CKGSB KNOWLEDGE
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Towards a Re-globalized World

After a long period of expansion in global trade, some in the West are pushing back

- Brexit has changed China's relationship with Britain and the EU
- The world's factory is beginning to automate away the world's largest workforce
- Now the leader in high-speed rail, China is rolling its trains out to the world

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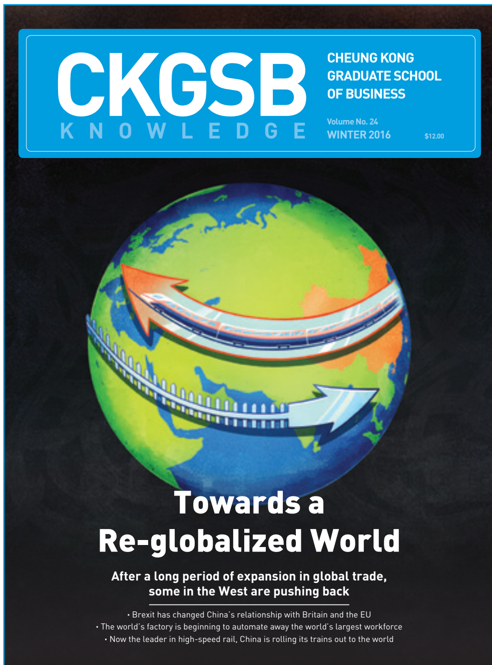
Sustaining Globalization

In this issue of *CKGSB Knowledge*, we are taking the unusual step of including a Comment as the cover story, on what we see is the key issue of our age—keeping the overall strategy of globalization, which has had such a positive impact on the world over the past few decades, on track in the face of significant new challenges. The election of Donald Trump to the presidency of the United States and the decision by a majority of British voters to leave the European Union are simply the two most high-profile indications of a growing wave of discontent in many countries at the impact that globalization has had. All countries have benefitted overall, but some segments of the population of some countries have not, and these groups, previously largely unnoticed and discounted, are now increasingly making themselves heard. And the year ahead will see elections in a number of countries in Europe that could very well see further gains for politicians who wish to see a rollback of liberalized trade and investment. But the answer, we believe deeply, is not an unwinding of the ties that now bind the world together, but rather a strengthening and improvement of them. The way forward is not de-globalization but rather re-globalization. The Cheung Kong Graduate School of Business (CKGSB) believes that business leaders in this new era will need to be attuned to three elements—Globalization, Humanity and Innovation, which we group in the acronym GHI. Please read our Comment on page 10, as well as the article looking at how China's relations with the EU and Britain are likely to be affected by Brexit on page 39.



Another topic that is likely to have almost as big an impact on the world economy as globalization in the years ahead is automation, and on page 22 we review the rise of the robots, and how China's role as the Factory of the World and its employment landscape could be affected by this basic technological shift in manufacturing, and many other sectors too.

In addition, we look in-depth at a number of important trends we have identified in China's economy, including the changing face of agriculture (page 17), the wealth management product segment of the Chinese finance industry (page 33) and the implications of, and prospects for, the slowdown underway in private investment into the real economy (page 12). Our company profile this issue (page 46) is search giant Baidu, which is in the midst of a major shift in its business model, while in our Downtime section (page 67), we discuss the changing culture of young professionals in China, who are increasingly turning their backs on baijiu and banquets in favor of jogging and yoga.

For our interview section, we talk with Philippe Gas, General Manager of the Shanghai Disney Resort, in a wide-ranging discussion about the history of the park, Disney's close partnership with Chinese government and more. Other interviews include a revealing Q&A with one of the top commentators on China's economy, Bill Bishop, and an interview with Georg Tacke, one of the world's most prominent business consultants on strategy and marketing.

The world is changing fast, and we at CKGSB are eager to keep ahead of the curve with our articles and commentaries. If you have any comments or opinions on any of our offerings, we would love to hear from you (*lzhou@ckgsb.edu.cn* or *ckgsb.knowledge@ckgsb.edu.cn*).

Yours Sincerely,

Zhou Li
Assistant Dean, CKGSB

For more insights on the Chinese economy and business, please visit the CKGSB Knowledge site: http://knowledge.ckgsb.edu.cn/

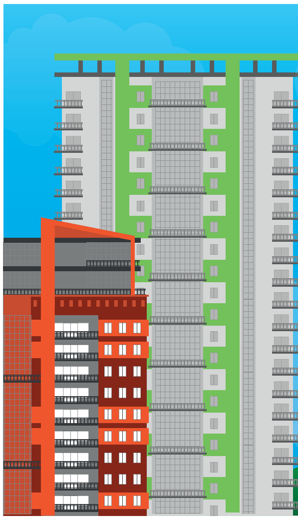
China Data

The stats you need to know

All Aboard for Africa

China announced it will build a **$4 billion** railway connecting the Ethiopian capital of Addis Ababa to the neighboring country of Djibouti

Source: The Wall Street Journal



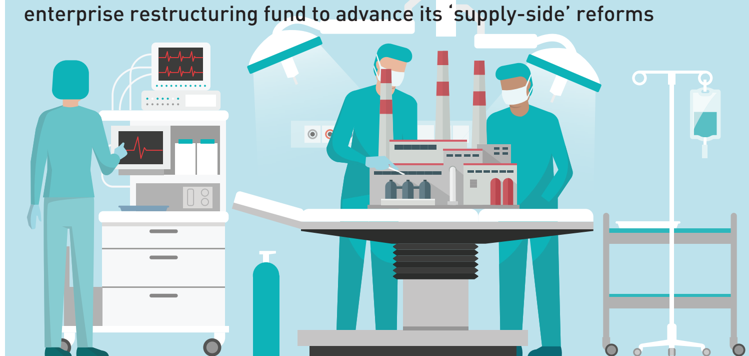
On Loan

New home loans in the first nine months of 2016 reached **$539 billion**, more than double the same period in 2015, as the property market heated up

Source: Caixin

We Can Rebuild Them

China has launched a **RMB 350 billion** ($52.5 billion) state enterprise restructuring fund to advance its 'supply-side' reforms

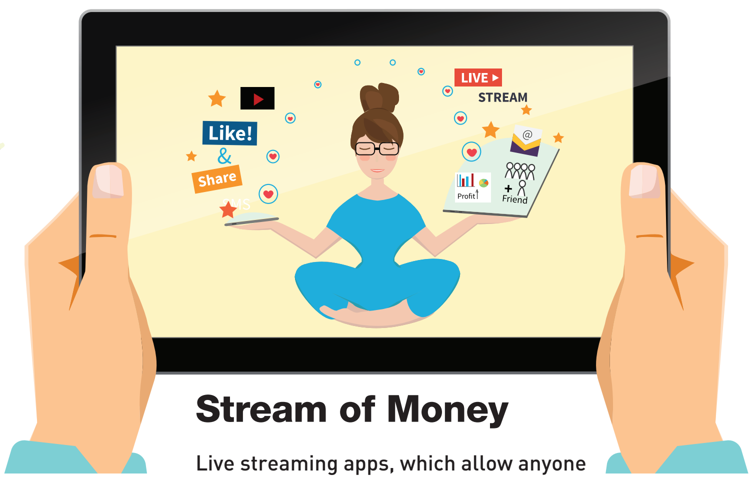


Source: Reuters

Eurotrip

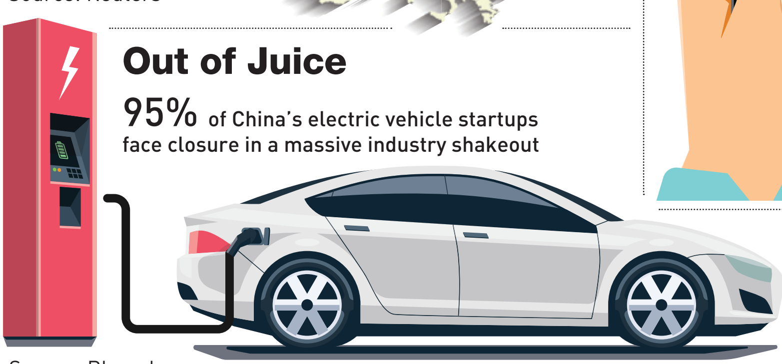
China has set up a **€10 billion** investment fund to finance infrastructure projects in Central and Eastern Europe

Source: Reuters



Out of Juice

95% of China's electric vehicle startups face closure in a massive industry shakeout



Source: Bloomberg

Stream of Money

Live streaming apps, which allow anyone with a smart phone to broadcast live to an audience, are expected to generate **$5 billion** this year as some users hit stardom

Source: The Wall Street Journal

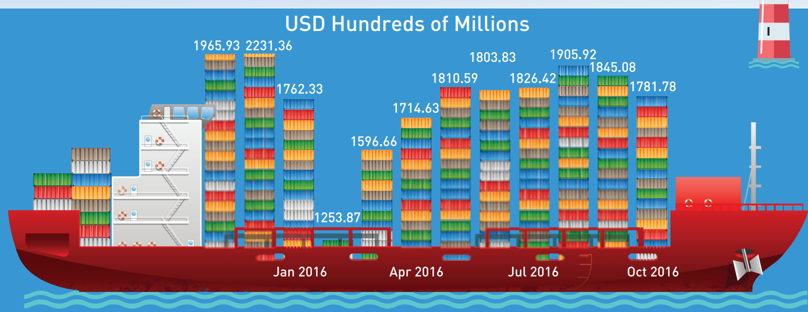
Bicycle Bounty

Venture capital funds raised **$200 million** for several bike share startups, which have exploded in popularity this year

Source: Caixin

Not Shipping Out

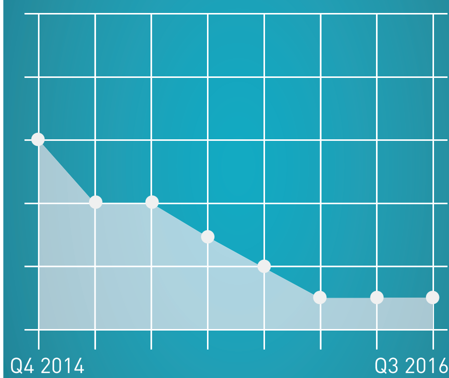
China's September exports fell **10%** from a year earlier amid a broad economic slowdown



Source: Reuters

Steady as She Goes

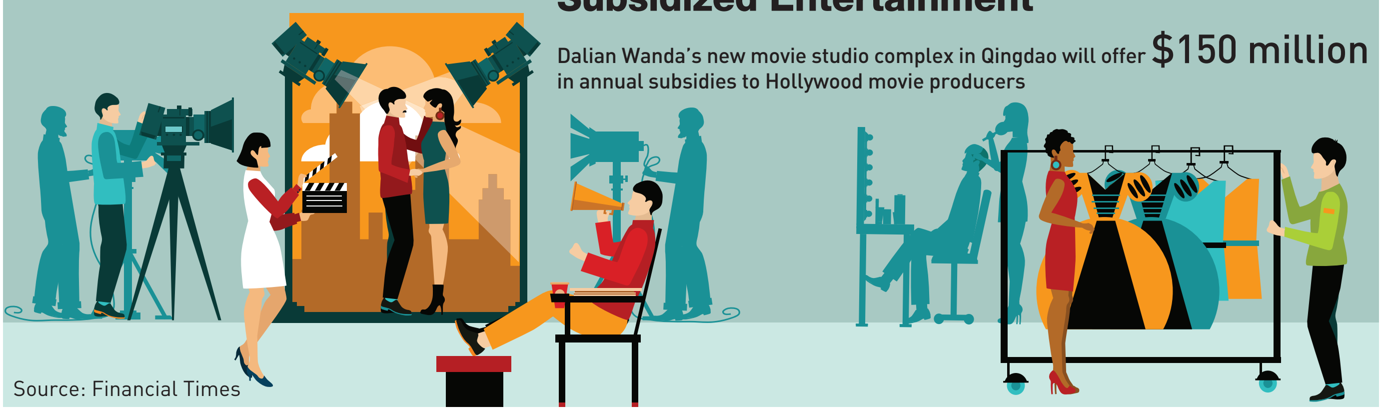
China's GDP has grown at **6.7%** for three quarters in a row to Q3 this year



Source: Trading Economics

Subsidized Entertainment

Dalian Wanda's new movie studio complex in Qingdao will offer **$150 million** in annual subsidies to Hollywood movie producers



Source: Financial Times

Arrivals

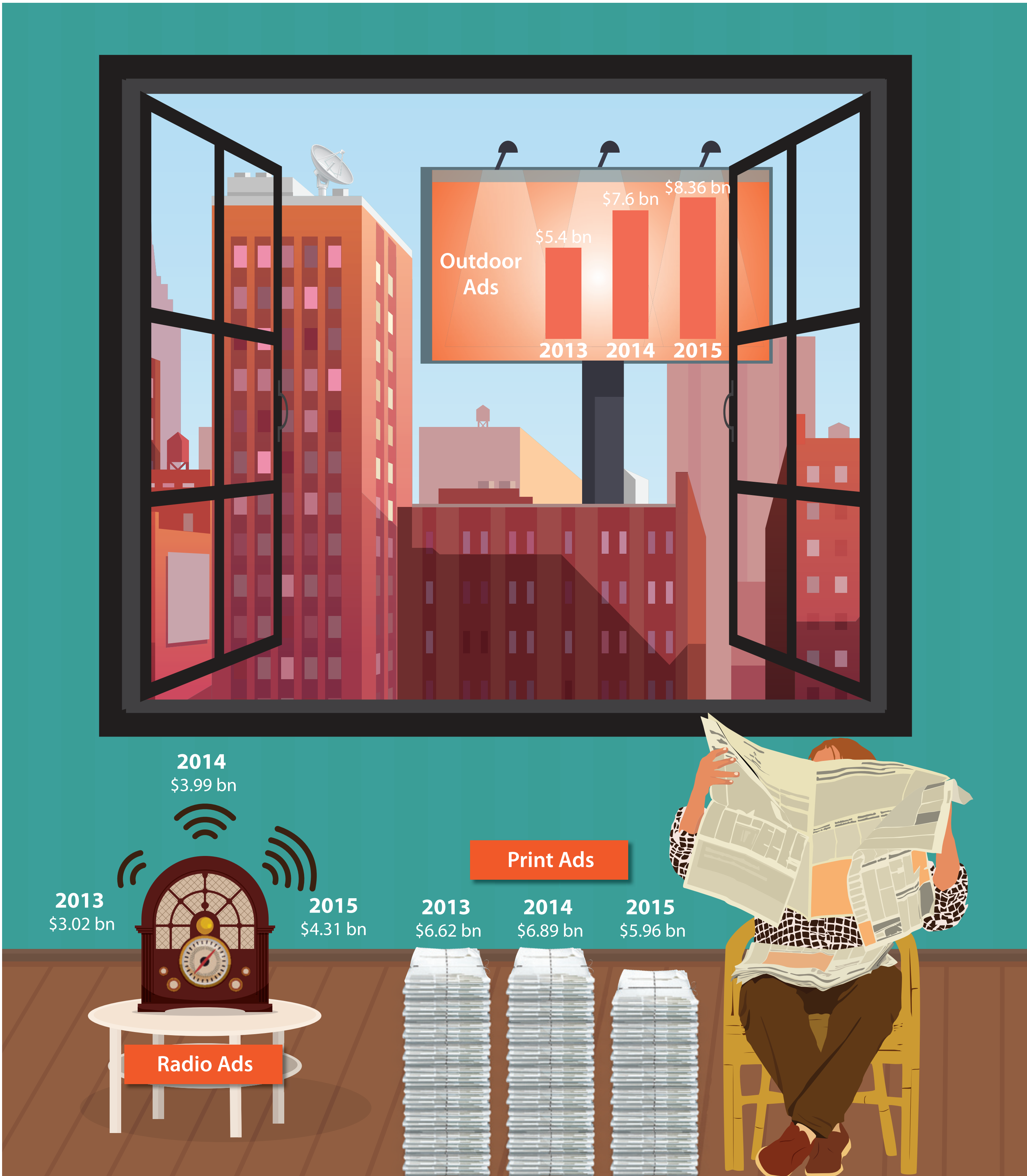
133 million Chinese tourists will make overseas trips by the end of 2016, up from 120 million in 2015

Source: South China Morning Post

Fast Fingers

Due to phone-loving millennials, China's online sales of fast-moving consumer goods (FMCG) grew at an average of **78.4%** from 2010-15, while the US and UK grew at 10.7% and 7.9% respectively

Source: Financial Times

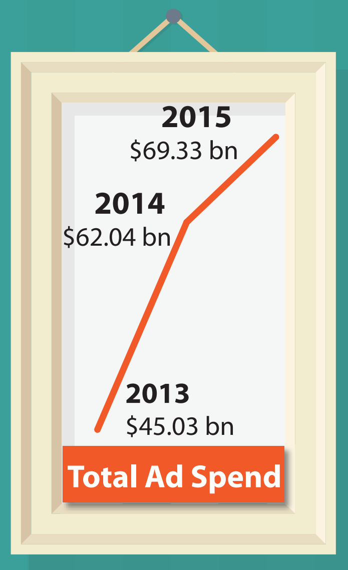


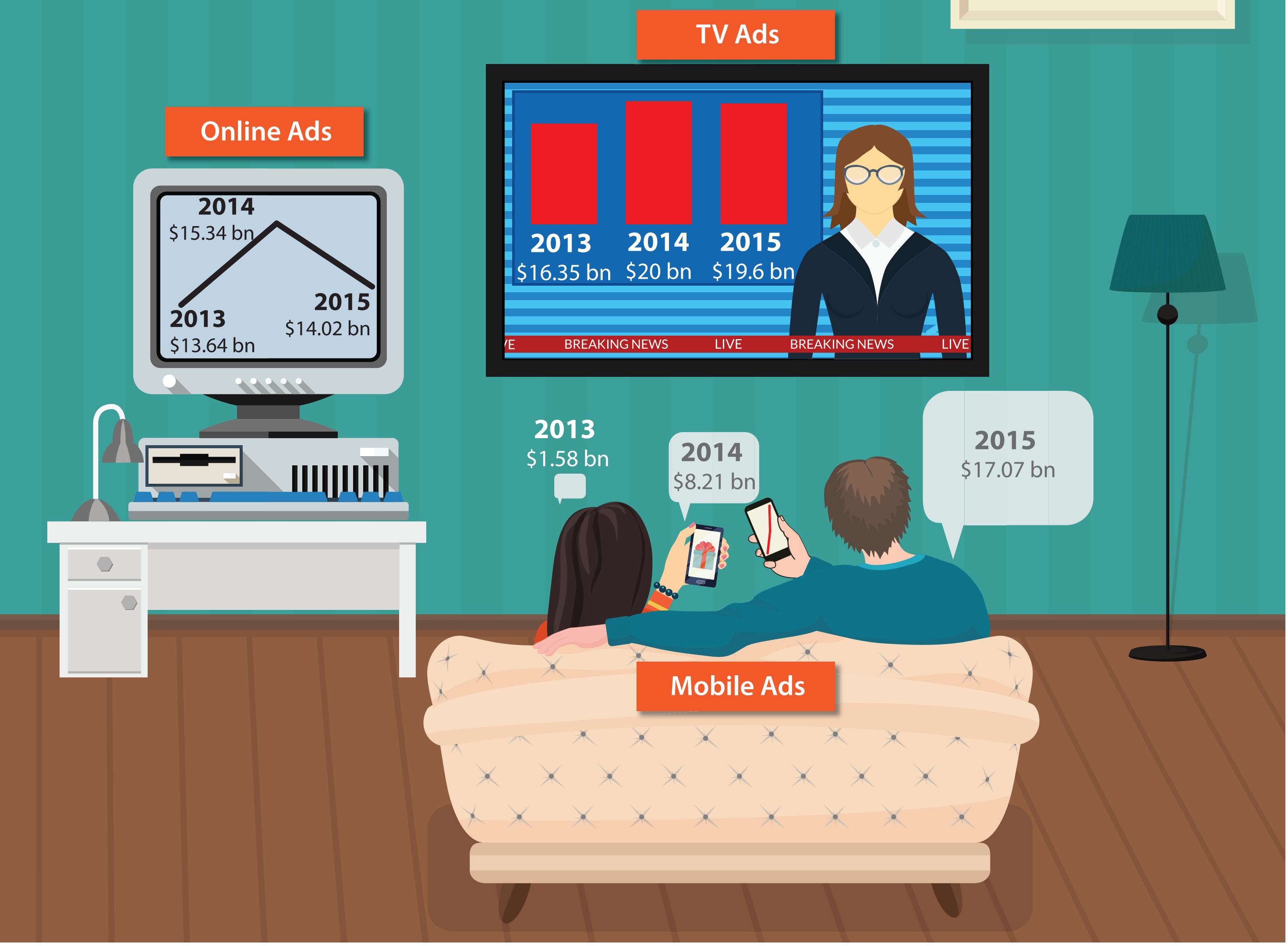
Source: eMarketer, China Internet Watch

Ad It Up

China's ad spend is evolving

China strives to be a consumer-based economy, and as such it is not surprising that advertising spending has risen by leaps and bounds the past few years, especially as people become more affluent. However, the ad spend is also changing to reflect the times. Mobile spending has risen ten-fold in the past three years, while print spending is slowly dropping off. And the change is sure to continue along with more digital disruption.





It Doesn't Stop Here

On April 15, 1981, some 500 Chinese officials and Americans gathered in the Great Hall of the People in Beijing to celebrate the opening of the Coca-Cola Company's first mainland bottling plant since 1949. It was still the early days of Deng Xiaoping's reform and opening process, and the international community was eager to have China participate in the new trend of "globalization." "[This] may be one of the most important days… in the history of the world," said Roberto C. Goizueta, then the chairman of Coca Cola.

