Executive Summary

The China Big Picture

The Chinese growth "miracle" is enabled by a series of policies that purposefully distort input markets in order to facilitate industrial development. The distortions, funded through financial repression, amount to large subsidies for the industrial sector through artificially low capital costs, artificially low land costs, and artificially low wages. These distortions have driven excessive levels of investment into capital-intensive manufacturing and therefore dependence on export-led GDP growth. Rebalancing towards a more internally-focused economy, however, is not an easy road to travel.

In order to transition to a consumer-led economy, China needs to dismantle the distortions it put into place that led to the Chinese growth boom. That is a tall order. The transition to a consumer-led, service-oriented economy will be slow and fraught with risks and volatility. Furthermore, thanks to the mal-allocation of capital resulting from input market distortions, China's physical and human capital is woefully inadequate to enable services-led growth. Thinking that China's trade imbalances are going to correct in the next 1-2 years is naively optimistic.

One of the results of the repression of households is that China has become one of the most unequal countries in the world. The government has wisely identified inequality as a major issue and has already significantly raised minimum wages across the country. In several regions, wage growth is now outpacing productivity growth. While positive for households and consumption, this has important negative implications for manufacturing and exports. China can no longer count on export-led growth for the long term. Therefore, rebalancing the economy is not a decision for China to take, but rather a reality with which it must contend.

The government needs to start focusing more and more on the "quality" of Chinese growth, rather than the "quantity" of growth. That implies a gradual slowing of the growth rate of the Chinese economy over the next decade, ultimately converging towards the 5-7% range. An unsuccessful scenario, perhaps unintuitively, would be for China to continue its 9-10% growth rate for several years. The longer China takes to reach a more sustainable situation, the riskier the transition will become, as more and more of the economy will become dependent on exports.

Key Findings

- **Dismantling current system challenging.** In order to correct large social inequalities and to enable a transition towards a more internally-focused economy, China will need to dismantle the distortions it put into place that enabled the Chinese growth "miracle". This will be challenging as it raises the usual issues around entrenched interests and also entails a risky transition to a new economic model.

- **Wage growth elevating Chinese households.** Chinese wage growth has been accelerating, enabling households to participate in the rewards of China's growth. As a result, contrary to myth, Chinese household consumption is growing rapidly. This is likely to remain one of the key investible themes in China going forward – especially as it relates to the changes economies typically undergo through "motorization".

- **Manufacturing competitiveness decreasing.** Conservative forecasts for continued wage growth imply that the economics of US offshoring to China are no longer compelling for some categories of goods. We anticipate a renaissance of manufacturing in the US and some developed nations.

- **Approaching limits to export-led growth.** Wage and cost dynamics mean that China *must* rebalance away from export-led growth. This is not a choice. China is hitting limits to export-led growth as gaining global market share inescapably implies lower margins. In some industries, negative margins are already at hand.

- **Mal-Allocation of capital an underappreciated handicap.** Mal-allocation of capital means that a transition towards a more balanced, services-oriented economy will be slow and tortuous. The human and physical capital required for many service-based industries is simply not present in China. However, this could present investment opportunities in healthcare, education, social housing, retirement services, and other services-based industries.

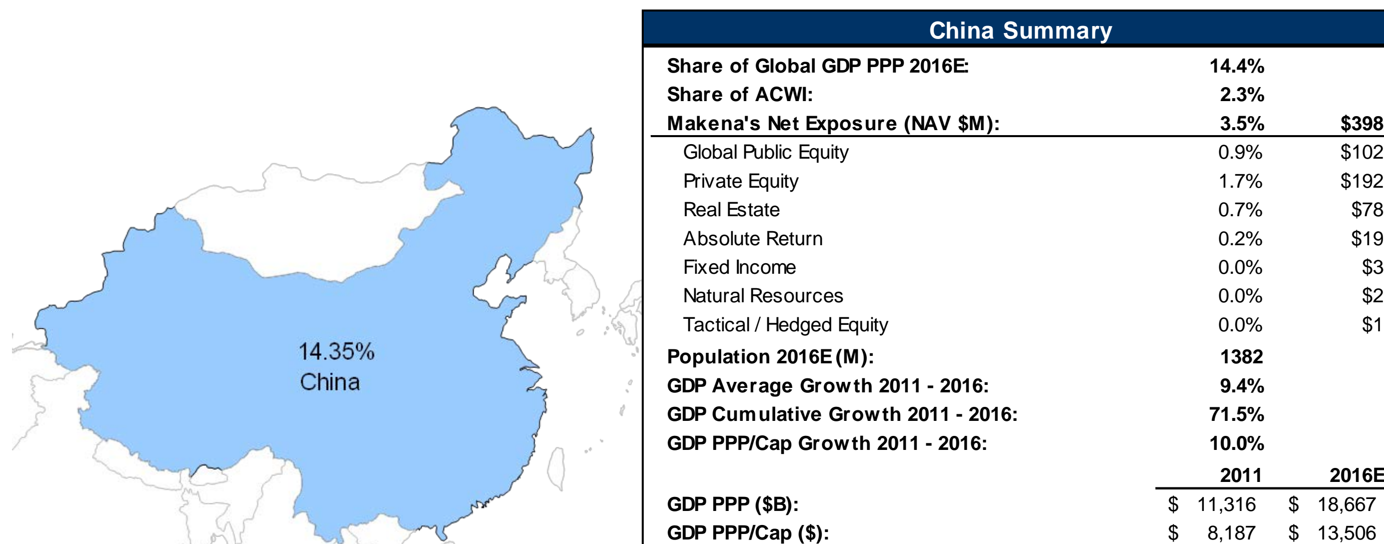
- **Extremely gradual moves towards a liberalized exchange rate.** Internationalization of the Renminbi will be a very gradual, carefully managed process. It is not reasonable to expect exchange rate liberalization without interest rate liberalization. Unfortunately, interest rate liberalization would likely force the bankruptcy of many State Owned Enterprises, or require a mass privatization program, both unlikely at this point.

