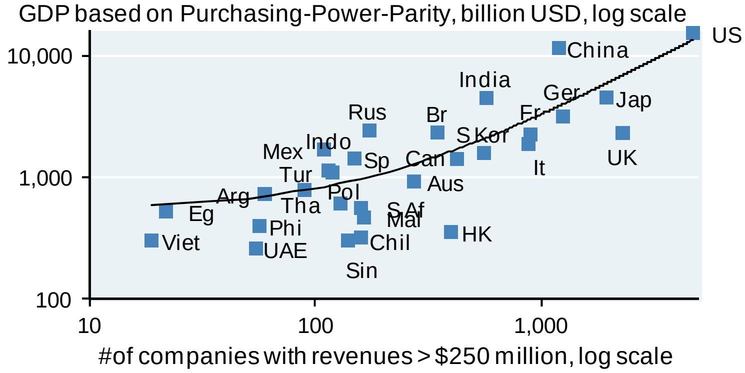
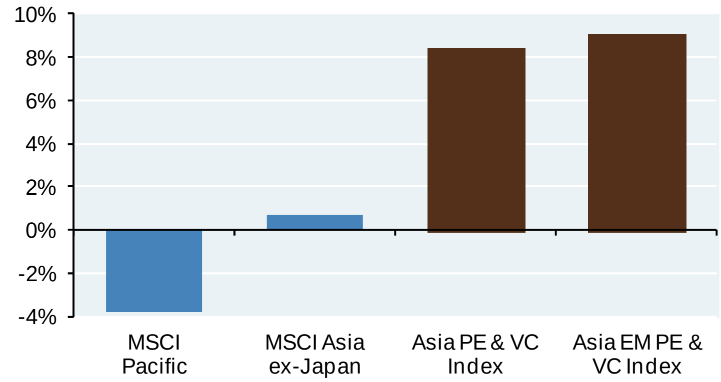
Looking for scale (as in log scale): GDP and the number of large companies per country
GDP based on Purchasing-Power-Parity, billion USD, log scale



Source: *"Global Private Equity Report 2012"*, Bain & Company, Inc.

Public and private equity investing in Asia
5-year annualized return through Q2 2012, percent



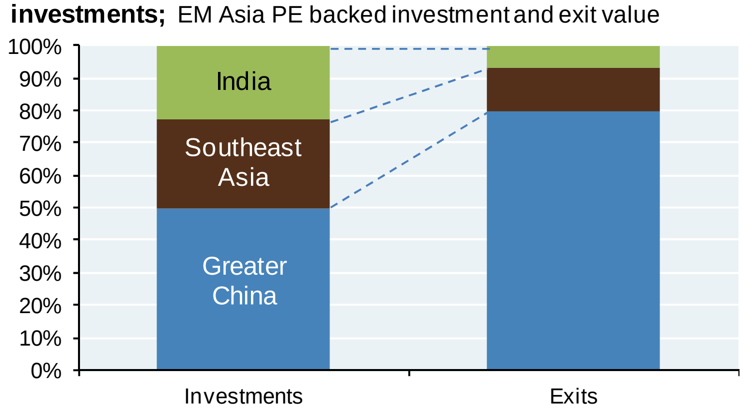
Source: Cambridge Associates LLC, Bloomberg.

Interest in Chinese private equity continues to grow: by the end of 2011, China represented 25% of private equity activity in emerging economies. Part of the reason for this is the growth in the number of potential target companies (see first chart above). The chart is shown in log scale; for example, the number of potential target companies in China is 10 times larger than in Indonesia, Turkey and Mexico. When I started at J.P. Morgan in the 1980's, China and Germany were around the same size on a purchasing power basis; China is now 3.5 times larger. Even with a slowdown in GDP growth from 11% to 7%-8%, China will still be one of the largest drivers of global growth. McKinsey estimates that 29% of global growth from 2007 to 2025 will come from 225 cities in China; the next closest regional contributor would be the US and Canada combined with 10%.

There are other factors than size. Private equity requires depth of domestic capital markets, an understandable legal system, protection of investor rights, some degree of corporate governance, a management talent pool, and an entrepreneurial culture. Time will tell if the returns on private equity in China are worth the risks. So far, private equity investing across broader emerging Asia (of which China is a part) has been worthwhile. According to data from Cambridge Associates, private equity in Asia has delivered annualized returns net of fees exceeding public markets by around 8% (see bar chart). Separate data from Preqin's universe of funds indicates that China private equity performance has been comparable to the region as a whole.