Today, Coke is as popular in China as anywhere, but the international mood has to a great extent shifted. The deeply-held views on free trade and open access for all, which are at the heart of the globalization trend of recent decades, have been joined by ever-more insistent drum beats of dissent. From Europe and North America particularly, but from other places as well, there are calls for a rollback, for trade restrictions, for sanctions and barriers. There are those in the West who believe that to protect jobs and industries, it is necessary to replace "globalization" with "de-globalization."

Who is Winning?

China was once a closed economy and an opponent of globalization. Now it is one of the strongest advocates because of the obvious benefits that it offers. Globalization has unquestionably helped hundreds of millions of people to be lifted out of poverty. Hunger, the bane of China for millennia, has been effectively wiped out. In today's China, people are hungry for streaming media on their smartphones and high-speed train trips to exotic locations. Desperation has long given way to aspiration.

But this process of globalization was not simply China's gain at a loss to others. It has truly been a win-win for just about all. National incomes are up consistently in recent decades and while average wages in many countries have not risen significantly, the money in people's wallets goes much further than it ever used to. The basic goods of modern life are drastically more affordable because in the past three decades China has exported huge savings in living expenses through cheaper products.

Of course, by becoming the "factory of the world," China's rise did indeed reallocate some jobs in the West. Or rather, forced Western countries to face inefficiencies and find other routes to development, which to a surprising extent they have made progress in doing. The economies of Europe and the US are dramatically different from 30 years ago—more flexible, with higher productivity and generally higher living standards across the board.

And here, too, is an interesting historical mirror image. In the days before it joined the WTO, China also had a strong contingent of anti-globalization voices. The loudest among them were the state-owned enterprises, and their professed fears were strikingly familiar—that Chinese companies would be wiped out in the face of open competition with foreign companies, and that once-secure jobs would evaporate. But the leaders at the time, particularly Premier Zhu Rongji, blazed a trail ahead, and in the end both China and the world benefitted.

Re-globalization

Now as then, protecting inefficiency is not the answer to the problem. What is needed is not "de-globalization" but "re-globalization," a fresh approach to the process of integrating the disparate economies of the world in a way that is equitable to as many people as possible. And re-globalization needs to also take into account the reasonable requirements of global companies for fair access to the ever-expanding China market.

The signs of opposition to globalization are currently much in evidence, but globalization should not and will not end here. The increasingly global approach of the Internet and transnational corporations, for instance, will continue to grow regardless of election results or other changes anywhere.

The next period of "re-globalization," however, will be differentiated from the globalization process of the past few decades in several ways. Firstly, science and technology will develop more rapidly, with artificial intelligence, and profound advances in medicine and the life sciences, generating all sorts of global opportunities and new problems.

This next phase will also see a shift in the rankings of the players. The last round of globalization was dominated by the United States, whereas in the years ahead, neither the US nor China will dominate—it will rather be a multi-polar scenario, with India and other dynamic economies, as well as globally competitive sectors in advanced economies also playing much more balanced roles.

A third feature is likely to be a shift from dominance of multinational companies through to a much bigger role for small and medium-sized enterprises and even interest groups on the Internet such as Wikipedia.

China's position vis-a-vis other nations has shifted dramatically since the start of this globalization story in the early 1980s. In those days, its role in the world economy was minuscule and so in consequence was its voice. But today China is a major player by any measure, and will inevitably and rightfully have a major voice in the way in which economic relationships change in the years ahead.

It is of course in the interest of China to have continued globalization, and the tremors that are shaking Western societies need to be recognized and addressed. But the answer is certainly not the erection of walls.

One factor to consider is the paradigm-bending changes to production that are likely soon to hit us. In the not-too-distant future, manufacturing jobs will not be threatened by cheaper workers in foreign lands, but by a far more disciplined army of tireless machines—the robots are coming, even to China. Job losses to other humans will pale in comparison to job losses to robots.

For all the complaining in certain quarters, the West today is better equipped to deal with the revolution that robots

> China now has a seat at the table of globalization. And just like the opening-up all those decades ago, it is unquestionably a good thing

may unleash. The reason is, simply, that manufacturing jobs have been disappearing from the West for decades, and the workforce has already gone a long way in adapting to that by switching to the service and knowledge economy. Making that same transition is a goal of the Chinese government, but China will not have the luxury of time on its side. And although the crystal ball never produces a clear image, it is a safe bet that the world cannot afford to let China deal with the transition pains all on its own. A new approach to globalization will be necessary.

The next phase of globalization will likely be about much more than labor and trade deals, it will be about a deeper intertwining of technology, society and culture on a global scale. This new era is already on the world's doorstep. A factory worker, even one in a highly globalized system of trade, is ultimately walled off, a faceless producer of shoes, or steel, or even those magically powerful instruments of communication, smart phones. But a knowledge worker, or a cultural worker, is not.

The workforce in the technology and information industries that is driving the future of humanity is remarkably more fluid. As of this year, 37% of workers in Silicon Valley are foreign-born. Many of them are Chinese, and many return to China to bring their knowledge and experience with them to break new ground at home.

Given the technological nature of these changes, they will affect everyone simultaneously, and will be as unhampered by national borders as is the weather. That does not, however, mean that the work of business and political relationships is somehow lessened—on the contrary, the importance is magnified.

This means, among other things, that a newly-powerful China will command not only a greater say in international matters, but also bear a greater responsibility. China's re-globalization interests need to better take into consideration the community interests of its business partners, be it in the Midwestern United States, in France with its wineries, or in countries across Africa. In short, these relationships demand a certain reciprocity that China, now more than ever, has the duty to deliver.

On Deck

What is for sure is that, whatever happens, China and other players will have a seat at the table of globalization. And just like the opening-up all those decades ago, that is unquestionably a good thing. Resolving the issues at the heart of globalization is the responsibility of all and they can only be solved by a world working together, as one, not through the implementation of a mélange of national solutions.

The uncertainty of it all is scary, to be sure, and all players feel the pressure of the future. But a connected world is the only future that can be sustained, and this is a time to re-evaluate and re-invigorate globalization, not turn away from it. So take a deep breath and share a Coke with someone. Or perhaps instead a cup of the world's original globalized beverage: tea.

Private Thirst

Less money is flowing to private enterprise in China

By Wynne Wang

Image by Lisa Ye

Zhang Qingli has little interest in investing further in his textile business, as rising labor costs and raw material prices, as well as falling sales prices continue to shrink his profit margin.

"I don't dare to invest more, not until a trustworthy client can promise me stable flows of orders," says Zhang, whose factory in China's eastern Jiangsu Province mainly exports products overseas.

Zhang is not alone in his limited confidence in the future. Private investment in China in terms of capital goods like factories and trucks grew by just 2.1% in the year's first eight months after nearly 30% average annual growth over the past decade. In June, it fell to a record low since China started tracking the data, and dipped even lower in July and August.

The pullback is happening just as the domestic economy is shifting to lower gear. The economy expanded 6.9% in 2015, the slowest pace in a quarter of a century, and is expected to cool to 6.6% this year, and slow further still to 6.5% in 2017, as the government continues policy support to help ward off a sharper slowdown.

While China's state-owned enterprises dominate the monopoly industries such as petroleum and telecoms, the country's private economy is still the major source for growth in production, employment and exports—indeed, it was the private sector that created the Chinese economic 'miracle' of the reform era.

"We have to realize that private investment is rather large and works as a strong driver for consumption and job creation," said Premier Li Keqiang at a conference in July with local government officials. He added that private investment is not only a concern for now, as it will affect economic development for years to come.

But whether the Chinese government has the ability to stimulate private business is unclear.

Who Hit the Brakes?

China's overall investment growth—including state investment—has slowed down only slightly, from 10.1% at the end of last year to 8.2% in September. But private sector investment in the same period slid from 10% to 2.1% in August, before inching back up to 2.5% in September.

> "
>
> I don't dare to invest more, not until a trustworthy client can promise me stable flows of orders
>
> Zhang Qingli
> Factory Owner
> Jiangsu province

"There is simply no profit to hunt for," said Liu Dongliang, senior analyst with China Merchants Bank. "The return on investment has dropped, so why bother to invest further."

Private companies are more sensitive to economic changes, and will jump out of a sector if profit margins shrink. State-owned firms, however, have more complicated goals, including supporting government policies, and are more likely to soldier on.

With investment opportunities sparse, Chinese firms reported an 18% jump in cash holdings during the latest quarter, the biggest increase in six years. The $1.2 trillion stockpile—which excludes banks and brokerages—grew at a faster pace than in the US, Europe and Japan, according to data compiled by *Bloomberg*.

Not all sectors are suffering from the investment slowdown. In the first eight months, infrastructure investment—almost entirely state-funded—increased by 19.7%, "playing a key supporting role in stabilizing investment growth in the country," says Wang Baobin, a senior statistician from National Bureau of Statistics.

But China's strategy to prop up economic growth by pushing large-scale projects could also potentially sideline the private companies that account for three-fifths of China's economy and four-fifths of its labor force. The government's push for infrastructure projects usually come with financial and policy support, funds that are therefore not available to bolster private companies.

A survey of China's industrial economy by the Cheung Kong Graduate School of Business pointed to the same trend. Only 9% of firms polled made fixed investment in the second quarter and a mere 2% made expansionary investment. The sluggish pace of investment looks like it will not improve in the third quarter as only six firms of about 2,000 said they planned to make investments.

"Recent media reports have noted that the country's fixed investment during the first six months of this year was dominated by government-led investment, while private investment has been contracting. Our survey has found this trend to be a persistent one," said the survey report.

There are, however, voices saying that the China's private investment spending isn't completely falling off a cliff. Analysis by Nicholas Lardy and Zixuan Huang of the Peterson Institute suggests the official data has exaggerated the decline as the government's RMB1 trillion bail out of the stock market has pushed some private companies into the state-controlled category, because state investment funds now own significant parts of those companies.

The researchers tried to provide more clarity by detailed examination of the share of investment undertaken by private and privately-controlled companies. It shows the private share declined slightly in the first half of this year, but it is still the first decline recorded in the decade for which these data are available.

Real Economy, Real Problems

But private companies aren't only being squeezed by policy, they are also being challenged by the market.

Like Zhang Qingli's concerns over overseas orders, the Cheung Kong Graduate School of Business school survey also indicated that weak demand is by far the biggest challenge for the industrial economy, as reported by 81% of the firms surveyed in the second quarter. Some enterprises also cited concerns over labor and raw material costs.

"We heard about a lot of policy support for small companies, but they [only appear] in the news stories and not in real life," said Zhang, complaining about lack of government and bank credit support.

Zhang said it is very difficult for small companies like his to get bank loans unless he provides hard collateral, usually in the form of real estate assets. Instead, he relies on retained profit and other sources to keep the business going.

John Wang, China manager of Corporate Value Associates, who has been consulting for Chinese banks for more than 10 years, says the banks do tend to favor state-owned companies.

"When the economy slows, it has a similar impact on state and private companies," says Wang. "But to the banks, the private companies pose additional credit risks."

Wang says that private companies may dress up their balance sheets, misappropriate the borrowed money or even transfer it to another company and bankrupt the current one.

"The bar for private companies is higher versus the state-owned companies even if they have similar operating results, cash flows, and collaterals, " Wang says.

Possible Solutions

China's top economic planning body, the National Development and Reform Commission, sent out a research team in May to look into the private investment slowdown problem, and then issued a work plan including 60 proposals. It mainly suggests that local governments improve services, help private companies to find funding and offer greater access to more areas.

But such structural reform pronouncements have yet to result in much real improvement. The government's usual method of infrastructure investment to spur growth has not shown much effect in shoring up the broad economy this time, and has so far failed to encourage more private companies to invest.

China's central bank has been pumping money into the banking system, but analysts are concerned that much of the cash hasn't been able to reach the real economy, or that companies that have spare money would rather hoard instead of expand their business.

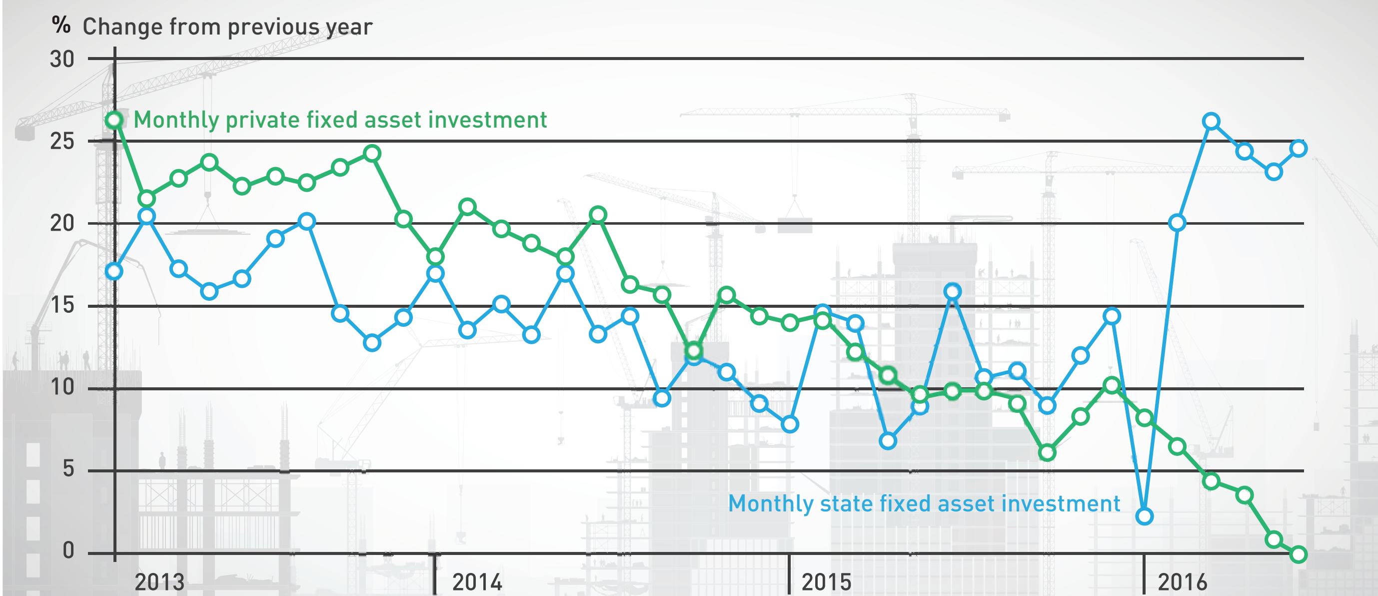
Speaking at a forum in Shanghai August, Sheng Songcheng, the head of the central bank's statistics department, said the gap between the growth rates of the narrower gauge of money supply, M1, and the broader measure of money supply, M2, had widened since October of last year largely because companies were having a hard time finding good investment opportunities.

China's M2 slowed down to 10.2% in July year on year, the weakest pace in 15 months. The slowdown in M2 suggests that money isn't being put to productive use. Rather, it is just sitting idle in corporate bank accounts.

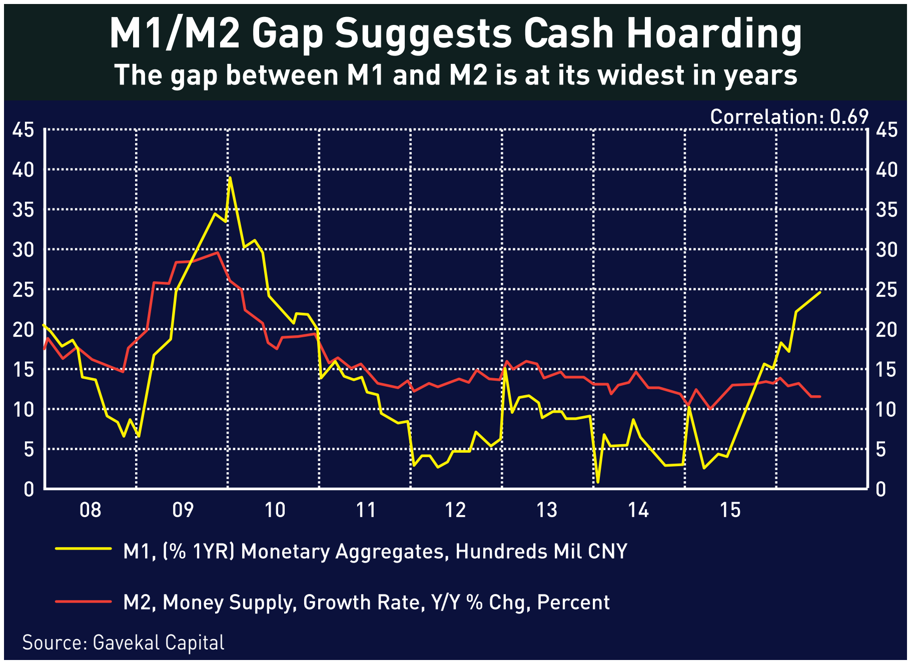
What also worries analysts is that the

Public Spending, Private Fears

Investment by state-owned companies has spiked as private investment has fallen



Source: The Wall Street Journal



high-flying property market has probably attracted too much liquidity from the real economy. Home prices are up about 60% in the past year in cities like Shanghai and Shenzhen.

"I plan to buy another apartment in my hometown where prices are expected to rise in the coming years," said Zoe Chen, who owns an export company in Zhejiang Province.

Zoe's company exports ink, and she says she has no plans to expand production.

"There aren't many investment opportunities," she adds. "If you invest into the products sold by the banks, they only offer you a return around 4%."

In the first half of 2016, close to half of new bank loans were housing mortgage loans, according to the state media. While loans to non-financial enterprises have slowed, loans for fixed assets increased by 7.5% on year, 1.6 percentage points down on the first quarter.

Bright Spots

But not everything is doom and gloom.

"We are investing every year to update our manufacturing facilities to make our production more efficient and develop new products," says Song Zhigen, whose company is a major stamp pad producer in China.

Song represents a group of business owners that believe they can continue to make decent profit by increasing efficiency and introducing new products, even if the industry they focus on has slowed down.

"The companies that produce automated equipment are very tied up recently, as so many manufacturers are replacing their facilities," Song says, adding his company would invest at least half a million RMB for the same purpose.

Additionally, some industries in China are still expanding. Official data showed that private investments in electricity, heating power production and supply grew by 32.6% in the first eight months this year, while private investment in education increased by 15.7%, and 13.5% in auto manufacturing in the same period.

The speed of private investment also differs from place to place. Eastern China grew fastest, recording growth of 7.1% in the first eight months this year. It's not a surprise as the area includes economically thriving cities and provinces like Shanghai, Jiangsu and Zhejiang.

But northeastern China has been a drag on the national economy, as the area's private investment declined by 30.3% from January to August. Liaoning province even posted a 1.0% drop in GDP in the first half of 2016.

"Liaoning is a famous old industrial base in our country with most of its enterprises in commodity chemicals," said Sheng Laiyun, spokesman with the National Bureau of Statistics. "In this round of readjustment, commodity chemical prices had the deepest correction, which posed downward pressure on Liaoning's economy."

Down but Not Out

China's private investment isn't slowing down all on its own, but rather along with the country's economy as a whole. And while China is looking for reasons and solutions in the private sector, the real question is how to spark growth in general.

One solution under discussion would be for China to further reform its state-owned enterprises and allow the private companies to compete in more areas. There are also options like cutting taxes, launching favorable policies and sharing infrastructure construction opportunities with private companies more effectively.

Whether China can enact the right reforms to regenerate growth is an open question. The government is surly aware of the problem, but to carry out reforms to overhaul the system would mean cutting into the meat from the free lunches currently enjoyed by state-owned companies and local governments.

But ultimately, shoring up the confidence of entrepreneurs means the prospect of profit, either by raising expected revenue or cutting costs. The recent dip in the value of the RMB is helping export companies stay the course, but that's not solid enough to encourage them to invest. They may see hopes rise if China can tame soaring property prices, control the rise in labor costs and make the government work more efficiently, which would all mean lower costs for private companies. But that is a tall order.

In the end, it might just be up to the market.