- **Rebalancing: not an easy road.** Chinese policy makers are on a knife's edge. If they abandon the existing distortions and export-led growth model too quickly, investment and growth could collapse, leading to a hard landing. However, maintaining the status quo is not tenable given that China must eventually rebalance and must also address growing domestic inequality. Policymakers must therefore carefully manage the transition by gradually rebalancing the economy - history shows there is a risk of significant policy errors during such transitions.

Current Makena China Posture

As we detailed in previous Quarterly Letters and Board presentations, our positioning in China at approximately 3.5% of the MEP is overweight relative to China's 2.3% weighting in the ACWI global equity index. However, an arguably better metric to use would be China's forward-looking share of global GDP which the IMF estimates at 14.4% in 2015. As we have shown in the past (and agree with many studies on this topic), GDP growth is not a good indicator of equity market growth on a sequential basis. However there is a greater than 80% correlation between total equity market capitalization and total GDP in many countries. This makes intuitive sense: as an economy develops and grows, one would expect that over the long run that translates into larger companies and more developed equity and debt markets. A summary of our Chinese exposure, as well as a few key metrics of the Chinese economy are in Figure 1 below.

Figure 1: China Geography Dashboard[2]



China Summary		
Share of Global GDP PPP 2016E:	**14.4%**	
Share of ACWI:	**2.3%**	
Makena's Net Exposure (NAV $M):	**3.5%**	**$398**
Global Public Equity	0.9%	$102
Private Equity	1.7%	$192
Real Estate	0.7%	$78
Absolute Return	0.2%	$19
Fixed Income	0.0%	$3
Natural Resources	0.0%	$2
Tactical / Hedged Equity	0.0%	$1
Population 2016E (M):	**1382**	
GDP Average Growth 2011 - 2016:	**9.4%**	
GDP Cumulative Growth 2011 - 2016:	**71.5%**	
GDP PPP/Cap Growth 2011 - 2016:	**10.0%**	
	2011	**2016E**
GDP PPP ($B):	$ 11,316	$ 18,667
GDP PPP/Cap ($):	$ 8,187	$ 13,506

Therefore, the best way to describe our China strategy to date is one that is cautiously optimistic about the long-run outlook for China. We are by no means unabashed China bulls, nor do we foresee a Japanese-style lost decade – we are the first to acknowledge that China faces a number of risks as it continues its transition towards a higher income developed nation.

Let us therefore now turn to China's macroeconomic situation to highlight key risks and opportunities.

[2] Source: IMF WEO database, Makena analysis. As of January 2012.

Engineering China's Growth Miracle: Historical Context

In order to understand the current situation in China, it is important to understand the historical context of government policy that engineered the growth "miracle" of China over the last 30 years. Understanding that context will show how government policy fits together into a logical framework. It will then become clear that many of the challenges facing China are a direct result of the very policies that were instrumental in creating its phenomenal success. This direct linkage makes it very difficult to unwind those policies: what has worked so well for 30 years is not easily given up.

Input Market Distortions

From the very beginning of the liberalizations that started China on its path in 1978, the goal was to industrialize China. Over the course of time, government policy evolved to create an industrialist's dream: heavily subsidized and often negative capital costs, artificially cheap land, and a steady source of cheap and compliant labor. These distortions, purposefully created by the government to ensure rapid industrialization-led growth, are driven by the following:

> *Capital.* By paying savers a negative real interest rate, restricting capital flows out of China, and allowing individuals very few investment alternatives, the government creates a large stock of captive capital that it allocates to industry as it pleases, via state-owned banks. Similarly, lending rates are not set by the market, and the recipients of artificially cheap loans, the SOEs (state-owned enterprises), are understood to never have to worry about rolling over their debts. SOEs pay interest on the loans, and when the loans come due, they are rolled over at the then current interest rate. Figure 2 below shows a recent IMF estimate of the implied subsidy to capital. For every dollar invested in the Chinese economy, more than 60 cents are implied subsidies, paid for by transferring wealth from households (through depressed savings income) to corporations. Figure 3 below shows the historic time-series for real one-year deposit and lending rates. Note how often since the 1990s both the deposit rate and the lending rate have been negative. Furthermore, the average return since 2002 has been negative to depositors.
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> *Labor.* On the labor side, the Hukou residency permit system essentially makes migrant workers second-class citizens. Migrants are technically not residents of the city in which they work, and therefore do not have the rights of residents, such as sending children to school or owning property. Naturally, the migrants do have children and property, though technically illegally – this is a powerful lever that keeps migrants quiescent, since complaining about working conditions can trigger a swift enforcement response by the authorities.
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> *Land.* Land seizure and re-zoning for industrial projects takes place regularly. Since there is little legal recourse by individuals when land is taken and no due process when decisions are being made, this is a source of resentment and popular uprisings. While it is difficult to put a quantitative assessment around this issue, the Chinese and international press regularly feature stories on arbitrary land seizures. For instance, The New York Times this past October had a lead article highlighting the issue, and concluding that "the government-run Research Center for Social Contradictions found that forced evictions, more than all other issues combined, were the driving cause behind the 180,000 so-called mass incidents — protests, riots and group petitioning".

Figure 2: The Fruits of Financial Repression[3]

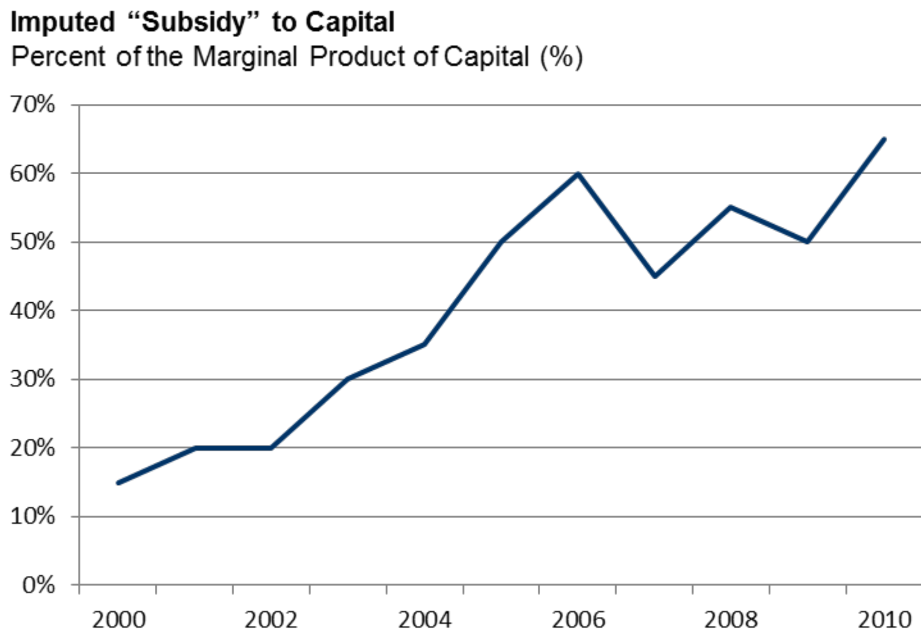


Figure 3: Real One-Year Deposit and Lending Rates[4]

[3] Source: IMF Title IV Consultation, July 2011
[4] Source: CEIC, Makena Analysis

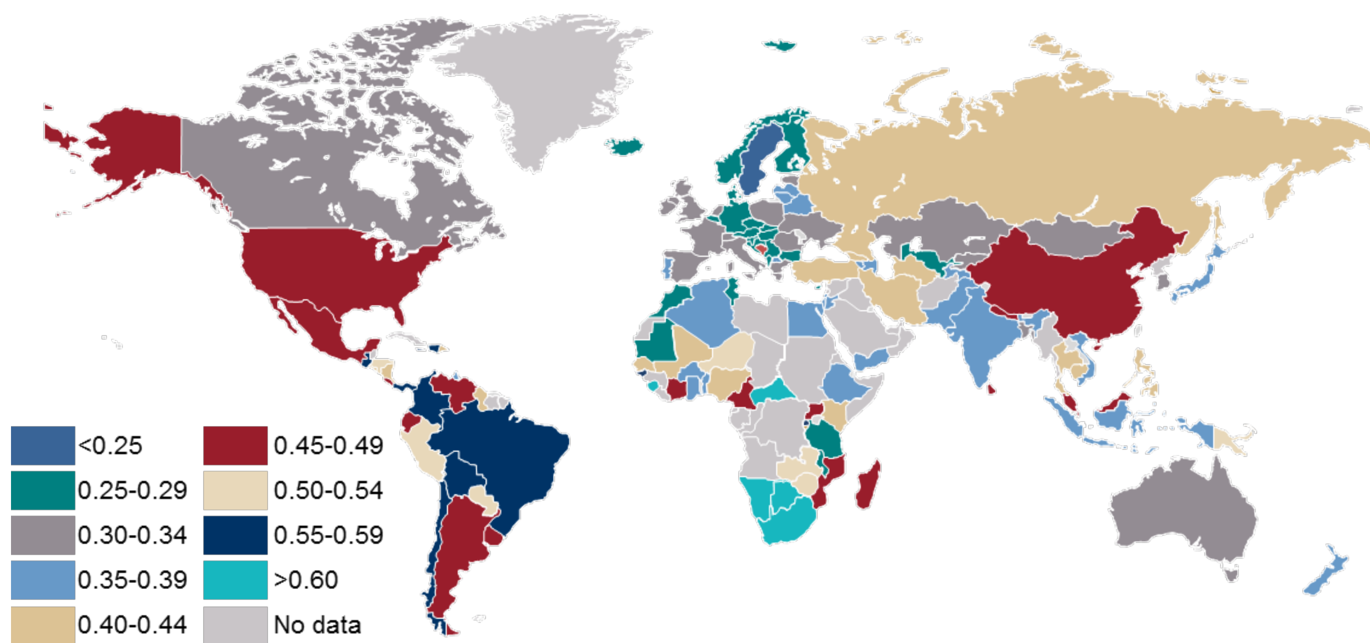
Consequences of Policy-Induced Distortions