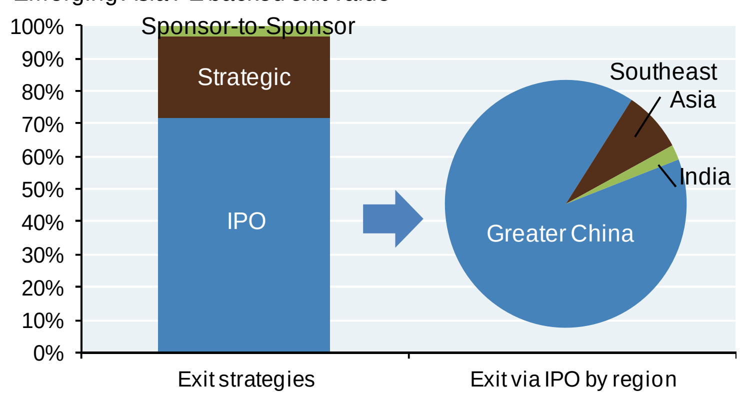
Another important factor is the range of exit strategies. According to Bain's 2012 "*Global Private Equity Report*", Greater China accounted for less than 50% of PE investments in emerging Asia from 2007 to 2011, and generated ~ 80% of the region's exit activities and 90% of the region's IPOs. 2012 was a difficult year for IPOs of Chinese: global Chinese IPO proceeds were over 400 bn RMB in 2011 and fell to 168 bn in 2012. Part of this decline is a function of poor performance of some IPOs, accounting issues, and government steps to slow the listing process. In addition to dollar-based funds, there are local Chinese RMB-denominated funds with a different strategy: they generally have shorter terms, and purchase companies at high multiples (25x-30x), selling into IPO markets when they are buoyant. They don't compete with dollar-denominated funds regarding companies they purchase, but they are part of the reason for the IPO backlog. The Chinese government is reportedly taking steps to cull the IPO queue by screening applicants for suitability, with the goal of reducing the queue from 5 years to 1-2 years.

China accounts for a disproportionate share of exits vs. investments; EM Asia PE backed investment and exit value



Source: *"Global Private Equity Report 2012"*, Bain & Company, Inc.

China IPO dominates Asian private equity exits
Emerging Asia PE backed exit value



Source: *"Global Private Equity Report 2012"*, Bain & Company, Inc.

Notes: analysis includes investments with disclosed deal value >$10M; does not include bridge loans, franchise funding and seed/R&D deals; excludes infrastructure project finance deals, real estate, real estate investment trust and hotels and lodging property deals.

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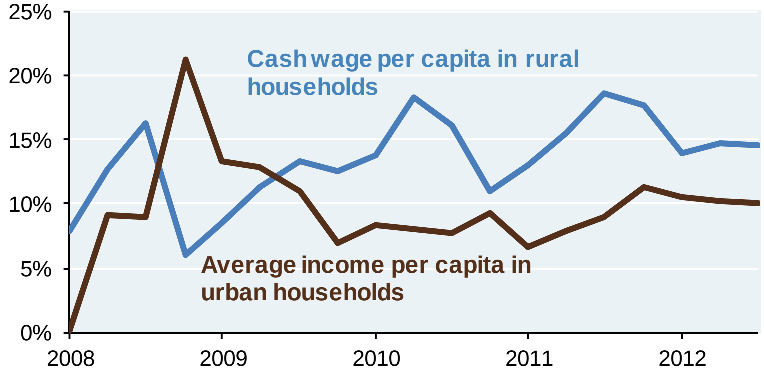
Final thoughts

The advance in Chinese spending would not be sustainable were China not generating greater household wealth and income. We have explained in prior notes reservations about data quality, the poor returns of equity markets relative to GDP, and increasing reliance of Chinese GDP on expansion in domestic credit. However, there are wage, income and productivity gains taking place, which is where I disagree with many China skeptics. In the last chart, we show **urban and rural real wage gains**. As usual, there is no single accepted way to measure this; these are the numbers we look at. They suggest that wage gains have been sustained even as GDP growth slows, and are rising faster than the Chinese economy itself. According to the Ministry of Human Resources, the ratio of job opportunities to job seekers is 1.08, a 10-year high, another positive sign for labor markets.

Chinese real wage growth

Percent change, YoY



Source: National Bureau of Statistics. Data deflated by rural and urban CPI.

A couple of years ago, I had the opportunity to speak with Lee Kuan Yew, former Prime Minister of Singapore, and he relayed to me one of those leader-to-leader conversations that just might have impacted history. In 1978, he met with Deng Xiaoping, before Deng's market-oriented reforms were enacted. Deng was impressed with Singapore's accomplishments and progress; Lee told Deng that they were accomplished by the descendants of landless peasants from South China. **"Just think", Lee said to him, "of what you can do with the mandarins, writers and thinkers. You can do much better".** Shortly thereafter, 4 cities (Xiamen, Shantou, Zhuhai, Shenzhen) were designated as Special Economic Zones and allowed to develop market economies, and China's transformation began. At this stage, consumption is the one of the more interesting aspects of this transformation for investors.

Lee Kuan Yew and Deng Xiaoping, 1978. Source: Associated Press

Michael Cembalest
J.P. Morgan Asset Management

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