"Private companies invest for genuine demand," says Liu Dongliang, "They retreat quickly when the broad environment worsens, and they will come back when the ice melts."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Down on the Farm

After years of focus on urban development, priorities are shifting towards agriculture

By Tom Nunlist

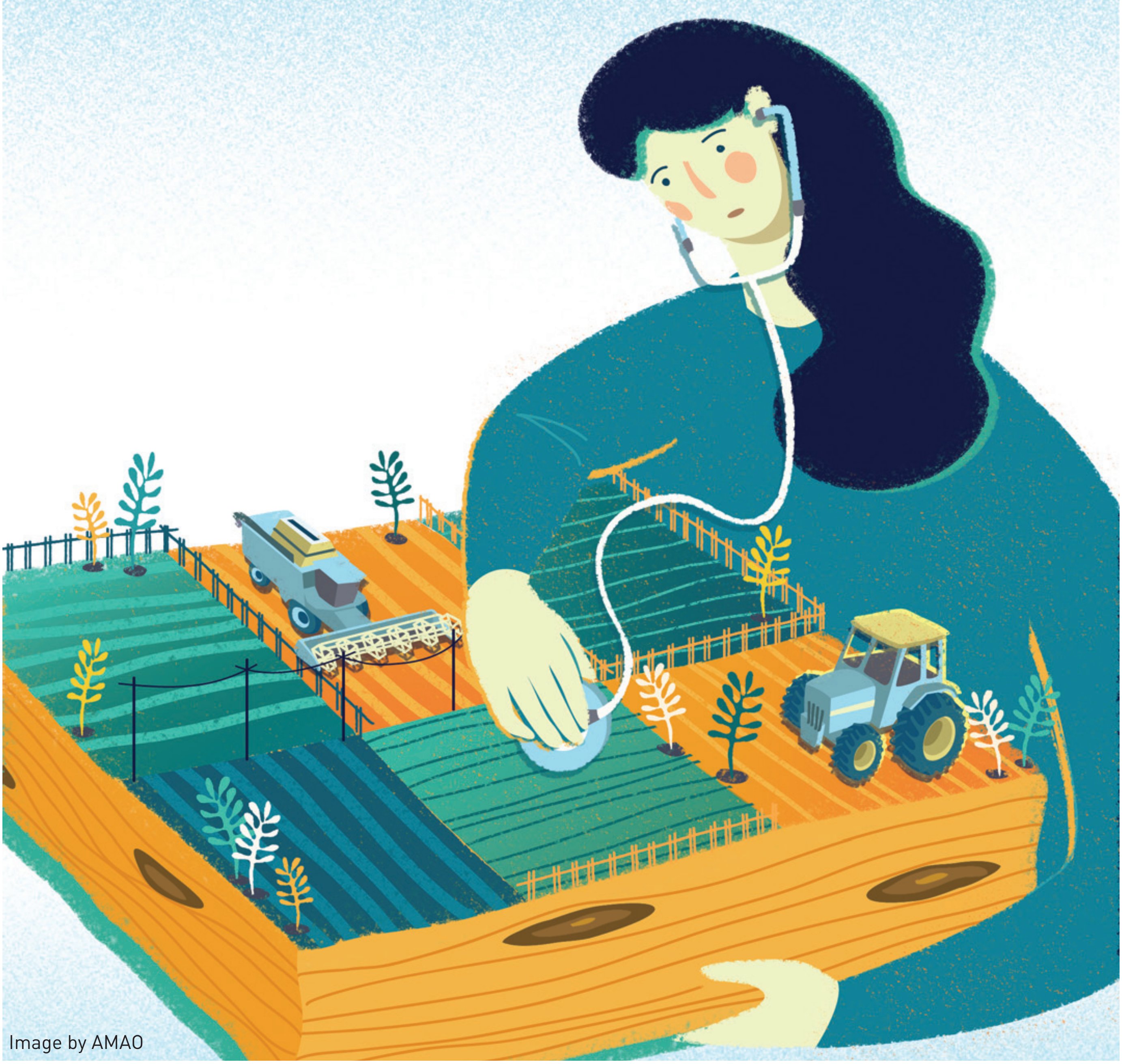


Image by AMAO

For a visiter, there are quite a few things to envy about He Kunhou's farm life out in the vast countryside around Chongqing city in central China. His traditional tile-roofed home has a large, sun-soaked courtyard with a gaggle of chickens milling about and beehives built right into the open-air walls. Just across the lane lay the rice fields, crisscrossed with elevated paths—a little less than an acre he calls his own.

In recent years, Farmer He's honey production has provided the bulk of his income, about RMB 30,000 annually ($4,400). His grain output has dropped off, particularly because he is now 70 years old.

"I don't have much energy, so I only plant one *mu*," he says, a *mu* being roughly one-sixth of an acre. And with his sons long since having moved to the city, the future of his little plot is uncertain.

The situation of Farmer He's farm is typical of a seeming rupture in Chinese development—while manufacturing and urban life took off, catapulting China to world-power status, rural China and farming lagged behind.

"Agriculture has very much been sacrificed to advance the urban areas, factories and industry," says Erlend Ek, agriculture and marine manager at China Policy, a Beijing-based research and advisory company.

The fundamentals are striking: In 2013, 86% of farms in China were only 1.6 acres, a tiny fraction of the size of the average 441-acre US industrialized farm. Most of the work on these miniscule plots of land is done by hand, and by an increasingly elderly population of farmers who now average over 50 years old. It is unclear who will replace them, and the development of large, mechanized farms is hindered by a number of factors, including the hazy status of rural land rights.

But the wheels of reform are turning. The government is making changes to rural land regulations and pushing private industry into the once off-limits agricultural sector to develop corporate farms. It has announced plans to invest $450 billion by 2020 to secure the future of this most fundamental of economic sectors. But as with any crop, the harvest is uncertain.

"It is a transformative moment for the Chinese agricultural sector," says Jason Young, lecturer and research fellow at the New Zealand Contemporary China Research Centre."You have the central government promoting the idea that what China needs is to supplement its modern urban sector and urban industry… [with a] better regulated and more diverse agricultural sector."

> "[The government] doesn't see [industry and agriculture] as separate anymore – they want to integrate them into one system… That's a fundamental change
>
> Erlend Ek
> Agriculture and Marine Manager
> China Policy

Family Plot

The rustic feel of Chinese farms, especially in contrast to their high-tech Western counterparts, belies the truly massive agricultural progress China has experienced in the past century or so.

Basic figures trace an inspiring profile. At the ascendance of the Communist Party in 1949, and before the land collectivization of the early 1950s, China's total grain production was roughly 100 million tons. Despite the tragedy of the Great Leap Forward famine from 1958-1961, by the start of the reform period in 1978, that figure had tripled to 300 million tons.

But although production had grown, collectivized farming was still vastly inefficient, and yields were often barely sufficient to feed the country. The supreme leader of the time, Deng Xiaoping abandoned the inefficient people's communes and allowed farmers to tend their own individual fields again. The so-called Household Responsibility System became a national policy in 1981.

Also around that time, new crops and techniques were introduced into China, thanks in part to the efforts of famed agriculturalist Norman Bourlag, the father of the so-called "green revolution" that helped to banish widespread poverty. In this sense, reform in China's agricultural sector is not new.

"Certain things have been happening for a long time, new technologies, new types of grains, fertilizer, pesticides, that type of thing," says Young.

With commune farming a thing of the past and new opportunities for factory work appearing in the 1980s, a major transformation took place. Roughly 700 million Chinese people have since left farming to live in the cities, but agricultural production has ballooned anyway. In 1998, China produced 500 million tons of grain, while last year it turned out 621 million tons.

But this progress is under threat, just as He's farm shows.

"Now farmers are already in their 50s," says Zheng Fengtian, professor of agricultural economics at Renmin University. "In ten years they will be in their 60s and they will be unable to work."

A Hundred Million Homesteads

Chinese farms are small, and farmers numerous

Source: ScienceDirect; US Bureau of Labor Statistics; USDA; New York Times

Who exactly will do the farming, and how it will be done, are major question marks.

Hungry for Change

Naturally, the first concern of Beijing is making sure that there is enough food to satisfy the stomachs of China's 1.3 billion people.

"Food security is national security," says Zheng.

Historically that meant the government doggedly pursued a policy of self-sufficiency in grain production, the thinking being that relying on anyone but China's own people was a huge risk, particularly in the event of war. This attitude has been fading, not so much because the leadership no longer sees conflict as a possibility, but because of global economic realities.

"[Now] they want 100% ability for self-sufficiency," says Ek. "They have understood that you can't produce where the market won't pay for it. The price is too high."

The price referred to is the cost of supporting grain production. For farmers, staple crops such as rice and potatoes are very low-margin, and so many of them have switched to other products, including high-value vegetables or meat—Young notes that there is massive demand for better quality and more diverse food products from urbanites.

> "Collective land ownership is not an obstacle to the land transfer that is already happening
>
> Forrest Qian Zhang
> Professor of Sociology
> Singapore Management University

In practice, there is not much the state can do these days to battle the market and encourage more grain planting except implementing price floors via mass state purchasing. But that is no longer a sustainable practice.

"State intervention is putting a huge fiscal burden on the central coffer," says Forrest Qian Zhang, professor of sociology at Singapore Management University, who researches land rights and agriculture in China. "In the past three years, the state has lowered its protection price to the extent that it is just market price."

Food production has long been a global enterprise, and Beijing is now moving in that direction, which alone is a major policy change.

"[The Minister of Agriculture] traveled to 25 countries last year," says Ek. "Before that he never traveled."

But although orienting China's agricul-

Machines are now more common, but most farming is still done by hand

tural sector toward the world market is a necessity, that will not be enough to offset the coming impact of tens of millions of small-time farmers riding off into the sunset. In their wake they could leave vast tracts of unplanted land, albeit broken up into tiny plots that are unprofitable and unattractive at such small scale.

What must happen is a consolidation of these plots into large farms that can be industrialized. This is underway in some areas such as animal husbandry where the requirement for land is lower and profits higher. But encouraging this process for staple grains such as rice and wheat, which are low-profit, is the government's major goal in agriculture reform. Previously the state wanted to push industry to help meet the needs to agriculture, but now deeper integration is the goal.

"They don't see [industry and agriculture] as separate anymore—they want to integrate them into one system," says Ek. "That's a fundamental change."

One way the state is working toward this goal is by laying the groundwork through massive state investment. According to Ek, of the hundreds of billions being spent on agricultural modernization efforts, about 70% is not going directly to the land, but rather to materials like cement, which are necessary to build modern irrigation systems.

But the state does not want to run farms, and the bigger change in prospect is the opening up of agriculture to private-sector investment—in other words, unleashing the forces of capitalism.

The Rights Way

This scheme, however, rests partially on the odd circumstances of rural land rights in China. Although the responsibilities of farming were devolved to individual households in the 1980s, farmers still do not own the land. The state does, through the local rural "collectives." Farmers have only usage rights for a fixed period. How this impacts on the development of consolidated corporate farms is not clear.

The government announced new rules in November, termed "land management rights" under which the state-run collectives will be able to aggregate usage rights from farmers, and then transfer the land to a corporation in exchange for annual payments.

This is all new, and there is fair amount of uncertainty, partly because of the sheer size of China. For the top leaders, it must be difficult to understand the situation at ground level, especially given the data deficiencies.

"On paper it looks very good," says Ek. "[But] nobody knows what is really happening on the farmland. No one has absolute overview."

In fact, transfers of land usage rights are already happening informally. As Chinese rural residents have moved to the cities to work in factories in what is the largest migration in human history, people often left behind their plots of land. Sometimes they let them go fallow, other times they rented them out to neighbors, or gave them to relatives.

"[Land rights are] already highly marketized … and the price is transparent," Zhang says, referring to one entrepreneurial farmer in Sichuan who has already managed to create a 1,600-acre rice farm—humongous by Chinese standards. Although this kind of organic land consolidation in still rare and on a small scale, it is nevertheless not dependent on state intervention.

"It doesn't really involve any policy change," adds Zhang. "Collective land ownership is not an obstacle to the land transfer that is already happening."

Betting the Farm

Moreover, official interference in this process could turn out to be counter-productive because farming is as difficult as it is ancient. Encouraging outside private investment from cities and industry in the way Ek describes risks handing farming to overconfident city slickers.

"[Companies] get into agriculture, and put in a lot of investment to improve the land, they set up the infrastructure, improve the technology… and then they very quickly realize that the agriculture market is very volatile," says Zhang. "We've seen cases where companies invest millions of yuan, set up a very modern corporate farm… and before they can harvest the first crop they are already running into [financial] problems."

If those companies go bust, the resulting situation could be worse than it was originally because that type of heavy investment changes the physical landscape. Farmers who transferred land rights may no longer even recognize which plots are theirs.

Ek also sees risk in making a large-scale switch to corporate farming, especially if it happens fast.

"It takes months before crops are ready," he says, noting the seriousness of crop failures. "If they get it wrong, they get it very wrong."

Another big risk has again to do with land rights. The long-term usage right of the land plots is very often the only real safety net that ordinary farming families in China have.

"[Land] is their ultimate form of social security," says Young. "Until you have a full social security system… then rural people [may] still want to have their land."

The thinking here is that should a migrant worker face true hardship and unemployment, he can always return to the homestead and provide a living for himself. But as the transformation picks up and farms become consolidated, it will become harder to do that—you cannot return to a plot that has been absorbed into a giant farming operation. It is worth noting that this has not happened yet at large scale, despite the recent economic downturn and the closure of many factories in big hubs such as Guangdong Province.

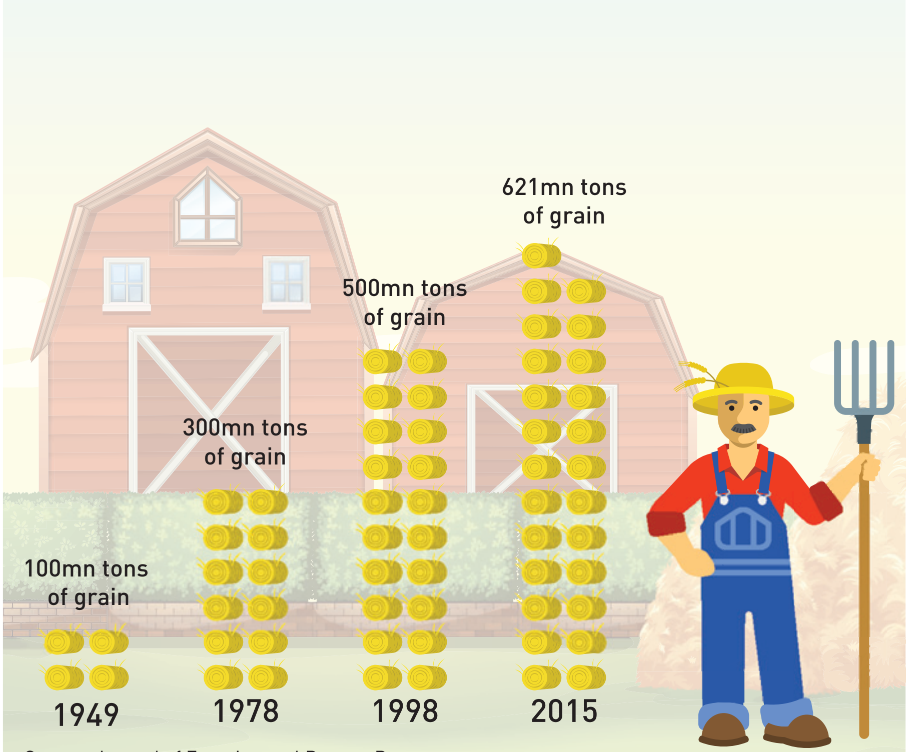
"I don't have a good answer to what happened to the people laid off from Pearl River Delta jobs," says Zhang, but he assumes they are still out there looking for work, noting the lack of agricultural skills of young people from the countryside. "All their aspiration throughout their lives is to settle in cities. So even if they face layoffs, joblessness, very few of them would really seriously consider going back to the countryside."

Country Pace

But as big as all the issues are, the reality of the future of farming in China is likely one of continued gradual changes. The base of Chinese agricultural production is likely to remain small farming for some time, for the simple reason that there just are so many of them—China is still only 55% urban. Consolidation doesn't happen overnight, and forcing that through would be inherently unpredictable.

More Bountiful Harvests

Despite problems, China's grain production has exploded



Source: Journal of Experimental Botany; Reuters

"Big bang reform can be very, very dangerous," says Young, noting that China has learned this lesson in the past. "You won't see radical change, but you will see more large agribusinesses."

The renewed focus on agriculture can be seen as part of a broader slowdown in China, in the economy, in urban growth and so on. Apart from the need to get ahead of potential problems in food production, there is a lot of potential for economic growth in the countryside that doesn't involve simply absorbing excess labor.

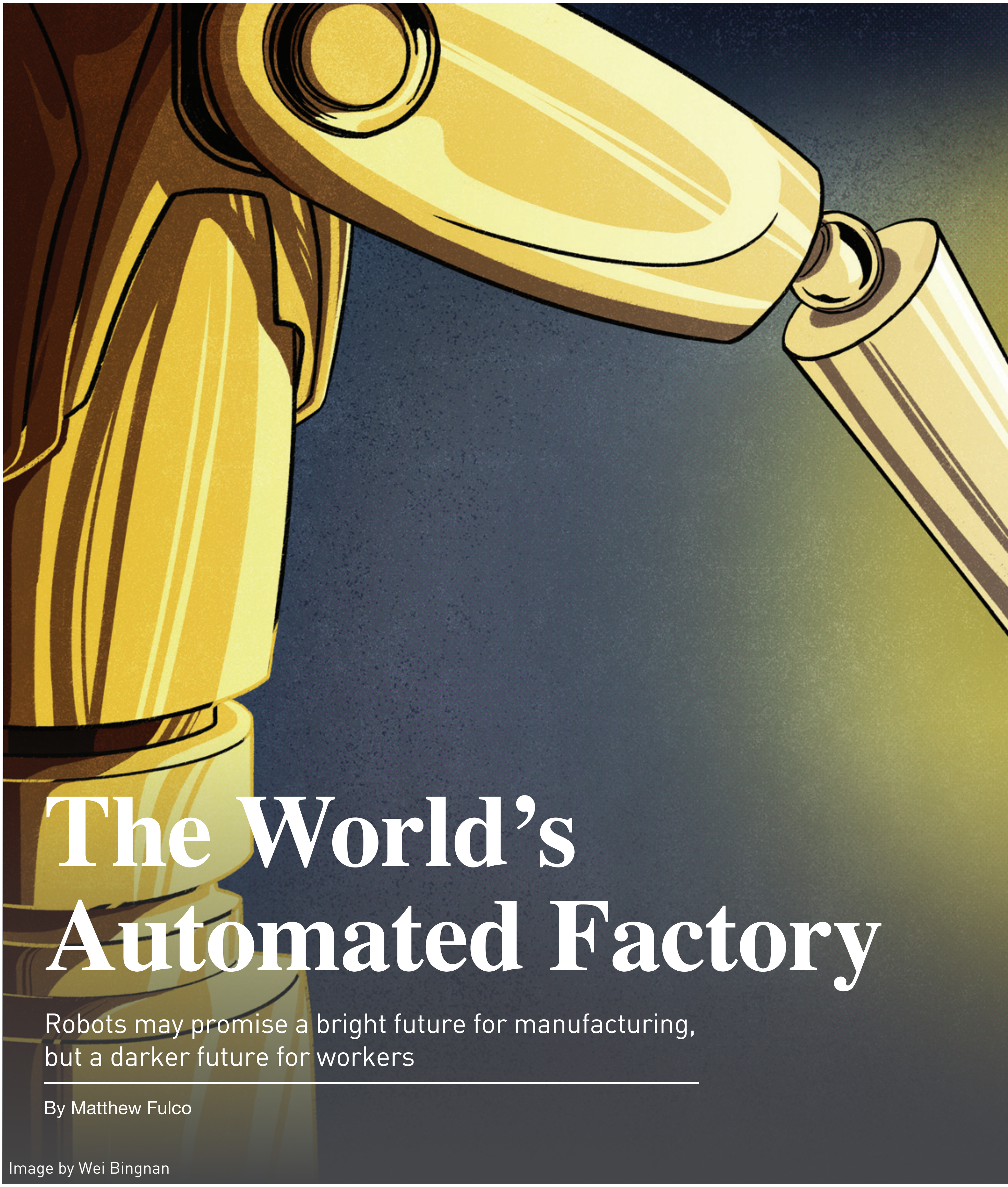
"I hope we will also see a reinvigoration of the rural economy," says Young, pointing out that in addition to farming there are huge opportunities for tourism and small-town business. "Rural China is still a nice place to live, but it has not developed the same [as the city]."

This is an understatement. The urban/rural divide is one of the most striking features of contemporary China. On one side there are big cities, including the ultra-modern megalopolises of Beijing and Shanghai, and the other end rural hamlets without much beyond the basics. The middle ground of well-developed towns is rather small, and nationwide there is a lot of opportunity there beyond just agricultural modernization.

It may take a city eye to see it, though. Farmer He's courtyard is currently in need of small repairs. He sons offered to help him make fixes, but he demurred.

"It is a waste of money," he says. "My children will not come back to live here."

On that point he may well be wrong, though. Recently his area has become a popular spot to build modest weekend getaways, many of them tucked into the natural overhangs that appear in Chongqing. In fact, He's urban-dwelling extended family recently built one, and have been kicking around the idea of turning it into a rental property, Airbnb-style. Perhaps it is a signal that now may be just the time to get some fresh air.