The singular focus on the export-led industrial sector that has driven China to such success cannot be sustained indefinitely. With investment being concentrated in capital-intensive manufacturing industries such as steel, shipbuilding, and industrial equipment, it is hard to underestimate how lopsided the Chinese economy has become. These policies have created one of the most unequal societies in Asia, if not the world. At the same time, export-led growth is starting to hit limits. We address these consequences of the policy-induced distortions below.

Income Inequality

The combination of financial repression depressing household income, large subsidies to industrialists, and tightly controlled residency permits has created one of the most unequal societies in Asia, if not the world (see Figure 4 below). That inequality naturally worries the government leadership, since it is a potentially destabilizing force for China. At this point approximately 1/3 of the population still lives below $2/day of income. The World Bank's standard for poverty for middle-income countries like China is $2/day, which is determined by calculating the amount of income required to afford minimal standards of food, clothing, shelter and health. The government has resolved in its most recent 12 year plan to reduce inequalities, and has already significantly raised minimum wages across the country – in 2010 many provinces increased minimum wages in excess of 20%. However, increasing wages has dramatic consequences for the export sector, which is dependent on cheap labor to maintain its competitiveness.

Figure 4: Income Inequality – Gini Coefficient[5]



[5] Source: CIA World Factbook. Official Chinese Gini coefficient last updated in 2000, independent economists estimate it now >0.5

Mal-allocation of capital

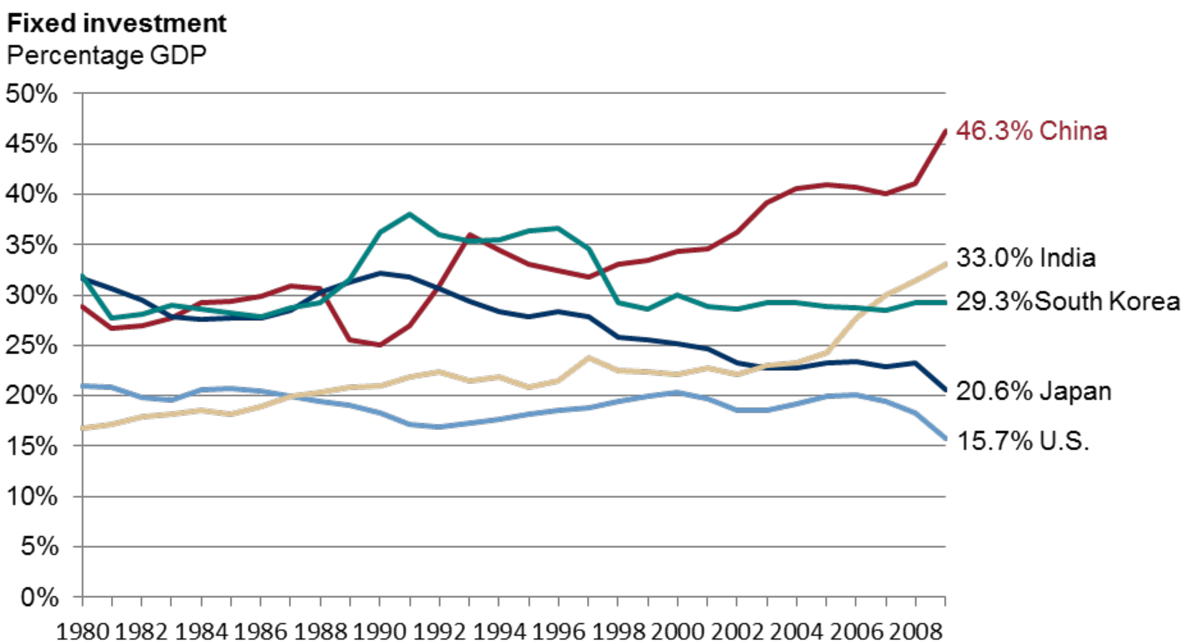
Perhaps not surprisingly, the exceptional circumstances surrounding investment, especially capital-intensive investment thanks to huge implied subsidies as described above, has led to investment being concentrated in capital-intensive manufacturing industries such as steel, shipbuilding, and industrial equipment. These goods-producing industries rapidly outgrew internal Chinese demand, and therefore turned to exporting goods. With all three key inputs, capital, labor and land being more inexpensive on a relative basis in China than internationally, it was easy for China to continue growing industrial output by taking global market share in most industries. Continued strong investment growth led to China being more and more dependent on exports to drive its economy.