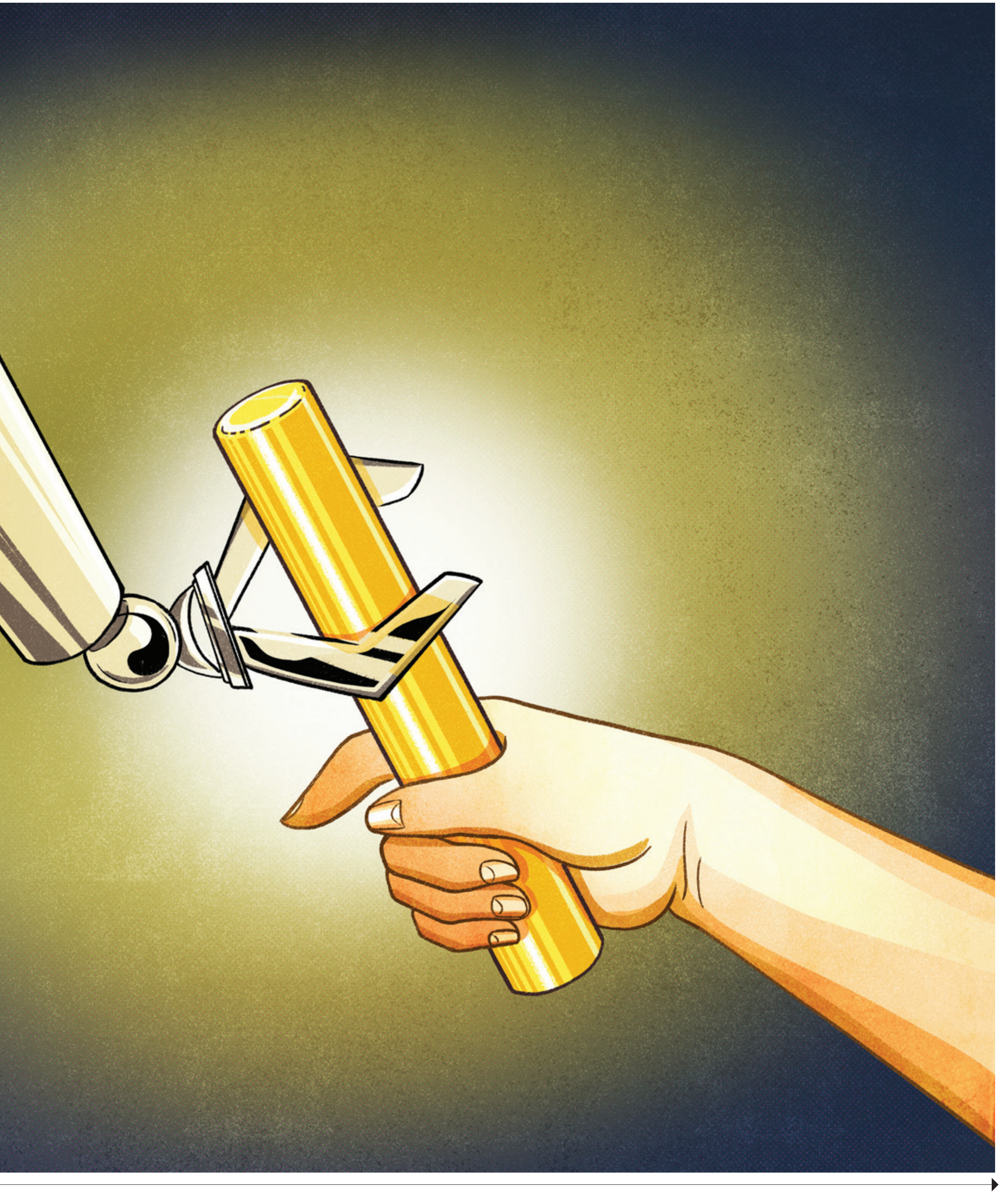


The World's Automated Factory

Robots may promise a bright future for manufacturing, but a darker future for workers

By Matthew Fulco

Image by Wei Bingnan



Over the past 25 years, China has become the world's preeminent manufacturer, churning out everything from running shoes to Apple products. Powering that ascent was heavy foreign direct investment and a seemingly inexhaustible pool of cheap labor.

But now as the Chinese economy slows, wages rise and the workforce atrophies, the decades-long manufacturing boom may be ending. In 2015, Chinese exports fell for just the second time since the launch of economic reforms in 1978. Wages for China's 277 million migrant workers rose 7.4% to RMB3,072 per month ($473), while the number of working-age people fell by a record 4.9 million, according to the National Bureau of Statistics (NBS).

Deteriorating conditions have prompted some foreign businesses to reduce their China exposure. The annual China business-climate survey published in early 2016 by the American Chamber of Commerce in Beijing found that 25% of respondents have either moved or are planning to shift capacity outside of China. Half are those going to developing Asian countries, and another 40% to the US, Canada or Mexico.

To help deliver China from industrial decline, the Chinese leadership is betting on automation. Large-scale deployment of industrial robots could raise efficiency and lower costs, channeling the resources of China's vast supply chain. While some workers would be replaced, new ones—albeit fewer—would be needed to design, construct and operate the manufacturing machines.

"Robots will be a game changer for the Chinese economy," says Chiang Chia-wei senior analyst at the Taipei-based Market Intelligence & Consulting Institute (MIC), an IT industry analysis provider in a written reply. "Smart manufacturing is an essential part of China's industrial transformation and bid to increase its global competitiveness."

At a 2014 speech at the Chinese Academy of Social Sciences (CASS), Chinese President Xi Jinping noted a "robot revolution" is underway globally. The worldwide market for industrial robots surged from 60,000 units in 2009 to 248,000 units in 2015, according to the International Federation of Robotics (IFR), an industry-lobbying group, and since 2013, China has been the world's No. 1 buyer. The IFR reckons that China will overtake Japan to be the world's top operator of industrial robots by the end of 2016.

> "Robots will be a game changer for the Chinese economy... Smart manufacturing is an essential part of China's industrial transformation and bid to increase its global competitiveness
>
> Chiang Chia-wei
> Senior Analyst
> Market Intelligence & Consulting Institute

Robot penetration, however, remains relatively low in China. In 2015, that figure was just 36 per 1,000 manufacturing workers, 28th in the world, according to the IFR, although that does mean there is a lot of room for growth.

But although China will likely be the leading market for robots for a long time, it faces technological challenges. Japan, the United States, and Germany remain the pioneers of the industrial robot industry, according to MIC.

But Beijing intends to directly challenge the world's current global robotics leaders. "We not only need to upgrade our robots, we also should capture markets in many places," President Xi told the CASS audience.

Automation Drive

China's ambitious robot plans in some ways echo Chairman Mao Zedong's call in 1958 for China to overtake Britain in industrial production within 15 years. This time, the objective is to channel the productivity acumen of millions of robots to surpass Japan, the US and Germany in terms of manufacturing prowess by the centennial anniversary of the People's Republic of China in 2049.

"Amid the continued growth of industrial robots, the MIIT (Ministry of Industry and Information Technology) has taken an aggressive stance towards robot development, making it one of the key strategic industries in China," says Chiang.

In March, Chinese authorities approved the China's 13th Five-Year Plan, a policy blueprint, which highlights the importance of industrial automation and makes available billions of RMB to upgrade manufacturing technology. The drive includes "Made in China 2025," a state-led initiative to make China an advanced manufacturing power within a decade, of which automation is a big part.

"If they can automate enough of their lines, China's production and revenues could expand another 25% by 2025," says

Gerald Van Hoy, a senior research analyst at IT research firm Gartner in Oregon.

Progress toward automation is already moving at a good clip in both the public and private spheres. In 2015, Guangdong province, long China's top manufacturing hub, pledged to spend $150 billion to install industrial robots in its factories and establish new advanced automation centers. And this July, China's top 10 robot manufacturers formed an alliance dedicated to research and development of advanced industrial and service robots.

All the efforts seem to be bearing fruit – the output value of China's domestic robots reached RMB1.64 billion in 2015, up 55% over a year earlier, according to the Qianzhan Industry Research Institute.

Yet for now, it remains difficult for China to develop indigenous high-end robots.

"The domestic robot industry has a short history—it really only began in 2000," says Jing Bing Zhang, the Singapore-based research director of IDC Worldwide Robotics, at the market research firm International Data Corporation. "The base is still very shallow."

Not surprisingly, then, MIC's Chiang says that about 70% of robots used in China are produced by global brands.

"While the market is lucrative, Chinese companies lack the ability to develop homegrown components and have to largely rely on imports," he says. "This is why the government has taken such an aggressive stance to foster its homegrown robotics industry over the years."

As a result, the acquisition of foreign technology through M&A deals has become integral to China's robotics strategy.

Overseas Shopping Spree

To hasten their climb up the value chain, Chinese firms are buying up premium robotics assets overseas. In January, China National Chemical Corp, Guoxin International Investment Corp, and Chinese-European private-equity firm Agic Capital purchased German industrial robot maker KraussMaffei for $1 billion. In April, Zhejiang Wanfeng Technology Development Co purchased the US's Paslin Co, an automotive assembly-line robotics manufacturer, for $328 million. And in June, Agic Capital announced its acquisition of Gimatic, an Italian supplier of end-of-arm tools for industrial automation and robotics applications, for 100 million euros ($108 million).

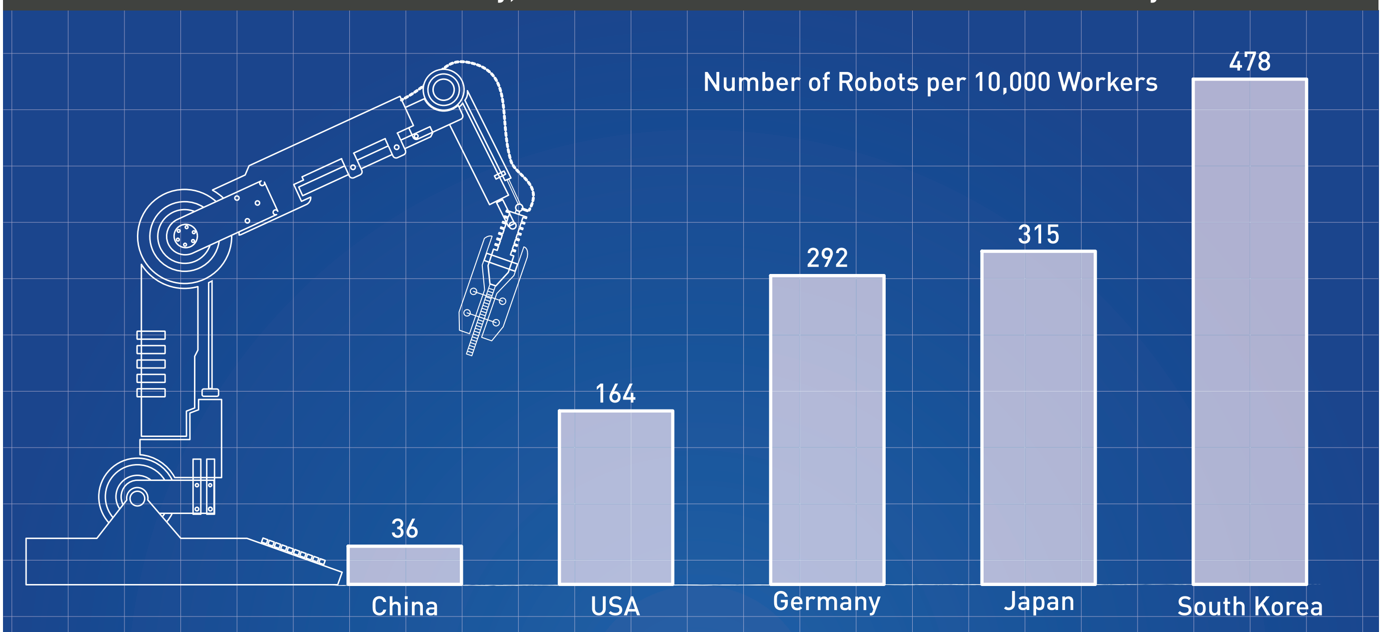
"The motivations behind those three major acquisitions made by Chinese buyers are deeply rooted in their wishes to obtain technological strength and gain system integration experience from those foreign companies to help them develop industrial robot components at a faster pace," says Lin Yi-ching, an industry analyst at MIC. "For those foreign companies, they have been given a great opportunity to set foot in China."

Shenzhen-listed Siasun Robot & Automation Co., China's biggest robot maker by market value, whose customers include General Motors, Ford and Schneider Electric, also has plans to acquire global robotic component manufacturers. At a robotics fair in Munich in June, Siasun president Qu Daokui said the company is hunting for acquisition targets in Europe. According to Chinese media reports, the company plans to raise 2.96 billion yuan ($449 million) from five institutional investors in November.

The most notable acquisition of the year is appliance maker Midea's $5.1 bil-

Man and Machine

With automation still early, the ratio of robots to workers in China is still very low



Source: 2015 World Robot Statistics, International Federation of Robotics lion bid for Germany's Kuka, one of the world's top-four industrial robot brands and an employer of 12,000 people globally. Kuka plays a crucial role in Germany's Industry 4.0 initiative, which aims to connect the physical factory with the virtual world.

"Acquiring Kuka will help Midea obtain key component manufacturing technologies that Chinese manufacturers lack, while Kuka can take advantage of Midea's strong channels in China's domestic market," says MIC's Chiang. That should help Kuka expand its 15% share of the Chinese industrial robot market.

Yet the deal has also raised concerns that it will provide China with undue influence over Germany industry. In a June interview with *Financial Times*, Markus Ferber, a German member of the European Parliament, said he worried a technology outflow from Germany to China was occurring, which would mean "the cars of the future" might be built in China rather than Germany.

To add to that, European policymakers and businesspeople are expressing growing frustration with the restrictions Beijing places on foreign companies in China. In its 2016-17 Position Paper published in September, the European Chamber of Commerce in China noted: "Chinese companies have successfully completed a number of eye-catching deals to acquire leading European companies in a wide range of areas—including banking, automotive, robotics and critical infrastructure—yet European business is still heavily restricted from making similar investments in China."

Not So Fast

But trade tensions aside, while acquiring premium global robotics assets will certainly boost China's robotics industry, it is not a solution in itself. In the view of MIC's Lin, the main reasons China lacks the ability to develop critical robot components such as controllers, decelerators, and servomotors is because it lacks corresponding patents and technologies that are still held by a handful of advanced countries. Of 3,794 industrial robot patents reviewed in a report by MIC this year, 61.3% are owned by Japan, 17.9% by the United States, and 9.7% by Germany—a combined share of 88.9%. By contrast, China holds less than 1% of industrial robot patents.

> "China is prioritizing industrial robots because it has no choice. If it does not take action, the supply chain will leave
>
> Jing Bing Zhang
> Research Director
> IDC Worldwide Robotics

However, acquiring them through M&A or other means is also not an instant fix.

"It still takes time for their manufacturing capability of those three key components to become world-class in terms of reliability, hardness, and fineness," says Lin.

Gartner's Van Hoy notes that this issue has rather far-reaching consequences in terms of the whole industry.

"China currently has a problem sustaining the robots it has already installed," Hoy says. "When a robot breaks down or malfunctions it stops the line until someone qualified to work on the robot arrives. This can take a while, particularly in Western China where infrastructure may be an issue."

This is not to mention that there is also a shortage of trained personnel to operate and maintain such advanced machines. "It takes time, even in a crash-course approach, to get enough intelligent people into those positions," Hoy says.

Considering those issues, robot oversupply is unexpectedly a problem, especially because of the generous subsidies Beijing is doling out to local governments. According to Shanghai-based market research firm Innova Research, 32 robot industry parks had been planned or established in China by municipal governments in 14 provinces as of the end of August this year. Richard Jun Li, a vice president at the company, said in a statement: "At this stage, thirty-two robot industry parks are probably too many. The oversupply on the robot industry park spaces will likely result in the elimination of quite a few of these parks."

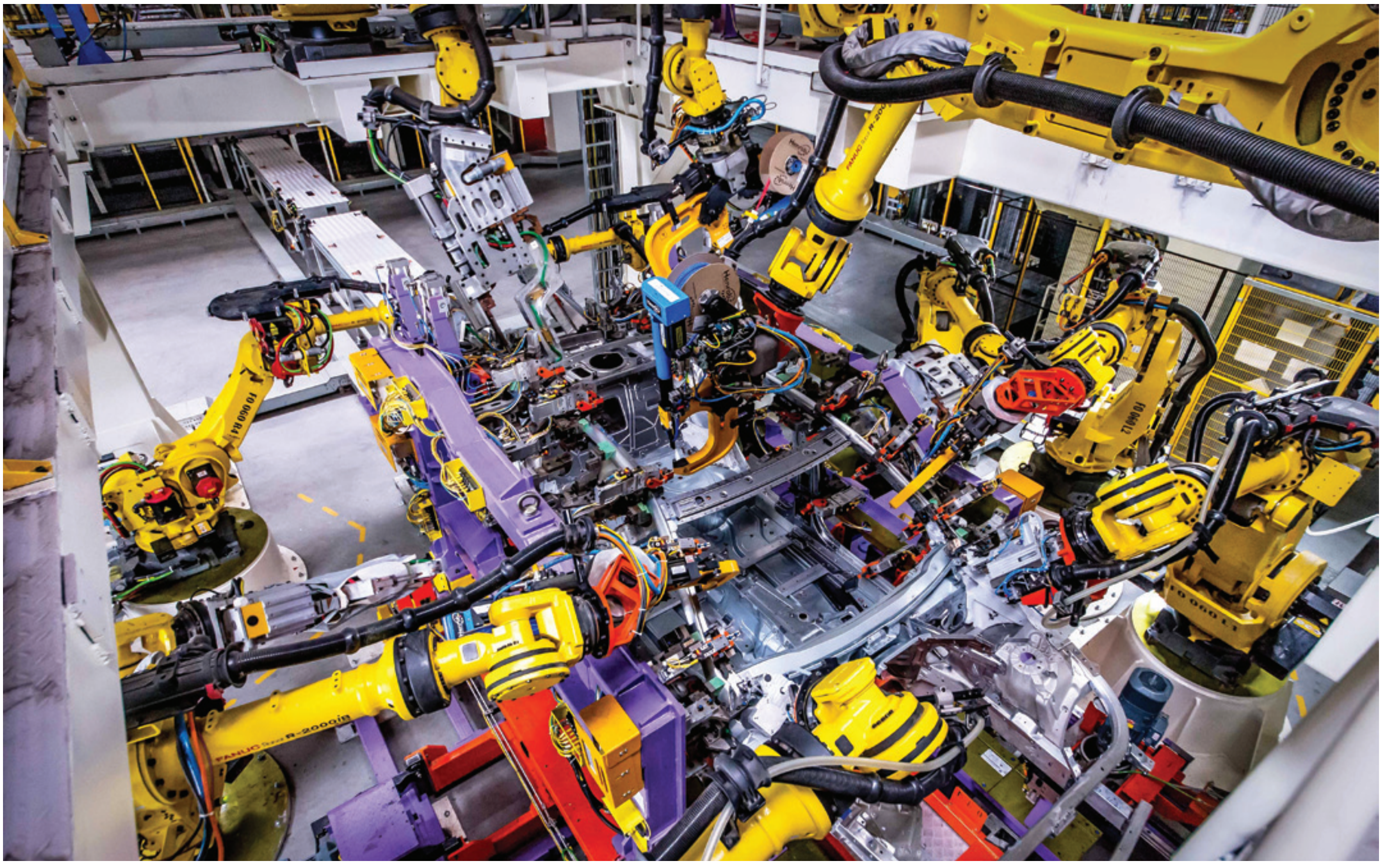
A July report in *Bloomberg News* noted that scams to capture subsidies for robotics projects are on the rise. Citing the Chinese-language *Economic Observer*, the report said a number of companies with negligible robotics experience have received large cash handouts that are not being used for their intended purpose. Most egregiously, one company in Nanjing attributed 65% of its 2015 net profit to robot subsidies.

Age of the Machine?

The bigger issue of automation is less technical: How to handle the potential displacement of large numbers of Chinese workers?

In May of this year, news broke that Taiwan-based contract-manufacturing giant Foxconn had replaced 60,000 of its employees with robots at a facility in Kunshan, a city near Shanghai. Foxconn later denied that it had laid anyone off, and generally downplayed the idea of automating away its employees, but still told the BBC, "We are applying robotics engineering and other innovative manufacturing technologies to replace repetitive tasks previously done by employees."

Regardless of Foxconn's current robot/human employment situation in Kunshan,



Robots assemble a Cadillac near Shanghai

a robot-induced rise in unemployment is a real threat to China. It is happening elsewhere already, albeit on a smaller scale. In July 2015, the English-language version of the *People's Daily* reported that a factory in Dongguan operated by the Changying Precision Technology Company (a manufacturer of electronics components) had replaced 590 of its 650 employees with robots.

The remaining 60 workers monitor production lines and a "computer control system," it said, noting that productivity in the factory had increased threefold with the added robots while the product defect rate had plunged. By July 2017, the company says it expects to have 1,000 robots at work controlling 80% of its processes.

Roughly 100 million people work in the Chinese manufacturing sector, which contributes nearly 36% of China's gross domestic product, but IDC's Zhang believes Beijing is prepared to manage the transition.

"I'm sure the government is aware of the problem and I would expect they have a plan to provide new opportunities for employment," he says, noting that increased automation will create jobs for higher-skilled workers such as robot programmers and technicians. How such a plan will work in practice, however, remains to be seen.

Chen Ching-kuo, a worker in a Taiwan factory of German high-tech polymer manufacturer Covestro, says he is unworried in the short run about losing his job to a robot. Chen is responsible for the dyeing of running-track materials, and converting those materials from a liquid to solid form.

"I don't think it would be that easy for a robot to do what I do, at least not yet," he says, adding that he does not think his company would hastily replace its human employees. "They [Covestro] have always been good to us."

To be sure, robots will not replace all manufacturing jobs. They are best suited to replacing jobs involving repetitive tasks. Humans will still be needed for jobs that require judgment, common sense and creativity.

Yet China faces a dilemma: As its workforce ages and shrinks, an ever-increasing number of robots will be necessary to maintain productivity levels and keep manufacturing costs competitive. But the speed at which China needs to replace workers is likely to be faster than its ability to manage their redeployment.

But if China does not automate production fast enough, it ultimately risks losing its prized status as the world's factory. For manufacturers, "there is a lot of attractiveness to staying in China. It's a huge market, the consumers are there," says IDC's Zhang. "But automated manufacturing in the US and Europe is eroding China's cost advantages."

He concludes: "China is prioritizing industrial robots because it has no choice. If it does not take action, the supply chain will leave."