China's investment path clearly surpasses that of several other countries (see Figure 5 below). Korea, being the most recent example of a country that has gone through the development cycle that China is currently experiencing, saw its investment peak at approximately 38% of GDP. India is currently at approximately 33% of GDP. China is a clear outlier, with investment in excess of 46% of GDP, which is the highest investment / GDP ratio seen in modern times. To put this massive amount of investment in perspective, post-WWI Germany and Italy investment peaked in the late 1950s at 30-35% of GDP and lasted only a few years. Investment in China has been in excess of that level for 20 years, and shows no sign of slowing.

It is hard to underestimate how lopsided the Chinese economy has become as a result of the singular focus of investment in the economy. Most obviously, households have depressed levels of income relative to where they might be, had investment and the associated financial repression not existed. Less obvious, but perhaps more importantly, however, is that the focus of investment in the export-led industrial sector has left China with a capital stock that is now a hindrance to further wealth creation. The marginal value of an additional dollar of investment at this point is small – McKinsey & Co. estimates that it takes in excess of $5 of investment to generate $1 of GDP growth in China.

Clearly, investing in other sectors of the economy would benefit China more, though on more "soft" social issues. For instance, social services such as hospitals and schools as well as farming technology and rural infrastructure have languished. The infrastructure around services, however, is precisely what China will need if it reorients itself away from export-led growth. Traveling the path to a more domestically-oriented and therefore more services-oriented economy is difficult and will present risks to the current setup of the economy. Indeed, as we show next, China does not really face a choice about reorienting itself away from export-led growth.

Figure 5: Gross Investment as % of GDP[6]



Limits to Export-Led Growth

The framework we have described so far that has driven China to such success cannot be sustained indefinitely. Export-led growth is starting to hit limits. Those limits have arrived perhaps sooner than expected thanks to the challenged long-term outlook for the US and Europe, implying that demand for Chinese-made goods will likely remain flat if not decrease over the next few years. The limits to export-led growth are due to two important structural reasons.

First, financial repression has led Chinese households to invest heavily in the only asset they were allowed to hold and that could potentially help shield against inflationary pressures: real estate. While the situation is not of US subprime proportions, the real estate situation is a reminder that people will actively try to avoid financial repression and those actions can have unintended consequences. A collapse in real estate prices at this point would be devastating to Chinese households, much as it was to US households, but in the context of a much lower-income country. The government has moved decisively to deflate the housing market with great success, but for households, that means that the one “safe heaven” investment against inflation is now not so interesting – tolerance for more financial repression is bound to diminish if there is nowhere for households to park their savings. Furthermore, if the government is serious about re-balancing China’s growth away from export-led growth, a priority must be to increase household wealth, not repress it further.

Second, continuing export growth necessarily implies China continuing to take global market share in key export industries. Simple math shows that continued growth in global market share cannot continue. The IMF recently published an interesting study highlighting the limits China faces to continuing export-led growth from a

[6] Source: Haver, Makena Analysis

microeconomic perspective.[7] For instance in steel, China has grown its share in global production from ~5% in the 1980s to ~40% in 2008. This rate of growth far outpaces the rate of growth of global steel demand (estimated at 3% a year from the World Steel Association), and current margins are estimated to be approximately 5%. If China were to maintain its historic growth rate in steel, it would have to grow its global share to 50% by 2020, implying a 90% increase in installed steel capacity in China. The only way to grow market share while maintaining margins is to increase productivity, i.e. reduce costs on a per unit basis. Given the situation around wages we view this as unlikely. With stable wages and historic productivity growth levels, the IMF calculates that Chinese steel exporters would face negative margins as early as 2014 on their quest to grow global share. Similar logic can be applied to shipbuilding, machine tools, etc.

Rebalancing: Not an Easy Road

Some economists estimate that as much as 50% of China's GDP growth is now driven by exports. The export-led model has led to real GDP increasing 13x between 1978 and 2006. With so much at stake, it makes sense that the collapse in global demand in 2008 was met with a massive stimulus package, perhaps the largest in history, to keep the economy from collapsing. Since then, the government has redoubled its efforts to reduce export dependency and "rebalance" the economy towards internal demand. However, that is easier said than done.

The transition away from industrial export-led growth towards an internally-focused service economy has historically been a difficult one. Many countries graduate from low income to middle-income, as China now has, only to find themselves stagnate in terms of income per capita growth from that point forward – the so-called "middle-income trap". Various theories attempt to explain why the transition to a services-based economy exist, but for China it is easy to see why that transition to a more balanced economy will be even more difficult than for most other countries.

Factors Influencing China's Rebalancing

First is the typically powerful force of political and economic inertia. Abandoning a system that has worked so well for so long will entail political hand-wringing, and will of course mean partially dismantling the input market distortions we described above. That implies that those who benefit from the system, the wealthy industrialists and their networks of influence, will fight any kind of transition that threatens their privileged position. We have heard senior Chinese policymakers describing this situation as the largest obstacle to reform.

Second, by their nature, services are more education-intensive and less capital-intensive. Since the economy has been so focused on industrial goods exports for so long (i.e. mal-allocation of capital), there is unlikely to be enough human capital for a rapid transition to a services-based economy. Studies show that in excess of 70% of China's factory workers have only completed Junior High School (9th grade in China), whereas approximately 70% of China's services workers have completed more than Junior High School. With employment in services only accounting for 30% of total employment, the balance being in farming and industry, 80% of the workforce have completed no more than Junior High School. The workforce is simply not ready for a rapid wholesale transition to services.

Third, services physical infrastructure is lacking. Thanks to the mal-allocation of capital towards export-oriented industries, China is lacking in hospitals, schools, clinics, etc. that are a necessary component of a successful transition to a more internal-demand focused economy.

Fourth, the legal infrastructure is not yet in place. It is relatively easy to establish who is wrong or right when someone fails to deliver a good or delivers a shoddy good. A steel I-beam is tangible and it is easy to verify its quality and whereabouts. It is much harder to enforce contracts in services, since services rely more on intangible

[7] *Is China's Export-Oriented Growth Sustainable?* Kai Guo and Papa N'Diaye, in *Rebalancing Growth In Asia*, IMF 2011

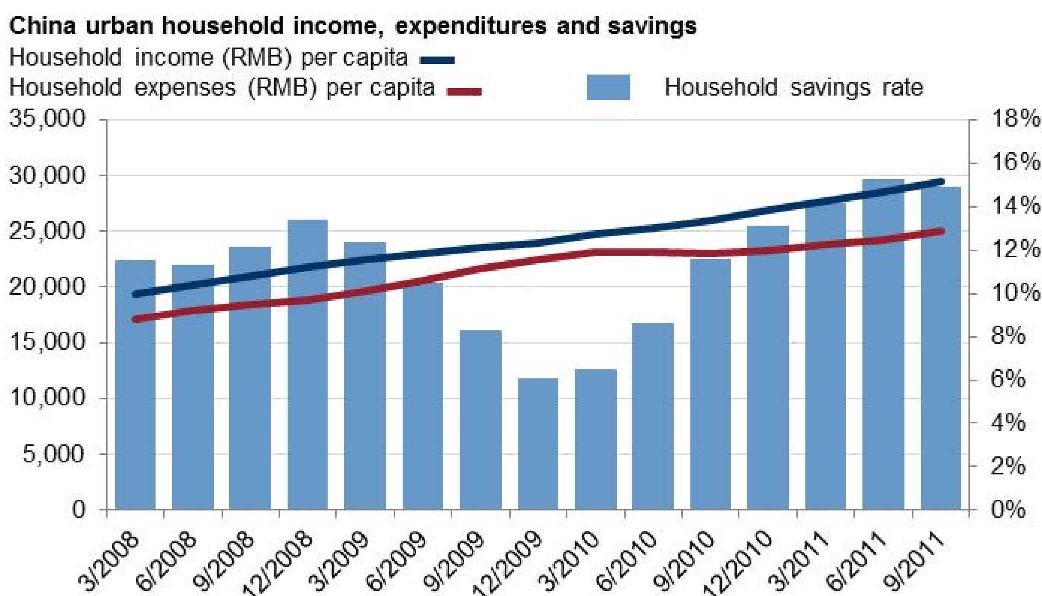
and subjective assessments. How can one "prove" that services were not done well? It is not easy for US courts to rule on medical malpractice, intellectual property, breach of duties, etc. – one can only imagine the challenges for China's legal system at this point in time.

For these reasons, while we believe that re-balancing towards internal demand *must* happen, it will be a much slower and tortuous process than many believe. We have heard many a comment about rebalancing "taking a couple of years". This process will take many years, perhaps a decade, and will progress in fits and starts. Note how even the 2008 stimulus was focused on providing capital to SOE industry through massive bank loans.

Wages – A Double-Edged Sword

A bright spot in the rebalancing process is that Chinese wages have risen rapidly and enabled a large increase in consumption for the average Chinese citizen. From 2000 to 2005, nominal wages rose 10% per year, and in 2005-2010 wages rose at 19% per year. Along with nominal wage increases, real per capita incomes have increased dramatically, growing at approximately 13% on an annualized basis for the 2000s. That increase in wealth has driven consumption, which has grown just as dramatically, increasing by 11% on an annualized basis over the same period. The widely-perpetrated myth of the Chinese household not consuming is driven by the fact that as a share of GDP, consumption has been dropping. While true, this is just a reflection of the large increase in the share of investment in the economy, which has been outpacing consumption growth. Figure 6 below illustrates this point for China's 36 largest cities. Note how (i) savings rates dropped during the crisis as households sought to maintain their consumption, and (ii) how expenditure growth closely tracks income growth. As incomes continue to grow, one can safely expect consumption to continue growing, and that is a key investable theme in the Chinese economy.