High-speed Diplomacy

Long an importer of technology, China's railways are now rolling out to the world

By Krystal Hu

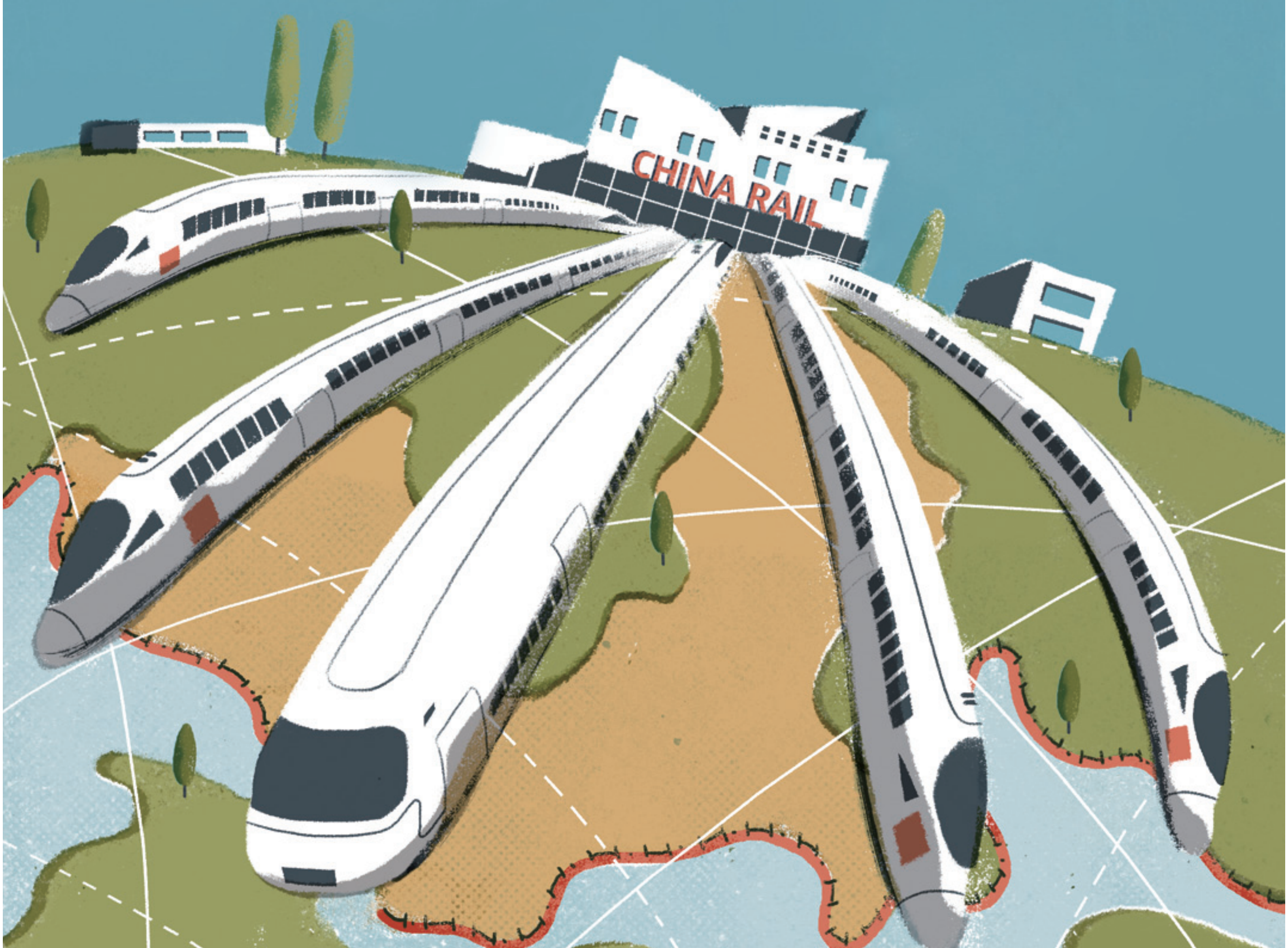


Image by Yulong Lli

In September, after two years and 14 rounds of ministerial meetings, China and Thailand finally came to an agreement on a planned high-speed railway project, the first phase of which will cost $5 billion. But for the 873-km rail line that will link the Chinese border with Laos and ports on Thailand's coast, that is only the beginning.

"It is an ongoing and delayed process, as the construction would not be able to start as planned this year," says Aksornsri Phanishsarn, economics professor at Bangkok's Thammasat University, noting unresolved issues ranging from operation and technical challenges to financial aspects.

The project in Thailand is one of many of China's efforts in recent years to export its high-speed rail to the world. In Turkey, China helped link the capital Ankara with the largest city, Istanbul. In Indonesia, the construction on the Jakarta-Bandung high-speed railway line will begin this year. This year the government also announced it will be building a high-speed railway to connect Singapore and the Malaysian capital of Kuala Lumpur.

Domestically speaking, China secured the leading position in world's high-speed rail development in the space of a just decade. Its network, already more than 20,000 km and still growing, is longer than the rest of the world's high-speed rail tracks combined. China's home-grown CRH380A engine can top 380 km/h.

Now China is targeting the overseas market for both economic and political reasons. As countries map out plans for high-speed railways, there is a growing market for China's cutting-edge technology. BCC Research projects the global high-speed rail market will grow at a five-year compound annual growth rate of 3.6%, to reach $133.4 billion in 2019.

"Lower-emission and high-speed travel resulting in shorter transportation times will drive the high-speed rail market in the future," BCC Research analyst Aneesh Kumar wrote in the report.

Exporting high-speed rail is also a form of diplomacy, and deals usually include substantial support and preferential financing from the Chinese government. But given the costs and complications of building a high-speed railway, signing an agreement is nowhere near the time to celebrate. So far, China has had at least as many failures as successes, if not more. But once a train gets rolling, it has a lot of momentum.

> "In the past, travelling on trains could take days… air travel is now my second choice
>
> Wu Shengtao
> Financial Industry Worker

Made in China

As little as ten years ago, high-speed rail was not one of China's strengths. Lacking the basic know-how, trains were imported or built under agreements with foreign train-makers, including Siemens from Germany and Kawasaki Heavy Industries from Japan.

"We couldn't achieve anything without them," says Jia Limin, a professor at Beijing Jiaotong University, who now heads China's high-speed rail innovation program. "[But] they wouldn't share any core technology with us."

In 2006 the Chinese government decided to indigenize. The country mobilized more than 10,000 rail experts, researchers and engineers, setting out to build a 1,310 km high-speed rail line connecting Beijing and Shanghai, with trains to average 350km/h.

Just five years and $33 billion later, the line opened. By far the most successful railway line in China, it was ridden by 130 million passengers last year, or a tenth of the entire national population. The change is palpable.

"In the past, travelling on trains could take days," says Wu Shengtao, who works in the finance industry in Wuhan, a major city in central China. "But now, I can go to Beijing or Shanghai, almost all the major cities by high-speed rail within half a day. Air travel is now my second choice."

A coordinated push from the central government, including investment, was a key for success.

The development of the high-speed rail network was a prominent part of the 11th Five-Year Plan, adopted in 2006. That year, China spent RMB155 billion on rail network development, a figure that ballooned to RMB800 billion by 2015 as China continued the expansion of the vast system.

"Our political and institutional advantages allow us to mobilize nationwide resources to accomplish large undertakings like this," Jia says.

But the breakneck speed of the growth of China's high-speed rail network came with undeniable costs. In February 2011, Railway Minister Liu Zhijun was removed from office on charges of corruption, accused of accepting millions of dollars in bribes. Months later in July, two high-speed trains collided near the city of Wenzhou south of Shanghai, killing 40 people and raising serious doubts about the quality and safety of China's railway system.

Jia Limin lays blame for the tragedy on operational and management failings. "The accident wasn't caused by technology issues," he says.

Rolling Out

Needless to say, the incident cast a dark shadow over the industry for some time. But things turned around rather quickly, with strong continued growth of the domestic network. But with China's economic growth slowing down, and most major lines already in operation, China's large-scale rail industry had to find other ways to keep the speed up. Exports were a natural choice.

Over this same period, the development of faster and greener transportation systems has become the common goal of both developing and developed countries, although the ability to construct such systems is possessed by only a few countries, specifically China, Japan and Germany.

"We have the ability, they have the need," says Jia, "That's why we have to go out." He believes China has several advantages over competitors in terms of exporting high-speed rail, including price. According to a 2014 report from the World Bank, the cost of building high-speed rail in China is one-third lower than in other regions.

And the economic benefit of selling high-speed rail is more than the railway itself. The business model was first developed in Japan with the famous Bullet Trains, where rail companies usually own or operate shopping centers, hotels, tourism businesses, and construction companies. It is a captive audience that China can capitalize on.

"One thing that usually comes with high-speed rail is that China can attach more economic projects and cooperations, increasing the chances of China's going out (policy) in general," said Agatha Kratz, an Associate Policy Fellow at the European Council of Foreign Relations and a specialist on China.

China Railway Rolling Stock Corporation, for example, has already established a facility in India that may handle the local production of parts or whole trains in the future. Kratz also believes China is selling high-speed rail as a flagship product to inform the world of its capabilities in terms of building high-technology products.

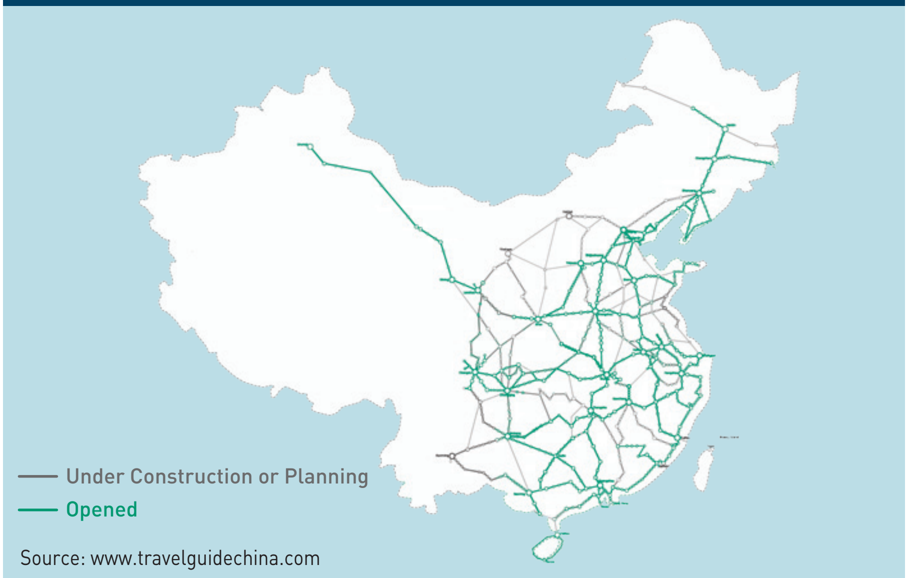
"The going out of China's high-speed rail is not only the export of technology and devices," says Jia. "It is also the spread of our culture and influence."

But that may be a bit optimistic. More than 20 countries are currently negotiating with China on building high-speed rail, according to a government statement, but to date, China has only actually completed one. In 2014, the rail line linking Turkey's capital of Istanbul and the largest city Ankara was opened up—and it has not been a smashing success. The ostensibly high-speed train usually travels mostly at 60 km/h with a top speed of 110 km/h, around the same speed as a motor car.

Kahar Tursun, a software developer from Turkey, says he believes the quality of the train is much inferior to the ones in China and in Europe.

Fast, Long and Still Growing

China's high-speed rail network is the world leader



Source: www.travelguidechina.com

"From my experience, it is not a high-speed rail. It is just a fast train rail, and the seats are not comfortable." Tursun says. "The Turkish government wants to have a high-speed train system for a cheap price, so the quality is proportional to the amount of money they invested."

Other projects are going even less smoothly. China has experienced setbacks in the US, Mexico and Venezuela, where initial agreements on constructing high-speed rail have been either held up or terminated by a mixture of technical, political and financial problems. Last June, US railway firm XpressWest ended its joint venture with the China Railway International (CRI) due to difficulties related to timely performance and CRI's challenges in obtaining the required authority to proceed with necessary development activities, according to the company's website.

Jia Limin doesn't buy that explanation, however.

"The real challenge for exporting doesn't lie in technology, cost or our management ability," he says. "What really matters here is the political relationship among countries."

Hard Business

Above all, selling high-speed rail to other countries may not be a profitable business. Due to vast investment, only three high-speed lines in the world have been shown to be profitable—Paris-Lyon in France, Tokyo-Osaka in Japan, and the Beijing–Shanghai line in China's system. The majority require large government subsidies.

"High-speed rail can only transport people, not goods," said Zhao Jian, economics professor at Beijing Jiaotong University. Profitable high-speed rail usually requires very large and stable passenger traffic.

Zhao believes that the countries for which China is planning to build high-speed rail projects mostly fall short of the population density and market needs for profitability.

"They only have the need to build high-speed rail if China offers the investment," he says. "To us, it's a deal that we are sure to lose money on."

Win Some, Lose Some

Not all of China's foreign rail projects have gone smoothly

Turkey Completed	**Thailand** Delayed
Indonesia Under construction	**Venezuela** Delayed/Uncertain
Russia In Development	**Mexico** Cancelled
Malaysia In Development	**US** Cancelled

Source: Public Information

But given that high-speed rail has significance beyond profit for China, the government has thrown its weight behind the effort regardless. And in a highly competitive market, one of China's secret weapons to win bids is flexible funding policy and low-interest loans.

One example is how China beat Japan in the bid for the Jakarta-Bandung high-speed railway last year. Because Japan required a government guarantee, Indonesia awarded the $5.5 billion project to China Railway International Co. Ltd., a subsidiary of China Railway Group Ltd., which didn't require such a provision.

More widely, China has been pushing for the development of a comprehensive rail network in Southeast Asia, the key area of its One Belt One Road initiative—a huge infrastructure investment program aimed at integrating China with Asia and Europe. As part of this diplomatic strategy, China's policy banks would play a role in filling the financing gaps for infrastructure construction in developing countries. The project in Thailand is one of them.

"China's railway plan in the region will help its landlocked inner western provinces to gain access to the sea, linking from Yunnan via Laos to Thailand and hope to link with other parts of ASEAN region as well," Phanishsarn of Thammasat University says.

Zhao Jian is not convinced.

"This will result in a more severe debt burden on the central government," says Zhao. He doesn't believe that many developing countries such as Thailand and Indonesia will be able afford the construction and operation costs of high-speed rail. "It's a time bomb for the One Belt One Road initiative."

Agatha Kratz also observed that the Chinese government is beginning to change its strategy after realizing that economic generosity doesn't always guarantee political return, as has been shown in China's relations with Myanmar, where economic aid and investments have so far not borne much fruit.

"The commercial liability is taking a bigger part [in the thinking]," she says. "China realizes it can't just give the money away."

The Future Rival

While the marketing of China's high-speed rail is still being explored, Jia and his colleagues have already begun working on a new generation train to solve the problem of cross-border transportation. It will run at a top speed of 400 km/h and have the advantage of being able to handle cross-border changes in gauge—the distance between the two rails.

"The train we're now developing will have wheels that can be adjusted to fit various gauges on other countries' tracks," Jia says. "It can travel from Singapore to Spain, crossing countries without changing wheels."

The US, perhaps because it is so behind the rail curve, is working on another innovative transportation system, known as Hyperloop. The concept entered public awareness when Elon Musk, the CEO of SpaceX and Tesla Motors, first proposed it in July 2012. In Musk's vision, the Hyperloop would be designed as a bullet train in a vacuum tube, which could accelerate safely to 1,225 km/h. Some companies based in Los Angeles are currently competing to make the idea feasible, and they already have their eyes on overseas markets, partly because of the political issues and expensive land in the United States.

One of the companies is the Hyperloop Transportation Technologies, which has been in negotiation over the past year with the Slovakian government to build hyperloop routes from Bratislava to Vienna and Budapest. Dirk Ahlborn, the head of Hyperloop Transportation Technologies said during a presentation that he expected to see stage one built by 2020.

But some experts are not as optimistic.

"I would estimate 10 to 20 years after Hyperloop's 'Kitty Hawk' moment, that some sort of evacuated tube transportation can come into service, " says Alina Alexeenko, an astronautics professor. She has taught a hyperloop design class at Purdue University since last year. Alexeenko also believes hyperloop will co-exist with high-speed trains rather than replacing them, serving instead as a super-fast cargo transport.

At least for now, China seems to be safe from competition from speculative technologies. And meanwhile Professor Jia and his team haven't slowed down their efforts to make China's trains more appealing to international markets. They have a lot of help as well—government support remains strong in high-speed rail technology innovation, and they are working towards a train system with a top speed of 600 km/h, according to the next Five-Year Plan drawn up the central government.

Kratz is more measured in her predictions.

"I don't think the overseas market will have explosive growth as China is hoping for, it won't be 20 countries building China's high-speed rail at the same time," says Kratz. "[But] it will get there."

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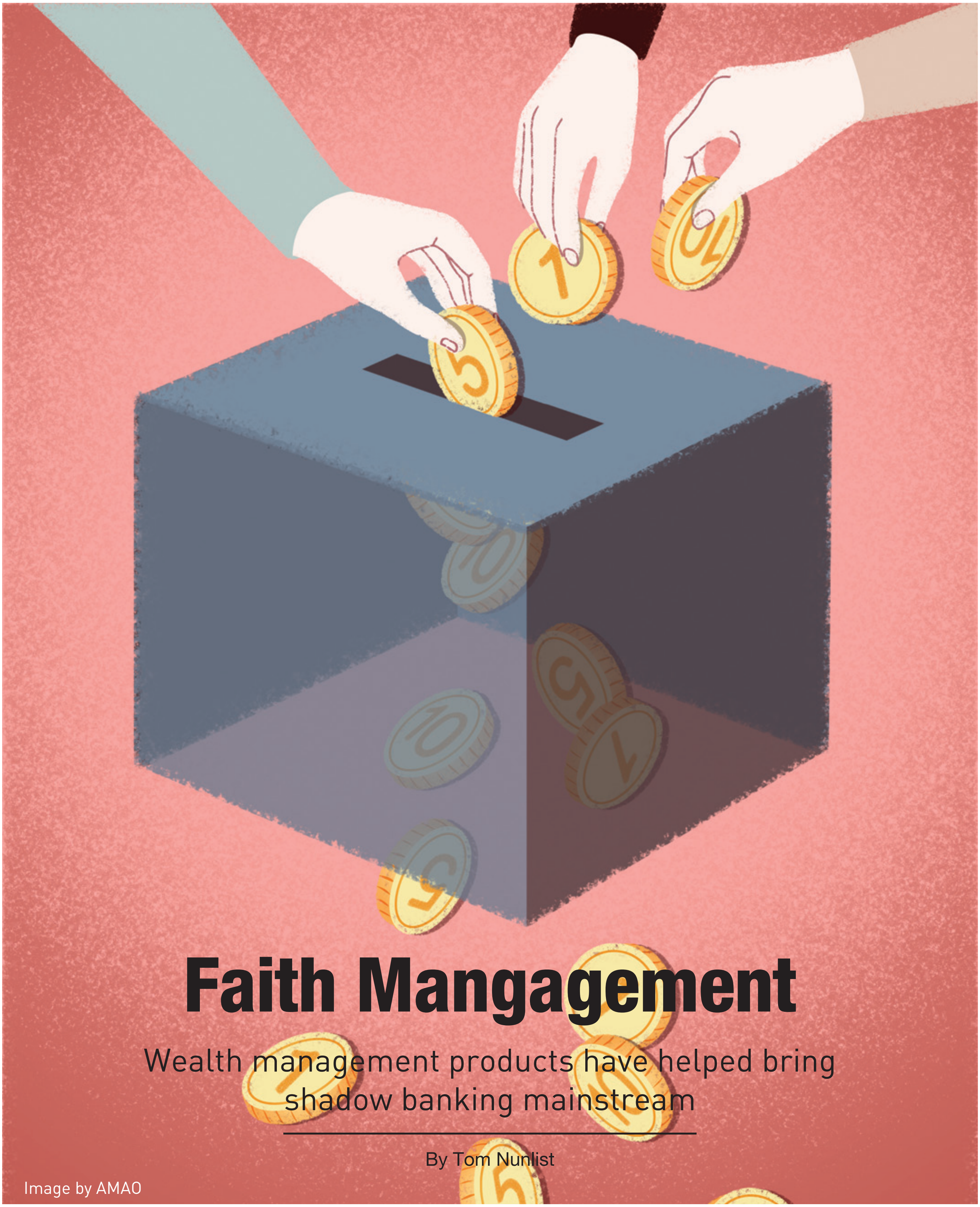


Faith Mangagement

Wealth management products have helped bring shadow banking mainstream

By Tom Nunlist

Image by AMAO

On a certain day in October, 2015, a group of disgruntled investors gathered in Beijing to lodge a complaint. They had bought so-called wealth management products (WMPs)—investment instruments somewhat similar to mutual fund shares—from a company called Global Wealth Investment, which had invested in loans backed by Hebei Financing Investment Guarantee, a state-owned guarantor managing nearly $8 billion in assets which collapsed earlier that year, owing about $98 million to Global Wealth, according to the financial magazine, *Caixin*.

"We gave great weight to Hebei Financing's guarantees," one investor told the *Financial Times*. "We knew it had the backing of the state."

On the same day, about 200 investors protested outside the Beijing offices of Ping An Insurance, which had sold around RMB 100 million of products from Gold Match Silver Fund Management, whose top executive had disappeared. Ping An, the investors claimed, had swindled them.

So far, such defaults (and the angry investors that accompany them) have been uncommon in China's complex and under-regulated wealth management product space. But the now-gargantuan industry, which according to *Bloomberg* comprised $3.9 trillion in holdings as of June 30, 2016, up 11.8% in six months, may pose a large risk to China's financial system.

This August, the International Monetary Fund issued warnings on China's credit boom risk, specifically calling out wealth management products as a key part of the problem. China's overall debt level has risen from about 150% in 2008 to 240% of GDP today, and according to IMF's statement, the state banks are repackaging at-risk loans into "investments," which cosmetically improves their balance sheets, but does not fix the core problem—high levels of non-performing loans.

"Economic losses are real whether you recognize them or not," says Patrick Chovanec, Managing Director and Chief Strategist at Silvercrest Asset Management Group in New York. "Somebody is going to bear it."