Figure 6: China Urban Household Income, Expenditures, and Savings Rate – Avg. of 36 Cities[8]

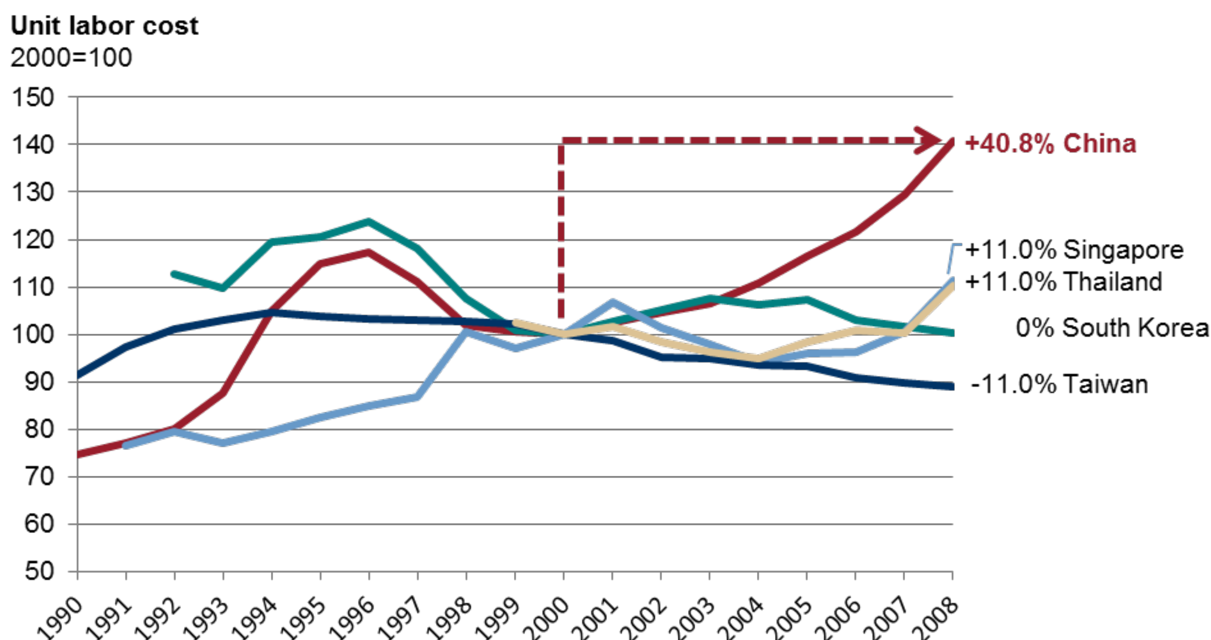


The issue with growing wages is that China is slowly starting to price itself out of global markets for some manufactured goods. As we mentioned above, this is in direct conflict with increasing global market share of exports, and is one of the key reasons for the necessity of a transition to a more domestically-oriented services economy.

[8] Source: CEIC, Makena Analysis

On a productivity-adjusted basis, i.e. the labor cost per unit of goods produced, Chinese unit labor cost growth has outpaced most other Asian exporters by a significant factor. Figure 7 below shows wages in China growing by ~41% from 2000-2009, about 4x more than the next country, Thailand.

Figure 7: Unit Labor Costs in Selected Asian Countries[9]

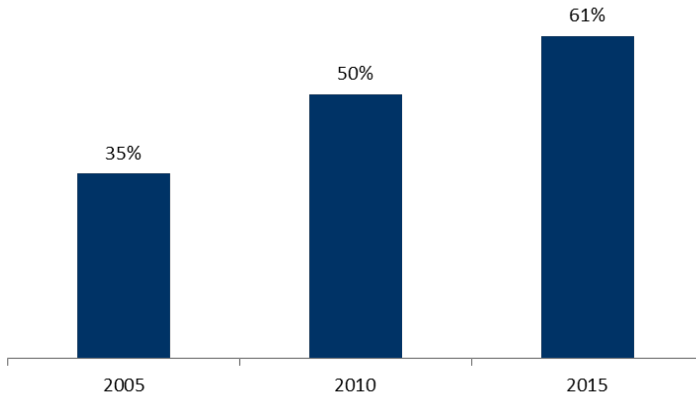


In the heavily industrialized coastal regions of China, the logic of offshoring for US or European companies is therefore starting to become less compelling. The Boston Consulting Group[10] recently published a report showing that currently, after adjusting for lower Chinese productivity and incorporating transportation and overhead costs, the benefit from offshoring to China's industrial coastal areas versus the southeast (non-unionized) US is now less than 13%, down from 16% in 2005, and headed to 10% by 2015. This is driven by the fact that on a productivity-adjusted basis, manufacturing wages are now 50% of US wages, up from 35% in 2005, and projected to exceed 60% by 2015 (see Figure 8 below).

Some companies are deciding that the headaches of distant production, legal uncertainty, cultural and language barriers are not worth an additional 10% of margin, and we are starting to witness more manufacturing investment in the US. Unfortunately, with US manufacturing representing less than 15% of GDP, this is of less consequence to the US than it is to China.