There are many risky aspects of the

> "This is not something that is separate from the banking system. It is an integral part of the banking system
>
> Patrick Chovanec
> Managing Director and Chief Strategist
> Silvercrest Asset Management Group

wealth management products industry in China: use of the money to fuel inefficient or even troubled state-owned enterprises, or to buy property and stocks—both bubble-prone markets in China—cross ownership of WMPs by institutions, and the rolling nature of the system whereby new products help cover the liabilities of previously-issued products. The web of risk, and the scale of it, has analysts like Charlene Chu, of Autonomous, a global equity and credit research firm, worried about the possibility of a chain reaction similar to the 2008 financial crisis when the US mortgage market buckled under similar strains.

"We call off-balance-sheet WMPs a hidden second balance sheet because that's really what it is—it's a hidden pool of liabilities and assets," Chu to *Bloomberg* earlier this year. "In this way, it's similar to the Special Investment Vehicles and conduits that the Western banks had in 2008."

One of the most troubling aspects is the involvement of everyday people across China, who sometimes risk their entire savings in these products. Many of the products have all the trappings of guarantees without a guarantee, and the losers from Global Wealth and Gold Match did not just lose money, they also lost trust. A broader crisis of faith in the system could turn off the money taps from ordinary investors, leading to a liquidity crunch, and likely also widespread anger.

"If they are selling investment products and they are understood to be investment products then that is not necessarily a problem," says Chovanec. "Except that's not how a lot of people [understand] it."

So far, however, most people are still making money, and lots of it. According to China Central Depository and Clearing Co., the first central securities depository approved by the State Council in China, banks and other lenders made RMB 117 billion ($17.3 billion) from WMPs in 2015. But it is unclear how long the good times will last.

Simple Product?

"Wealth management product" is a term used to describe off-the-books financing instruments used by banks in China. Buying one is somewhat similar to buying shares in a mutual fund, except the return is fixed, and it usually has a set maturity which is typically short. It usually unclear what the underlying assets are.

Each product is created individually and so terms, interest rates, maturity and other details vary considerably. But generally speaking, on average they cost in the neighborhood of a few thousand dollars, mature in about six months and typically carry an interest rate return of 3-5% (although sometimes the return can reach 10% or greater), which is considerably better than bank deposit rates. For comparison, the savings account interest rate at ICBC (the world's largest bank by assets) was set at 0.3% in September, and the one-year time deposit rate was just 1.75%.

WMPs are sold directly by banks, and also through third parties. Confusingly, they are also often sold by third parties at bank locations, a distinction that is not always clear to buyers. The proceeds are then invested or re-invested, and everything is game, from the stock market to construction projects.

But the basic concept is simple: "WMPs function as both loan substitutes and deposit substitutes," says Jack Yuan, associate director, financial institutions at Fitch Ratings in Shanghai. In other words, WMPs are an instrument of shadow banking.

Wealth management products are issued by just about all banks in China, from giant institutions, like ICBC, to mid-tier provincial banks. The largest group of buyers is individual mass-market investors who, according to *Bloomberg*, in September held roughly half of them.

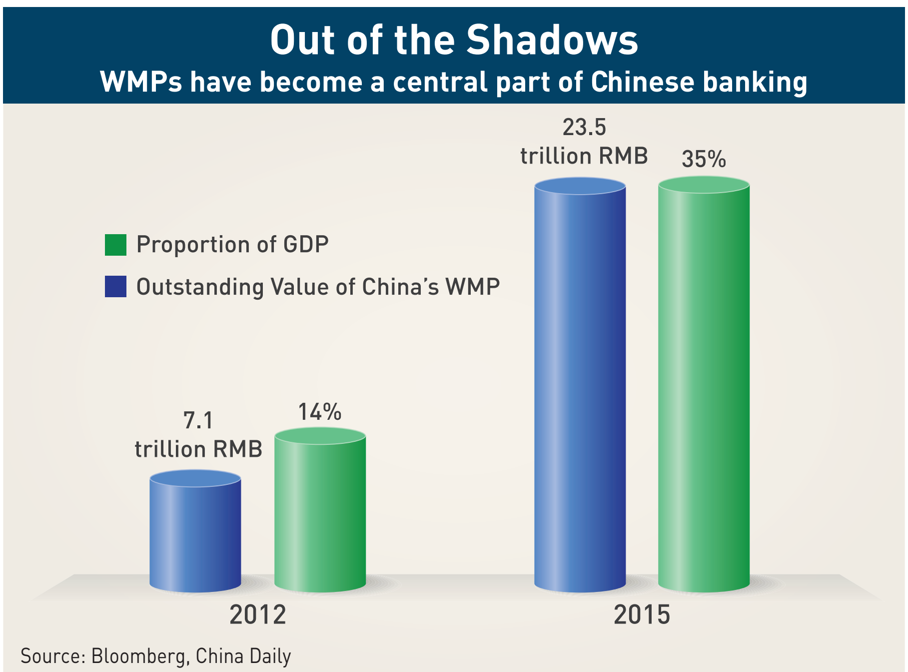
These products are not inherently exciting, were it not for their enormous scale and the speed of their overall growth in recent years. According to the China Central Depository and Clearing Co., in 2011 they amounted to RMB 4 trillion, and have since ballooned more than six fold.

"Growth started around 2010, and it was for sure impressive growth every year," says Denis Suslov, a financial industry analyst at Kapronasia in Shanghai. "2010, '11, '12 saw at least 20% growth each year."

There are factors driving growth on both sides, supply and demand. On the demand side, there are relatively few investment options for ordinary people in China outside of property and the stock market. In 2010 and 2011, when wealth management products really began to take off, the inflation rate was more than 4%. Match that with China's low deposit rates meant saving money was the same as losing it, and people were happy to have an alternative.

The supply side is a bit more complicated. Chinese banks, like banks in any country, need to turn a profit, but they also need to meet the demands of the state in a system that is not purely commercial. So far, WMPs have been a reliable source of good revenue for them, but also a tool to help them meet their policy obligations. As the government pushes banks to deal with non-performing loans (NPLs), many to state-owned companies, banks can use WMPs to move them off the books. The IMF also warned against this in August.

"Issuing more products off balance sheet is a way for them to make their financial metrics and their balance sheets look a little bit nicer," says Yuan. "They don't report NPLs that are in the WMP pools." But to really understand wealth management products and their place in the system, it is necessary to take a look at the development of banking in China over the past decade.



So-called shadow banking has long existed in China, and it is not inherently a negative. The formal banking system, being a state-owned operation, preferentially lends money to big state-owned enterprises, the consequence being that there are many under-served customers starved for credit, as well as the aforementioned demand for investment vehicles. Shadow banking can fill in the lending gaps for both parties, and to good effect.

But a sea change occurred with the 2008 global financial crisis and the massive Chinese government stimulus that followed. As Chovanec explains, the stimulus loans, funneled largely through the state banks, put huge stress on their books, which in turn caused concern in the government.

"Starting around late 2010, there was an effort by the PBOC to try to rein in that lending, and it involved raising the reserve ratio [among other things]," says Chovanec. However, if economic growth was to continue on target, projects needed to be funded. "What happened was banks figured out ways of making loans besides making loans."

Those other ways of making loans were wealth management products: effective, profitable and off the books. With these products, banks could improve their balance sheets, and lend with a lot less regulation, including lower capital ratios.

By last year, they had risen to RMB 23.5 trillion, about 35% of China's GDP—meaning shadow lending is no longer a dark corner of the financial system.

"This is not something that is separate from the banking system," says Chovanec. "It is an integral part of the banking system."

Investment to Nowhere

Another key event that helped shape the current system occurred in 2012. Originally, wealth management products were used as money market funds, the money market being the liquidity used for short-term borrowing between banks and other financial institutions. However, when money market yields fell in 2012, issuing institutions could not achieve the returns they needed to repay the higher interest on wealth management products.

"The real transformation has been a move to add duration and credit risk to the assets backing WMPs," says Logan Wright, a director at Rhodium Group who leads the firm's China Markets Research. Those assets could be something like a housing development, or a coal mine, projects that may not create a return for several years.

According to a statement in September by the China Banking Wealth Management Registration System, about 40% of the WMP funds in the first half of 2016 went into bonds, 17.7% into cash and bank deposits, and 16.5% into "non-standard credit assets" (a hodgepodge of loans)—assets that are longer term. But, good assets in China have begun to dry up, kicking off what Wright calls a "search for yield" that can keep the system moving.

"This is how you have seen the explosive growth of margin financing during the equity markets [boom], the commodities futures volume explosion in April, as well as some of the rally in the corporate bond market right now," says Wright.

But this is where things get start to get murky—unlike a mutual fund, which has a prospectus, there's no way to easily figure out what precisely a particular wealth management product is backed by. One Shanghai professional who has occasionally purchased WMPs said she had no idea what her money was funding. Rather, she understood only the basic terms of maturity and interest rate, as well the name of the institution that sold her the product.

"There are just some general statements that there are investment risks and that these wealth management products are not deposits," says Suslov. "The risk notice is not really adequate."

Customers mostly buy products from reputable institutions that may only implicitly stand by them—it is not really the bank's liability, because it is classed as an investment product.

This gets to the heart of the odd economic disconnect inherent in WMPs. In a traditional investment, the investor would assess the risk and price accordingly, knowing there is a chance of losing money. But with WMPs, customers place the bet basically on the institution that is marketing the product, which may be selling an off-the-books amalgam, or something created by a third party.

While few WMPs have so far gone bust, and the state banks pushing them have demonstrated their willingness to guarantee the investors' principal. According to *Reuters*, CITIC did just that in 2012 when a wealth management firm marketed by the bank missed a $1.12 million payment. So why would banks elect to repay the investors of failed products despite having no legal obligation to do so?

"Banks are actually, formally or informally, on the hook for a lot of things not reflected on their books," says Chovanec, reinforcing the point that the shadow banking system enabled by wealth management products is, in fact, central to China's present financial system.

This fact of being informally on the hook, along with the size and structure of the system, poses what may be enormous risks.

The Big One

The most immediate problem is liquidity risk, in other words a sudden shortage of cash, which stems from that switch beginning in 2012 from using WMPs for money market funds, to assets like property investments.

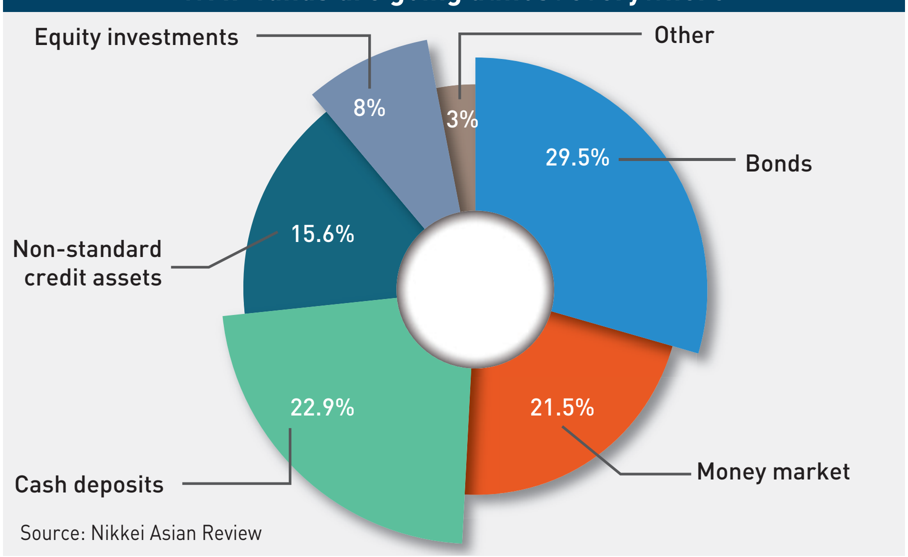
"One of the key problems with wealth management products is that there is quite a large asset/liability mismatch," says Yuan of Fitch, echoing Wright's explanation of how these products transformed. "You are financing medium to long-term assets with very short-term funding."

Because WMPs typically mature in a matter months, funding for big projects needs to be continually rolled over by issuing new products to cover old ones and keep the cash flow going. This creates a tricky situation of dependence on the continued sale of WMPs. Should the investing public become spooked, say by a big single default, the money tap could turn off.

Not only are they heavily used by most banks, but they are particularly relied upon by mid-tier state banks, those that lack the enormous deposit bases of China's largest state banks. Some smaller banks are issuing far more WMPs at this point than they are attracting deposits.

"A withdrawal of WMP funding [at mid-tier banks] could cause them to have

Investment Breakdown
WMP funds are going almost everywhere



Source: Nikkei Asian Review

a major liquidity crunch," says Yuan. "If a number of them go to the interbank market at once… they may have to go in the last instance to the central bank."

"It could get quite messy," he adds.

This is partly why institutions have been willing to cover losses, to quell any investor jitters before they could get out of hand. According to the *Financial Times*, when Hebei Financing went bust, 11 shadow banks wrote an open letter to the Hebei government asking for a bailout, lest a bevy of WMPs default, including the ones that people protested over. The letter appealed to concerns about social stability.

There are a number of other amplifying factors on top of this, most notably the cross-ownership of WMPs between banks, which amounts to 15% of WMPs, according to official data. Such a practice creates the possibility of a default chain reaction, but deleveraging the situation is made devilishly difficult by the very nature of the system.

Failure is Not an Option

In the short term, any attempt to tighten rules on WMPs could itself cause a liquidity crunch. But the deeper concern may not actually be WMPs but the apparent need to keep economic growth running at a smooth clip.

"There's a consequence to reigning it in, which is you don't hit the GDP target," says Chovanec. "So what happens? You don't reign it in."

The China Banking Regulatory Commission issued new draft rules in November aimed at curbing WMPs, specifically the repackaging of high-risk loans. But according to *The Wall Street Journal*, the broad language still gives banks quite a bit of leeway in interpreting the requirements, meaning they may be ineffective.

"China wants to have a correction without having a correction," Chovanec says.

The bottom line is that investors believe that the government will not allow anything to fail, at least not in a widespread fashion, the net effect of which is to throw off the rational process of investment.

"When the system is structured in this way, there is a tendency for asset misallocation because… losses will be socialized," says Yuan.

> "
> The real transformation has been a move to add duration and credit risk to the assets backing WMPs
>
> Logan Wright
> Director
> Rhodium Group

Put another way, it means the inherent potential of a given investment to generate returns is less important than the good faith of the backer—in this case the government.

Wright holds a similar view: "WMPs are a particular evolution in response to a system in which things aren't assumed to fail. That's the central part of this story."

As Wright, Chovanec and Suslov all see it, it is a moral hazard. And it may be the case that it is an unavoidable one, in the context of the Chinese economy.

"If WMPs didn't exist, someone would have to create them," says Wright.

That begs the question: What then can be done?

Paradigm Shift

Perhaps the most obvious fix would be to move WMPs out of the dark, and the Chinese government is already working to do this. In October the PBOC began requiring commercial banks to count them as part of their overall credit, according to *The Wall Street Journal*.

The second thing is clarifying risks to the buyers of WMPs, probably by making them more transparent.

"What is especially important here is making it really clear what the underlying assets are," says Suslov. "Often times investors don't understand, and often times the assets can be really complex and complicated."

Next would be targeting the use of the WMPs as instruments, particularly because of the asset/liability mismatch. According to Wright, the entire world is moving toward longer-term, more stable bank financing, while China has done the opposite with short-term WMPs.

Really cracking down on them could be painful.

"It would cause widespread disruption," says Wright, especially to the smaller banks relying upon them. "But because they are so short term in nature…you would pretty rapidly roll off 70-80% of WMPs in 3-6 months."

However, Wright also notes that WMP growth is already beginning to slow down on its own, because good assets are drying up.

But the longer term implications are more fundamental to the way the Chinese economy operates, that is, the current reliance on credit for growth, and the fact that everything is at least implicitly guaranteed by the government.

As Chovanec puts it, by far the worst effect of "trying to run an economy with no losers" is that the market signals about what to really invest in don't get sent, which pushes investment into things like real estate that keep the economy growing at least on the surface. As he sees it, at some point losses have to be accepted.

But the good news is there is still ample opportunity out there in the real economy.

"I think there are lots of areas in China's economy that can generate real productivity gains, and you don't even have to invent anything," Chovanec says. "But the signals have to be [there]."

Bargaining on Brexit

Brexit has changed China's relationship with both the UK and the EU

By Douglas Bulloch

Image by Wei Bingnan

On the morning of June 24th, 2016, China woke up to witness an unexpected drama unfolding half a world away. The previous day, millions of UK citizens had voted on whether the UK should remain in the European Union, and all opinion polls, betting and market expectations pointed firmly towards 'Remain.' But as the early results came in, as China was eating its breakfast, the startling prospect of Brexit became a reality.

With typical British understatement, Mark Pinner, Managing Director and Partner at Interel China, a public affairs and government relations consultancy, called the result "a bit of a shock."

The reasons divined for the 'leave' vote were many, but one consistent theme was a desire of British voters for Britain to make its own decisions, and to chart its own course in the world. The effect, however, could be to redraw the economic map, requiring companies and governments to rethink long-held assumptions concerning market access and investment strategies.

Furthermore, although the EU is for now China's largest trading partner—accounting for nearly €190bn in imports in 2015 and €321bn in exports, or nearly 16% of China's total exports—losing the UK will mean the EU will once again come second to the US.

China and the EU

How exactly Brexit would affect China's relations with the EU prompts much disagreement.

Writing in September about China's relationship with the UK, Jie Yu—China Foresight Project Manager at LSE IDEAS, the foreign policy think tank of the London School of Economics—highlighted how it complicates Chinese investors' plans to enter the 500m-strong European market, noting that "Brexit has indeed diminished Beijing's hopes of treating the UK as a strong advocate for China in the EU."

But Song Gao, Managing Partner at PRC Macro Advisers in Beijing, an economic forecasting firm, disagrees, arguing that investment in the EU is small compared to exports.

> It is very likely that the UK and China will sign a free trade agreement after Brexit
>
> Song Gao
> Managing Partner
> PRC Macro Advisers

"The Chinese… have other ways to penetrate the EU market, for example [through] Greece," he says, noting Chinese support of the Greek government and projects like ports.

In a sense, they are both right. Chinese investment in the EU has so far been limited, but it is on the rise. China's investment in 2013 was only €4.7 billion out of a total foreign direct investment into the EU of €621 billion, but in 2014 it rose to about €8 billion, or 6.5% of €119 billion total FDI, and has certainly grown further since.

Song, however, focuses on the more political dimension of the economic risk.

"China is apparently going to lose an ally within the EU Council," says Song. "That could [threaten] China's pursuit of free market status designation from the EU." According to the terms of the agreement reached to allow China into the World Trade Organization in 2001, China was to be given "market economy status" at the end of 2016. However, the EU balked earlier this year, due in part to issues of alleged steel dumping related to China's continued support of state-owned enterprises.

Other fair trade issues have further ratcheted up the tension. The €670 million Chinese acquisition of German chip manufacturing technology company Aixtron was held up in October. The breakdown in the deal was due at least in part to German security concerns, but broad issues of fairness and reciprocity likely also played a part. Chinese firms have been on an M&A spree in recent years, prompting other countries, Germany not least among them, to complain that foreign firms are restricted from acquiring similar companies in a huge range of Chinese industries.

It would appear, therefore, that there are more potential roadblocks to China's EU investment strategy whether the UK remains a member or not.

Golden Relationship?

Also in play is the so-called 'Golden Relationship' between the UK and China, which has been assiduously cultivated in the past couple of years.

Part of this relationship is based on institutional cooperation and access to London's financial services and currency markets, but the more important consideration for the UK is China's growing investments in infrastructure. The Hinkley Point C nuclear power station is the best example. Despite doubts following the historic vote, the project made headway in the post-Brexit UK with final approval for the deal given by the UK government in September.

Song Gao considers this kind of infrastructure investment rather than access to the EU as being the key factor in China's future relationship with the UK. The opportunity derives from the perceived need for "the UK to promote investment in infrastructure to offset the economic headwinds from leaving the EU." That in turn will create more investment and financing opportunities for China.

"The Chinese would love to jump in and provide financing for infrastructure investment in the UK," Song says.

Salvatore Babones, Associate Professor

of Sociology at Sydney University, Australia, is less optimistic about China's long-term interests, but instead sees opportunity for Britain.

"The UK may be willing to seize opportunities to fleece the Chinese government on big financial deals," says Babones. "The English have had an eye for a good deal for half a millennium now, and if China wants to subsidize British infrastructure, the UK government will let them."

But Brexit also throws London's status as a financial capital into question, and that may very well put a hold on many deals.

"There will be more hesitation before major commitments in the financial area [until] the picture gets clear," says He Jun, Career China Fund Manager based in Hong Kong.

However, the main problem with gauging the consequences of Brexit on the China-UK relationship is that the process is uncertain, and the outcome unknown. There is now a little more clarity with the promise to invoke 'Article 50' by the end of March 2017, implying a likely exit date by April 2019. But that also means nothing can be formally discussed until March of 2017, after which the negotiations promise to be highly complex.

"Britain can't really undertake detailed trade negotiations with other countries until it leaves the single market," says Pinner.

Nevertheless there is a fairly strong impression that China will want to strike a trade deal with the UK.

"It is very likely that UK and China will sign a free trade agreement after Brexit," says Song. "[Brexit] will simply make Britain more flexible in terms of negotiating trade agreements with third-party countries outside of the EU."

To that end, high-level discussions between the UK's Chancellor of the Exchequer and one of China's Vice-Premiers have been scheduled for November, according to an announcement in October by Liu Xiaoming, China's Ambassador to the UK.

Downsides

There are, however, some specific challenges that confront China in the short term. The most obvious is the effect on China's currency of the Brexit vote, and now also the US election of Donald Trump.