[9] Source: Haver, Makena Analysis
[10] Made in the USA, Again, BCG, 2011

Figure 8: Offshoring Costs and Benefits: China vs. US[11]



US Productivity	2005	2010	2015E
Wage Rate ($/hr)	15.81	21.25	24.81
Productivity (%)	100	100	100

China Productivity	2005	2010	2015E
Wage Rate ($/hr)	0.72	2.32	6.31
Productivity Relative to US (%)	13	27	42

China - US Worker Comparison	2005	2010	2015E
Productivity Adj Chinese Wage	5.53	8.62	15.03
Labor Cost Savings (%)	65	50	39
Total Cost Savings before Trans, Duties, etc.	16	13	10

Low value added, manual-labor intensive manufacturing, such as clothing manufacturing, has already started moving out of China. That trend is bound to continue. Figure 9 below highlights some of the key industrial clusters at risk.

Figure 9: Key Industrial Clusters[12]

[11] Source: Made in the USA, Again, BCG, 2011
[12] Source of map: The Wall Street Journal

Exchange Rate Liberalization

Some pundits speculate that China will rapidly liberalize its capital controls to make the Renminbi a convertible and freely floating currency in the next few years. The hope is that the result would be a stronger Renminbi, therefore boosting household incomes on a purchasing power-adjusted basis. Putting that potential liberalization into the context we have described above shows that this would be a wildly risky move on the part of Chinese policy-makers. If financially repressive conditions with negative or near-negative real returns to savers were to persist within a liberalized currency framework, the potential capital outflows from China would be of enormous proportions. Every saver would try to escape domestic repressive conditions. Therefore, it is not reasonable to expect currency liberalization without interest rate liberalization. Therein is the rub for China's state-owned enterprises (SOEs), used to accessing credit on a preferential and subsidized basis. Chinese SOEs would have to start paying market rates for their loans, and this would undoubtedly precipitate a wave of bankruptcies across many levered SOEs, let alone local government funding vehicles that fund infrastructure investments with cheap leverage available from state banks. In short, rapid liberalization of the exchange rate would cause a surge in unemployment in China, and as we discussed, the low education levels of industrial workers would mean that finding gainful employment would be very difficult for those workers. One could draw a parallel with the US where the collapse of the construction industry has caused sustained unemployment as those workers are unable to find new work – the main difference being that as a share of GDP, construction in the US was a fraction of the size of the Chinese export sector.

In general, it is unreasonable to assume that any one aspect of a specific market could be fully liberalized without other portions following suit, as unsustainable imbalances would very rapidly appear and wreak havoc with China's all-important manufacturing base. Along those lines, it would therefore be unreasonable to expect quick liberalization of residency permits, wages, or land markets.

Conclusion

By providing artificially cheap capital and labor, China has become the "workshop of the world". Cheap capital drives the excessive levels of investment into capital-intensive manufacturing and export-led GDP growth we are accustomed to seeing in China, and is enabled by artificially lowering interest rates to savers, transferring the wealth from individuals to corporations. On the labor side, wages are kept lower for migrant workers through the Hukou residency permit system which gives lesser rights to migrants than to city residents. This has created large income inequalities, making China one of the most unequal countries in Asia. That inequality has driven a lot of the riots and protests we read about in China, and justifiably worries the political leadership. The government has resolved in its most recent 12 year plan to reduce inequalities, and has already significantly raised minimum wages across the country. While positive for households, this has important negative implications for export-led growth, and has the potential to cause much distress in the export sector.

Despite this complicated situation, Chinese consumption has grown 250% in the last decade, and is set to accelerate rapidly if income inequality will truly be addressed through wage hikes or other income-boosting actions. This is perhaps the most investable aspect of the Chinese economy.

The transition to a consumer-led, service-oriented economy will be slow and fraught with risks and volatility. In order for China to transition its economy to a consumer-led economy, it needs to dismantle the set of distortions it put into place in its labor and capital markets that led to the Chinese growth boom to start with. That is a tall order, and one that will only happen gradually. Thinking that China's trade imbalances are going to correct in the next 1-2 years is overly optimistic. The silver lining is that the gradual shift that is being enabled by the government is going to translate into more purchasing power for consumers. Therefore the one clear positive is that the Chinese consumer will continue to provide a strong driver for growth in all consumption-related categories. That is one of the main potential investable themes in China at this point.

Clearly, the government will not stand idly by, but will start focusing more and more on the "quality" of Chinese growth, rather than the "quantity" of growth. Practically, what that implies is a gradual slowing of the growth rate of the Chinese economy over the next decade, ultimately converging with the growth rates of other emerging countries in the 5-7% range. The longer China takes to reach that more stable scenario, the riskier the transition will become, as more and more of the economy becomes dependent on exports, exacerbating the mal-allocation of capital and the distortions we outlined in the capital, labor and land markets. Therefore, an unsuccessful scenario, perhaps unintuitively, would be for China to continue its 9-10% growth rate for several years.

With a difficult transition ahead for China, we remain slightly overweight versus the equity market weighted ACWI but significantly underweight versus China's share of global GDP, with investments broadly focused on the growing purchasing power of the Chinese consumer. We continue to monitor the Chinese situation with frequent visits to China by the Makena team, and we will continue to refine our strategy vis-à-vis China, in order to maintain a compelling and comprehensive strategy for such an important country in the global economy.