"The new RMB overall currency policy now is targeting a basket of currencies," says Song. "So [while] Brexit will have a huge downside pressure on the Pound … the Chinese currency has to follow."

He adds that policy makers worry the market will see such depreciation not in the context of targeting a basket, but in the context of a broader weakening of the Chinese economy.

The bigger concern though is about the spill-over effect of Brexit on the entire European Union, the fear being exits of more countries, such as Italy, or even a collapse of the Eurozone. "The Chinese are extremely worried about this prospect," Song says.

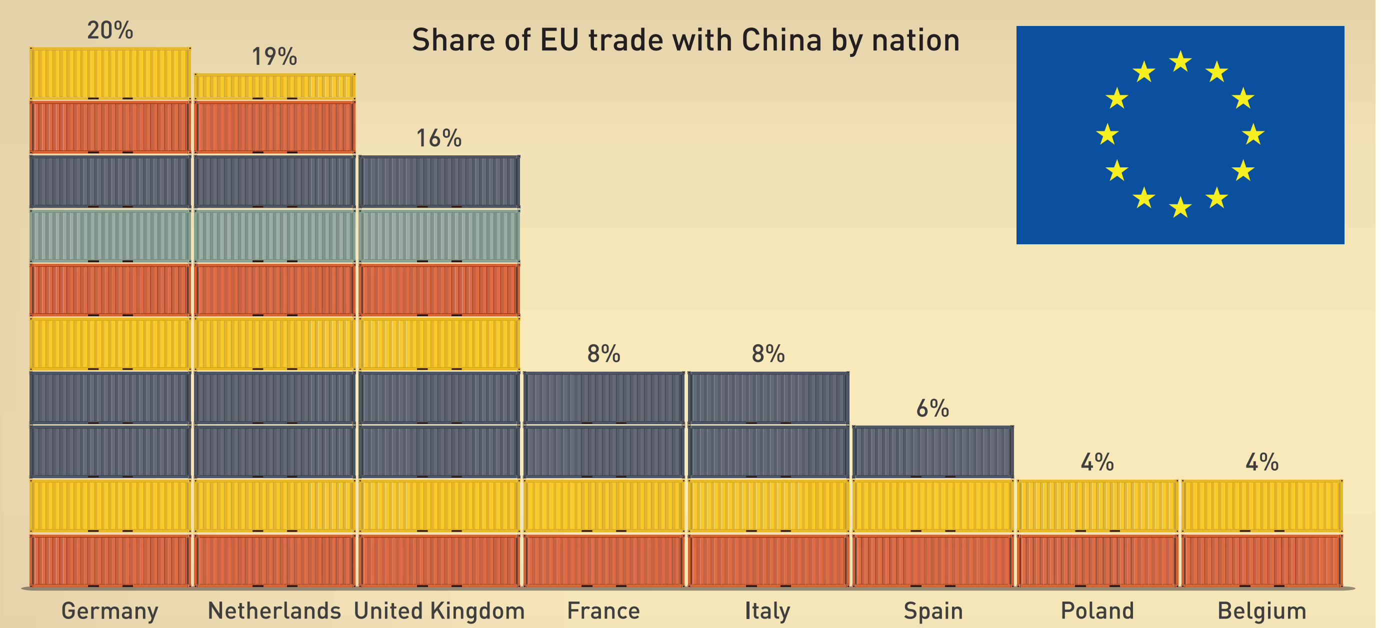
He Jun concurs, though is perhaps more sanguine.

"It is obviously hard to gauge exactly what Brexit means to the world ultimately," says He. "So far the Chinese government is taking a relatively relaxed attitude on the issue and their chief concern is whether it will create another round of 2008-style global systematic risk."

Babones takes a contrasting view, believing that the problem will be less about economics than politics.

Partners in Trade

The EU is China's biggest trading partner



Source: Bruegel

Chinese officials greet British PM Theresa May at the G20 in Hangzhou

"Post-Brexit Britain will inevitably move closer to the United States," he says. "Chinese policy coups like the Hinkley Point nuclear contract and Britain's decision to join the AIIB will be less likely in the future."

Upsides

There are some bright spots, however. The most obvious opportunity stems from the immediate decline—as much as 18% by the end of October—in the value of the Pound.

"[This] makes Britain very attractive to investors," says Pinner. "Tourism from China is booming and investment in … real estate has jumped very significantly, too."

Song goes further: "Chinese SOEs have been instructed to purchase technologies and more productive sectors from foreign countries, so the Chinese see this as a great opportunity for them to increase their ODI."

In a more strategic sense, however, the biggest opportunities may not be economic.

"The Chinese government sees a less unified Western world more as an opportunity politically," says He Jun, which "leaves the way open for China to gain concessions [and]… win support from at least some of the European countries on some issues."

Babones agrees, further speculating about the opportunities thrown up by a weakened EU.

"The post-UK European Union is likely to be more amenable to—or vulnerable to, depending on your point of view—Chinese diplomatic initiatives as the overlap between the EU and NATO declines," he says.

But the division also has the potential to overshoot, which is a big concern for China.

"[The EU may] become more conservative in terms of global trade." says Song.

That touches on the wider current phenomenon of de-globalization, with which Brexit has been identified.

Walling Off

In the broadest sense, Brexit's challenge is philosophical as it points to a fragmentation of the existing institutional order. In this way, it is linked to other trends around the world, including a rise in protectionism and a threatened reversal of the long post-war trend towards increasing trade and interdependence.

"The growing anti-globalisation sentiment in developed countries is very much noticed among Chinese academics and investors," He Jun says. "Brexit should certainly be viewed as part of that development."

Indeed, He Yafei, Vice-Minister of Overseas Chinese Affairs Office of the State Council, made exactly this point a week after the vote, stating that "from a strategic and global perspective, Brexit may be defined as the first wave of anti-globalization and rising populism that washes over the world."

In the wake of United States' election of Donald Trump as president, he may have been correct.

At the most recent BRICS meeting in India in Mid-October, President Xi Jinping himself warned that a "rising tide of protectionism and anti-globalization was endangering the world economy's still fragile recovery" blaming "deep-seated imbalances that triggered the financial crisis."

But Salvatore Babones, whose academic work focuses on de-globalization, says that this is not new.

"The falling trade between China and the rest of the world is part of a long-term super-cycle," he says. "The era of increasing globalization came to an end in 2008."

Babones also sees de-globalizing forces at work in China's efforts to carve out a stronger sphere of influence in the South China Sea. And while this may not represent an absolute retreat from trade, it is shifting toward a system that is more regional, rather than truly global.

Re-globalization and Brexit?

But what Babones sees as 'de-globalization,' others see as 're-globalization'—a response to deglobalization that envisages creating new patterns of trade, perhaps regional or sectoral, as a way of forestalling an expected downturn in global trade. Song sees China's efforts in the last few years, in particular with the One Belt One Road (OBOR) initiative and its associated institutions, as a specific response to China's long-held expectations of more difficult trading conditions.

"The political dynamic is definitely shifting against globalization and this trend is not going to reverse anytime soon," says Song. Expanding on OBOR's reach into the central Asia, he adds that the Chinese initiative "[involves] the corridor that has been very much excluded from the previous wave of globalization."

"[These areas] lack the infrastructure [and] financing to facilitate trade," he adds.

And this brings the whole question back to a wider context in which Brexit could be a remarkable opening for China. It is within the potential for "re-globalization," a rethinking of the globalization process, that China may see the opportunity to deepen its relationship with the UK—and with a more fragmented EU—to complement its long-standing efforts to promote regional trade initiatives from a more global perspective.

While the UK may be a relatively small economy, it is very global in outlook, with strong connections and institutional presence all around the world. In that sense, the UK leaving the EU just as its relationship with China has matured is seen, in Song's words, as a "great opportunity for China and Great Britain."

Clearly the huge uncertainties that still hang over Brexit make prediction difficult, but inevitably China will need to rethink its relationship with the EU. Having lost a sympathetic voice on the inside, there is a danger that the EU will now be more suspicious of China's intentions, as recent decisions on mergers clearly show. Nevertheless, a more flexible UK will provide some very obvious opportunities for Chinese investment, just as the EU will maintain an overwhelming interest in continuing to improve trade.

The key danger for China is if Brexit goes badly wrong and somehow helps to trigger a global downturn, but as the chances of that slowly diminish, China may find itself moving beyond the shock of the event and looking toward what is next.

"We should be confident in a promising future for China-UK relations," said Vice Premier Liu in October, when announced China-UK talks. "What is more, we should seize the opportunities when they come along."

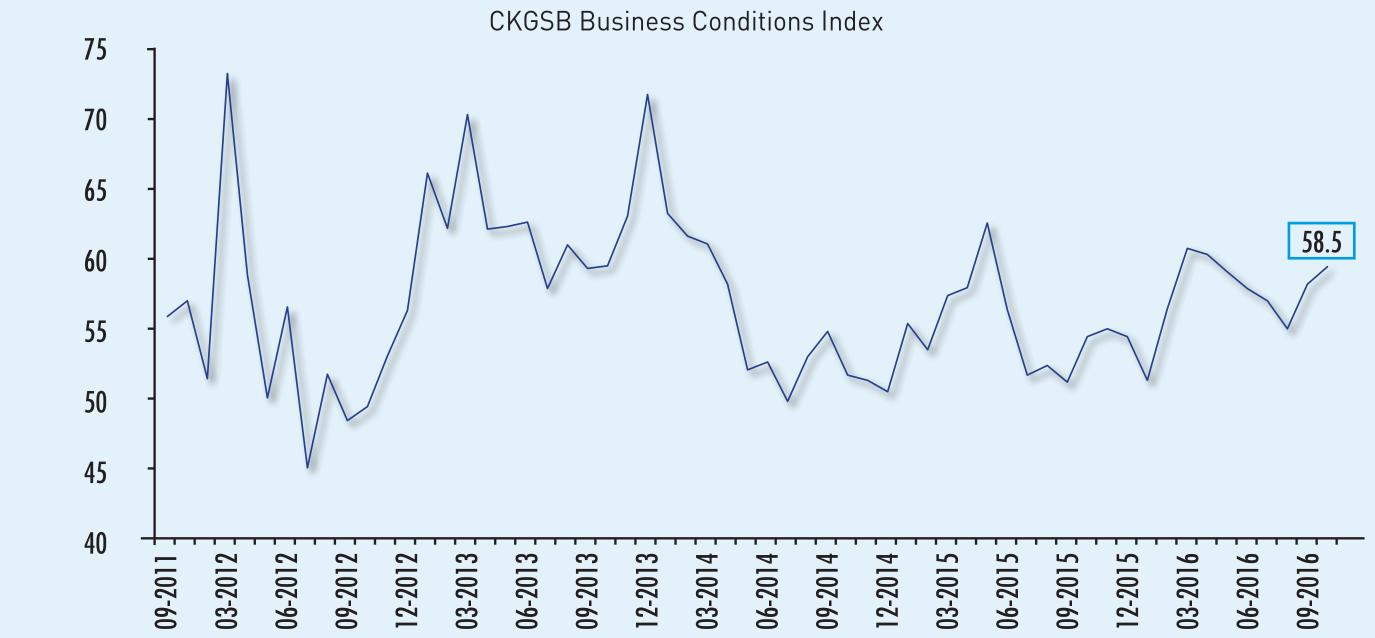
Profitable, but Troubled

Firms make money while facing issues

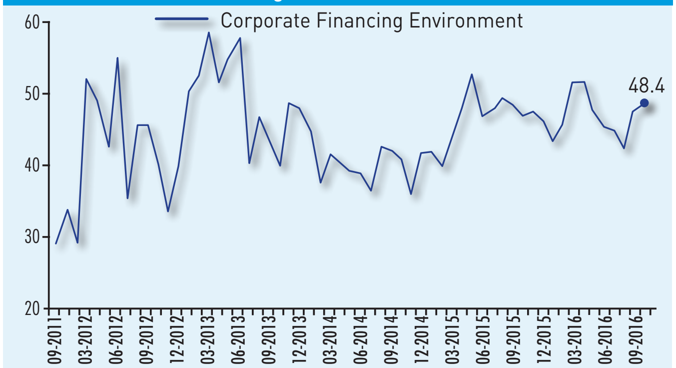
The CKGSB Business Conditions Index (BCI) registered 58.5 in October, a slight improvement on September's overall index of 57.4. With this, the BCI has reversed the downward trajectory which had been in evidence since May. For CKGSB's sample of relatively successful businesses operating in China, the next six months are viewed with increased optimism. The CKGSB BCI comprises four sub-indices. Of these, corporate sales fell slightly from 75.4 to 74.0, while corporate profits rose from 57.4 to 61.8. The fact that both of these indices are both well above the confidence threshold of 50 shows that company prospects are improving.

The BCI, directed by Li Wei, Professor of Economics at the Cheung Kong Graduate School of Business, asks respondents to indicate whether their firm is more, the same, or less competitive than the industry average (50), and from this we derive a sample competitiveness index (see Industry Competitiveness Index). As our sample firms are in a relatively strong competitive position in their respective industries, the CKGSB BCI indices tend to be higher than government and industry PMI indices.

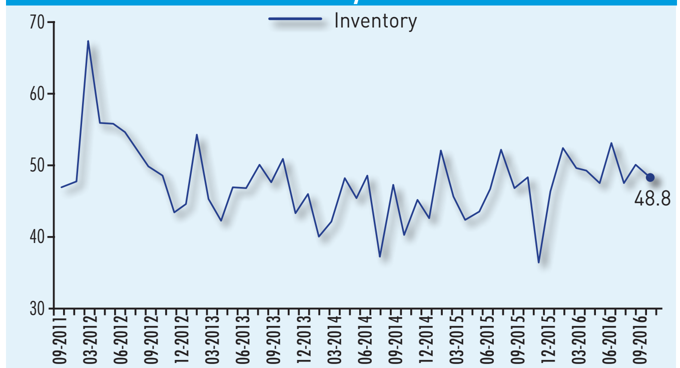
The downward momentum of the BCI has been reversed



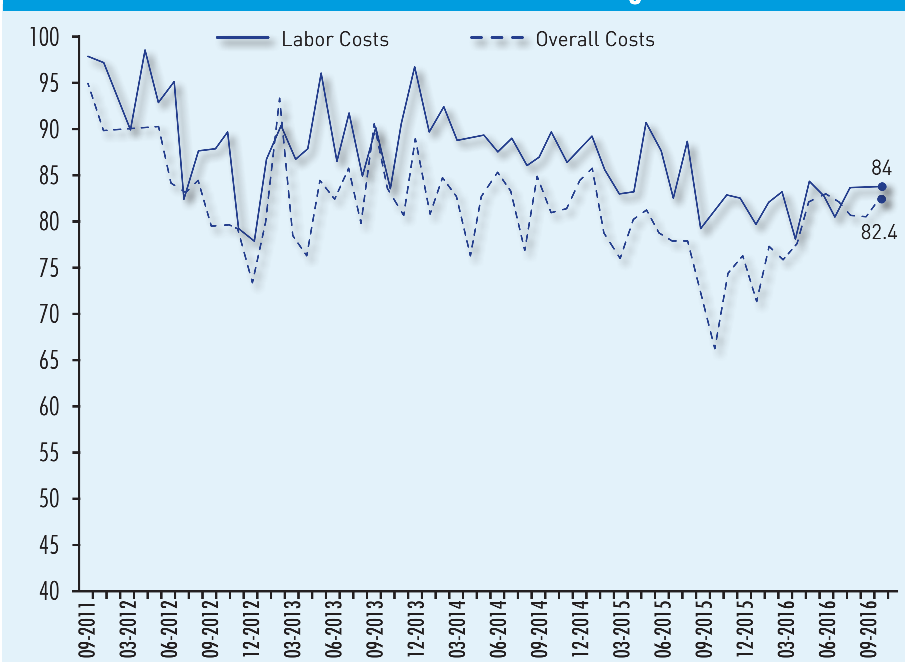
Financing remains below 50...



...while inventory fell below 50

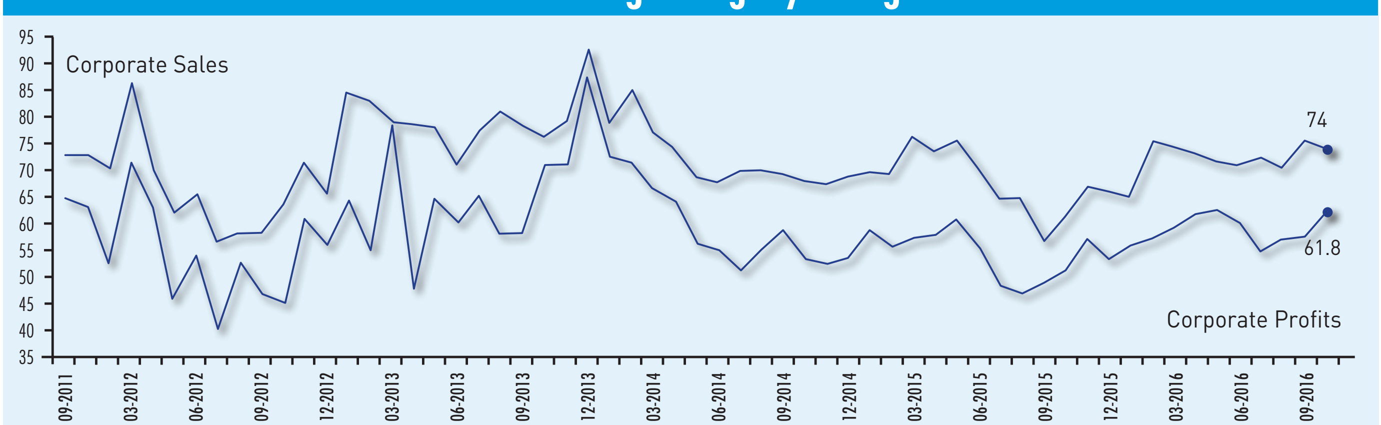


Labor and overall costs remain high



The financing environment index rose in October, from 47.5 to 48.4, but remains below the confidence threshold of 50. We can see that the financing environment for the BCI sample is less than optimal, and given that our sample consists mainly of the leading powerhouses in the economy, SMEs, this is a critical issue for economic reforms going forward. The inventory index also fell this month, from 50.0 to 48.8, hovering around the confidence threshold. This too remains a significant issue for the economy, with the index having registered below the confidence threshold of 50 for much of the past five years. The labor and overall costs indices remained above 80, with the former at 84.0 and the latter at 82.4, indicating that China's cost problems are structural rather than cyclical.

Profits are rising on slightly falling sales



Searching for the Future

Baidu needs to find a better business model

By Shasha Chen

Image by Wei Bingnan

Qian Zhu, a Chinese professional who returned from New York in 2016, was surprised by how China's largest internet search company Baidu answered one of her queries.

"When I searched 'Rome, Italy' on Baidu Map to plan for my trip to Italy, what I got were locations of Chinese wallpaper manufacturers that named themselves 'Rome'," Zhu said. Having lived in New York for 16 years, Zhu found one of the challenges readapting to life in China was dealing with the logic of a Chinese search engine.

It is one of the milder criticisms Baidu has faced over the past year. In April, the death of a college student named Wei Zexi, who died after mistaking an advertisement on Baidu for an experimental cancer treatment for medically reliable information, generated a nationwide outcry. Both the government and Chinese users accused Baidu of failing to clearly delineate paid advertisements from search results. In July, after an official investigation over the scandal and the release of tightened regulations on search advertisements, Baidu reported its worst quarterly earnings decline since it listed on Nasdaq in 2005.

"The Zexi scandal caused Baidu to cut its revenue expectation by RMB 2 billion per quarter since the second quarter (of 2016), and the impact is expected to last for a year," says Connie Gu, an analyst with BOCOM International.

The incident has put more pressure on Baidu at a time when web search ad revenues have already been shrinking, raising serious questions about the future of the company, given its reliance on Internet search for its existence.

"Baidu has been overly reliant on search ads to generate revenues, which was a realistic choice during its early development," says Wei Wuhui, a scholar of media development at Shanghai Jiao Tong University. "But now, such a sales model appears to be insufficient."

Baidu also faces fierce competition from its two main domestic rivals in the Internet space, Alibaba and Tencent, which together with the search giant make

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>
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>
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> Scholar of Media Development
> Shanghai Jiao Tong University

up the so-called "BAT" companies. Baidu is also more constrained than the other two companies that make up the acronym in terms of expanding abroad, due to the omnipresence elsewhere of Google.

Early Success

In fact, Baidu, established in 2000 in Beijing's Zhongguancun, China's equivalent of Silicon Valley, is often described as China's Google, which is true in terms of web search. Robin Li, Baidu's CEO and co-founder, grew up in a family of factory workers in a town southwest of Beijing. He is now China's seventh-richest man with a $12.6 billion fortune. In 2015, Baidu had more than 46,000 employees, and reported a profit of $1.8 billion on $10.2 billion revenue.

Baidu operates a broad range of products and services both via computer browsers and mobile, including search, advertising services, statistical tools, maps and knowledge products, a package similar to Google's core offerings.

Early on, Baidu adopted a strategy to aggressively penetrate the Chinese market, which was greatly different from the US market at the time in terms of maturity and average age of users.

To expand the user base, Baidu initially took a surprisingly non-digital approach by putting large numbers of sales people on the ground. It actively partnered with Internet cafés, popular among young people, and set Baidu as their default search engine. The company also launched products specifically aimed at young users. In 2002 and 2003, Baidu launched MP3 downloading and Tieba, an online message board community, both of which rapidly became popular. By the time of its 2005 IPO, about a quarter of Baidu's traffic came from its MP3 search.

Although internet users were already using the American company's services, Google officially opened in China also in 2005, but targeted educated users in big cities who appreciated its professional email services as opposed to Baidu's fun-based chat rooms.

According to iResearch, Baidu passed Google in number of visitors in 2004 and has been in the lead domestically ever since. Baidu in 2004 acquired hao123.com, a directory for first-time internet users, which was followed by Google's similar acquisition in 2008 of 265.com. It was not until 2009 that Google launched a music streaming service in China, which proved far too late to be effective.

But Baidu's victory over Google was also built on its smart interaction with the Chinese government, particularly in the realm of censorship, by deleting certain sensitive search results. Google was effectively blocked from the China market in January 2010 when it declined to continue filtering search results in accordance with official requirements.

Given the realities of China's regulatory environment, Google has yet to stage a comeback. In 2009, Baidu had 63% of China's search revenue versus 33% for Google, according to iResearch. Last year, its share of the market by revenue was 80%, with Google still holding 9.2%.

"Baidu's early success was no surprise,

as China's regulatory environment offered the company an advantageous position over its global counterpart," says Wei. "In the meantime, Baidu demonstrated a quicker reaction and better understanding of Chinese people's tastes than Google."

But Baidu's triumph has been coupled with criticism. The MP3 service, for instance, has been widely accused of relying upon pirated music, although such problems have by no means been limited to China. There have also been several scandals surrounding search results. In 2008, news reports claimed that Baidu took payments in return for deleting negative news on Sanlu Group, a diary product company that sold milk powder containing melamine, a plastic ingredient, which led the deaths of six children. Baidu denied the reports. And this November, Baidu's youngest and most promising VP, Li Mingyuan, agreed to quit from Baidu after being accused of engaging in "huge economic dealings" involving acquisitions.

Publicly, much criticism has continued to focus on Baidu's business ethics, especially in contrast to Google's, whose corporate motto is famously "Don't be evil." After the Wei Zexi scandal, easily Baidu's most damaging, Robin Li himself openly commented on the difference, contrasting Google's idealism with Baidu's pragmatism. He said Baidu perhaps needs to be a bit more idealistic in the future to win people's hearts.

On the other hand, some Chinese analysts believe Baidu's pragmatic philosophy is a norm among Chinese privately owned companies, a product of dealing with China's unpredictable regulatory environment.

"As many other Chinese private-owned enterprises, Baidu understands it has to make quick money and grow bigger in the short term in order to play a power game with the authorities," says Wei. "The operational risks for small companies can be more unpredictable, but bigger Chinese companies have the power of access to cleverly navigate the regulatory uncertainties."

However, with changing user habits and the growth of other domestic Internet companies such as Tencent and Alibaba, which were mentioned by Baidu in its 2015 financial report as key competitors, the company is now facing new challenges beyond the search industry.

Baidu's profit in the second quarter of 2016 was RMB 2.87 billion ($431 million), one fifth of that of Tencent's profit and one third of Alibaba's. The gap indicated that Baidu's membership in the country's powerful BAT group looks increasingly in jeopardy. And this struggle, too, may be wrapped up with the government and regulations.

"The harsh reaction from Chinese government after the Wei Zexi scandal can be another sign indicating Baidu is losing its position as a powerful Internet company," says Wei."With the increasing popularity of Tencent and Alibaba, authorities do not need Baidu as much as it used to."

Time is running short for Baidu to find a new strategy and new revenue sources, he adds.

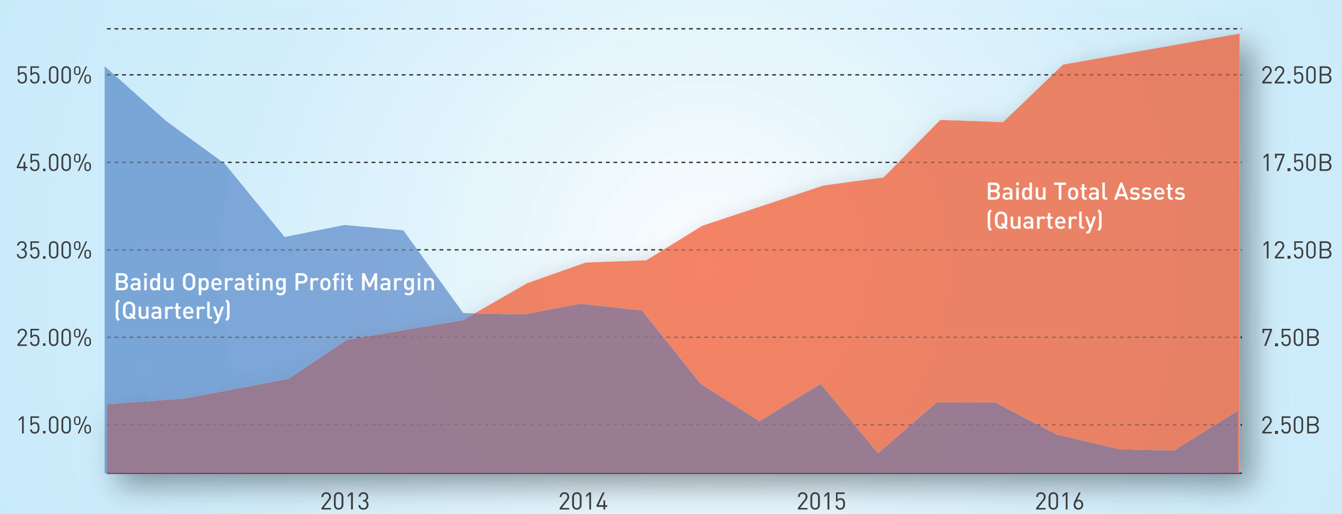
Baidu's Diversification

Despite massive changes in the hi-tech and media space, online ads remain Baidu's main revenue source, accounting for 97% of the total in 2015. With the increased competition and the downward pressure on online advertising rates, it is crucial for Baidu to diversify its business.

In 2015, Baidu made 23 investments totaling US $1.1 billion in value, with the largest category by number being outside of its core business in Online to Offline (O2O) services (52%), followed by e-commerce (13%), according to research by BNP Paribas.

Outgrowing the Profit

While Baidu's asset have grown in recent years, its profit margins have shrunk



Source: YCharts; Tranding Economics

But Baidu is conservative in terms of investments and partnerships in comparison with Alibaba and Tencent, whose investments last year totaled US $11 billion and US $3.8 billion respectively.

In the Online to Offline (O2O) sector, Tencent-backed Dianping and Alibaba-backed Meituan, both group buying platforms, merged in 2015, giving the newly-formed platform almost 80% market share, and putting great pressure on the Baidu-backed Nuomi. Meituan-Dianping raised $3.3 billion in early 2016, compared to Nuomi's $169 million ($25.3 million) investment from Baidu. Last year, Tencent-backed Didi Dache and Alibaba-backed Kuaidi Dache also merged to form China's largest taxi hailing app, adding competition to the Baidu-backed Uber China in the cut-throat online car hailing segment. Uber China finally threw in the towel in August and sold out to Didi.

Generally speaking, analysts believe Baidu's strategic moves in developing new services has been weaker than its competitors.

"Baidu has lagged its large-cap Chinese internet peers in delivering new commercial innovations," says Vey-Sern Ling, analyst at BNP Paribas.

According to him, a number of strategic innovations and acquisitions in the past few years have given Tencent a strong position in entertainment, O2O and finance, while Alibaba has also created a value far beyond e-commerce.

"The latter has demonstrated successful organic innovation, such as AliCloud and Ant Financial, and made a large number of strategic investments in logistics, digital entertainment and healthcare," says Ling. "In comparison, Alibaba has the strongest capacity for further investments and acquisitions among the three. Baidu is the weakest."

iResearch suggests Baidu is particularly weak in the online finance sector. Baidu Wallet, its online payment tool accounted for only 0.5% market share in China's online transaction market in 2015. Alibaba's Alipay dominated with 68.4% of market, followed by Tencent's Tenpay with 20.6%. In the mobile payment sector,

> Baidu has lagged its large-cap Chinese internet peers in delivering new commercial innovations
>
> Vey-Sern Ling
> Analyst
> BNP Paribas

Tencent is rapidly developing a user base for its payment system through the social-networking tool Wechat, which has 700 million active users each month. Ironically, Baidu's O2O platforms, such as its eye-catching food delivery service Baidu Waimai, link with Tencent's WeChat platform for transactions, although using Baidu Wallet nets a small discount.

But Robin Li expects Baidu's O2O services to have revenues far exceeding those of search in the future, given the huge market potential in the sector. But not all third-party observers are so bullish. Vey-Sern pointed out that with high competitions in the sector, higher expenses and uncertain returns are expected.

Similarly, Zhou Xiaoqian, an analyst with iResearch said the increasing cost of logistics and human resources might narrow down the profit of O2O operators in the coming years. The similarity of services by different operators is another problem.

"We see in the past [few] years that the tremendous growth of O2O users is largely built on operators offering subsidies to motivate users rather than innovation," Zhou says. "In the future, improvement of technology must be the key for success."

But in fact, that is likely the company's strongest card. Baidu's investment in developing artificial intelligence (AI) services is believed to be a strategic move aiming for the future rather than quick returns. All the analysts interviewed took a positive view on Baidu's AI technology, which is expected to be integrated with services including search, O2O and automated vehicles.

"With the slowdown in the growth of the number of Internet users and the increase in labour costs, AI can help to cut down human resources spending to improve efficiency," says Connie Gu of BOCOM. "In the AI sector, Baidu is a frontrunner and it has advantages in data gathering."

Baidu's AI lab was established in 2013, making it the first-mover in developing AI in China, and it is a cutting-edge developer in the world market. In 2014, Baidu hired Andrew Ng, formerly the head of Google Brain and leading AI expert, to lead its AI team. By 2015, Baidu built Baidu Brain, which is one of the largest computing neural networks in the world. Leveraging this resource, Baidu in September announced the establishment of a $200 million venture-capital unit that will focus on early-stage AI and virtual reality (VR) projects.

BNP Paribas indicated that Baidu's current innovation is expected to support a strong capacity in deep learning, high performance computing, voice and image recognition, natural language processing, big data, and human-computer interaction in the future. "The early investment together with Baidu's access to Chinese language search data provides it with a strong head start in the commercialization of AI," BNP Paribas wrote in a report.

Attempts towards that commercialization of AI have already started. In 2015, Baidu launched a Siri-like AI service named Duer, which has been integrated with Baidu's O2O platforms including Nuomi, allowing users to get AI assistance in everything from healthcare to travel planning. It has also announced intended public use of autonomous vehicles on fixed routes in select cities in China by 2018, and mass production of driverless cars by 2021. Despite some uncertainty in the business model for autonomous vehicles, Vey-Sern Ling believes the market potential is huge.

"Our conservative projection suggests that the successful commercialization of autonomous driving alone could increase Baidu's revenues by over 30%," Ling says. However, Baidu's plans hit a snag in November, when BMW ended its self-driving cars partnership with the company. Baidu is searching for a replacement.

Globally, China and the US are the two leaders on AI, and both countries have spent tremendous amounts on AI development. The US government in 2015 announced a $1.1 billion investment in AI-related research for both innovation and security reason. That same year, Robin Li proposed the development of a national-level artificial intelligence program in which he said private companies would partner with science research institutes and China's national defense and military organs on AI development. According to Wei Wuhui, Baidu's strategically development of AI might enhance its position in China to continue bargaining for a favorable regulatory environment.

Going International

But Baidu still has ambitions outside China. In 2015, 94.6% of visits to Baidu's search engine originated from China. The US, its second-largest market, accounted for a mere 1.6%, according to Statista, a statistics website. But Robin Li has said he expects Baidu to become a household name in 50% of world's markets by 2020.

Achieving this will not be easy. Globally, Google is overwhelmingly dominant and highly effective. With only 25% more employees than Baidu, Google generated seven times more revenues than the Chinese company in 2015. In the mobile sector in particular, Google's Android operating system is the predominant OS globally. With an absence of a competitive mobile system, Baidu's O2O apps are based on Google's Android platform.

> In the AI sector, Baidu is a frontrunner and it has advantages in data gathering
>
> Connie Gu
> Analyst
> BOCOM International

Baidu's attempts at internationalization have not gone well. Its earliest expansion was in Japan, where it launched its search service in 2007. Japan was chosen because of cultural similarities to China, particular the use of Chinese characters. But Baidu did not prosper in Japan as it had expected. Eight years later, the company announced the closure of its search engine in Japan due to declining user numbers.

To avoid similar failures, Baidu has adopted a different strategy for its latest round of international expansion. According to Baidu's president Zhang Yaqin, the company will target Southeast Asia, South America and the Arabic-speaking world as preferred regions, which have large populations and are seen as ripe for mobile Internet development.

Baidu's expansion rate is now faster than its earlier days, which highlights its growing ambitions. In Indonesia, Baidu branded itself as a 'mobile first' company and is aggressively promoting MoboMarket, its app-based O2O service. MoboMarket's monthly active users increased from 2.9 million in 2014 to 4 million in 2015. Baidu Map, similar to Google Maps and Apple Maps, is set to enter into more than 150 countries and regions all over the world by the end of 2016, and aims to have 50% of users from overseas by 2020.

In Brazil, Baidu's launch ceremony for its Portuguese search engine was attended by China's president Xi Jinping, a strong sign of government support. But such support, while offering Baidu an advantage domestically, could in some cases be detrimental elsewhere. Baidu is expected to be preparing for political challenges in international markets, especially in countries with geopolitical differences with China. In 2013, Tencent's WeChat was targeted for a boycott in Vietnam due to a political dispute with China.

But the ultimate challenge may come from Baidu's innovation capacity and credibility, which had affected its performance in China.

When asked to comment on Baidu's international services, returnee Qian Zhu, said, "I'm forced to use Baidu in China because Google is blocked. But outside China, I vote for Google for professional search and mapping services."

Chinese analysts also highlighted that there are lots of areas Baidu needs to improve to compete on a global basis. The future of Baidu will increasingly depend on whether Chinese and overseas consumers accept the innovations it offers. Meanwhile, there are still improvements to be made to the core services.

"Taking map as an example, the accuracy of the service should be enhanced," Zhang Xu said.

Needless to say, the future of Baidu will be increasingly based on whether Chinese and overseas consumers would be impressed by its new innovations and enhanced credibility.

Conversations

“You want to make sure you have a win-win formula. When we build a theme park we build it forever, we are here forever, and we are going to continue to grow”

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Philippe Gas

General Manager, Shanghai Disney Resort

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“If the product does not fully meet customer needs, the price cannot correct that mistake, and the product ends up as a flop”

Georg Tacke

CEO, Simon-Kucher & Partners

“China’s economy [is] a lot bigger, but it’s got a lot more problems and a lot more debt and so it is a bit harder to be as optimistic as people were back in ’04”

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Bill Bishop

Co-founder of MarketWatch, author of Sinocism *newsletter*

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“In today’s environment, access to the right human capital, the right talent, has become a very important source of competitive advantage for organizations”

Edward E. Lawler III

Distinguished Professor, Marshall School of Business

“There needs to be more serious conversations with China about what the nature of the global system ought to be looking like in a go-forward basis”

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Larry Summers

Former US Secretary of the Treasury

Behind the Scenes in the Magic Kingdom

Philippe Gas, General Manager of the Shanghai Disney Resort, discusses the challenges of building the park and Disney's partnership with the Chinese government

By Tom Nunlist

The opening of the Shanghai Disney Resort on June 16 this year was arguably the biggest event in the history of The Walt Disney Company since the first Disneyland opened in California in 1955. The culmination of decades of negotiation, planning and construction undertaken together by Disney and the Chinese government, as well as an investment of $5.5 billion, the park has already received an overwhelmingly positive reception from the public. But according to Philippe Gas, General Manager of the resort, this is just the beginning.

Starting out in a financial role, Gas has been with The Walt Disney Company for 25 years. He has worked on every continent where the company has a presence, making him among the most well-travelled of company executives. Before being assigned to the Shanghai park, he served for seven years as the CEO of EuroDisney. In this interview, he gives a detailed, inside look at the long process of developing the park with the Chinese government, the unique localization that Disney built into the resort and the overall mission to bring happiness to guests.

Q: Planning of the Shanghai Disney Resort goes way back, 15 or 20 years. How was the concept developed?

A: It goes back a long time, to the early

1990s, and the government of Shanghai at the time. Former Premier Zhu Rongji, who was Mayor of Shanghai from 1987 to 1991, was the one who had the idea to bring Disney to Shanghai. That's how far it goes back when it comes to the theme park project. And then it was Bob Iger, Chairman and CEO of The Walt Disney Company, who was instrumental in his support behind the development of China for the Walt Disney Company. He arrived as President and COO of Disney in 2000, and he took back this project and really started to engage, actually with Premier Zhu Rongji, to push the agenda forward. That more formal negotiation took us all the way to 2011 and the groundbreaking of Shanghai Disney. It is a long history, but I think it came from both parties—Iger being completely certain of the potential of China for The Walt Disney Company, and the Chinese government also very interested already by the push of the new economy and tourism and thinking about Disney as one of the key drivers, simply because of who we are.

Q: Why did development of the project take so long? Is that a typical timeline?

A: I don't think we could have expected it to be 10 years or 20 years, but you want to make sure you have a win-win formula. When we build a theme park we build it forever, we are here forever, and we are going to continue to grow. So you want to make sure you have the right level of confidence that what you do is set for that. We come with ambition, we come with pride, we come with a certain view of what we can bring to this market, but also we want to make sure we have all the elements in our hands. We also respect the fact that we are in China, we respect the rules of the game, and the interest of the Chinese parties, our partners. I wasn't there at the time, so I don't know what they thought in terms of timing, but it was worth the wait when you think about what we have built, and the size of the investment.

But we also didn't waste the time, because at the same time we were negotiating, we were taking lessons from the other sites. It is part of a journey of development, understanding what to do to succeed in different contexts and different markets. So we have taken all that to make this product. Once again, we knew it would be long. I don't think we knew it would be quite that long, but it was worth it.

We thought [China] was a great opportunity to do something we have never done

Q: How did Disney coordinate with the various stakeholders, specifically the Chinese government, which is a major part of the partnership?

A: It's a bit different in China than in France, my home culture. First of all, you have to come in with the attitude of knowing that there are many things you don't know. This is where the partner becomes essential, a partner that you trust, a partner that trusts you, because you are going to use that partner, in this case the Shanghai local government, and the central government as well, as a guide, as an advisor, as people you can go to and talk about issues. And that has been a key dimension of the project. We would not be successful, we would not be where we are without them, because of years of working together, of getting to know each other better, understanding how we contribute to their success, and how they contribute to our success.

And it is like any partnership: not everything is perfect. Sometimes you have a private business agenda that is not completely aligned with the public, political agenda. That happens in France, that happens in Hong Kong, that happens anywhere. It's ok, as long as you have the same overall objective, you get to find the solution, you get to find the right compromise, and by knowing each other, we have been better able to put ourselves in the partner's shoes. We have also been careful to not get stuck on the main agreement, the legal document that outlines the responsibilities of each side. This is a piece of paper, right, but what I am going to be aware of is that we are entering into a long-term partnership and we need to make this paper come alive. It is not just about the letter, it is about the spirit, and applying every day the spirit of trust, of partnership. So even if the document says, you, Disney, on that matter decide, I will still take advice. The product we build will be better if we work it out with our partner. And that's an essential part of our success.

And the number-one thing of defining the relationship with the Chinese partner is understanding what China is building, what China is developing with the tourism industry and the growing service sector, and that we can play a role to help grow this industry in the country. One of most exhilarating missions that the CEO, Iger, gave me was to think of this as not only building the business, but also helping the country raise its level. And we take that very seriously. It is as important as simply making Shanghai Disney successful; it is about our role within this overall Chinese agenda, which I think is great.

Q: China obviously changed a lot while the resort was being developed. To what extent did the concept change with the country?

A: The big change of China in the past 20 years is the growth of the middle class, and the fact that China is getting richer, and there is more ability for people to spend on leisure and quality of life. That plays right into our arrival and the timing.

I think the way to think of it that we are here to do something that goes completely through time, which is we bring happiness. We are here with a simple mission: allow families or friends to spend a moment together, in an environment that will allow them to get away from their day-to-day life, and create a memory that will last with them. That's what we do. It's very intangible, but that's what we are here for. And that is done by creating an immersive environment, an excellence of service that goes beyond what you would expect, being able to make one person feel special when actually we have 60,000 people in the resort, and every single guest has to feel recognition of who they are. That's why we are here, that's what people know about us and expect from us. With that regard, nothing has really changed when it comes to our philosophy and our mission in China, because that goes across borders, across countries and through time.

Q: This resort is the not Disney's first experience in mainland China, right? When did Disney the brand first come here?

A: Actually the story of China and Disney started in the 1920s, and in the 1930s with the princesses and the classic Disney characters being what kids and families were exposed to first. *Snow White* premiered in Shanghai in 1938, and one of the most popular and well-known princesses today is Snow White. The success of the Snow White adventure we have at the park shows it. People want to relive the story of something their grandparents told them about. So really we have a long-standing relationship with China.

And now we are bringing in very new characters, very new stories, Marvel and *Star Wars* are coming into this market. Marvel is hugely popular here in China, all the Marvel movies, the newly-released *Doctor Strange*, are blockbusters. They are something we are going to leverage, and find and live those adventures here in our park. Star Wars is a story that we will create in the Chinese market, but it will grow with the expansion of the movies and franchise in the future. *Zootopia* is a great example of a very new movie that was an amazing success in China.

So you have these kinds of classic 1920s characters, Snow White and Mickey Mouse and friends, and then you have these brand new cool stories that are also hits. So we have the full spectrum of stories and characters that we are working with that

Shanghai Disney Resort in the evening

will allow Chinese families and Chinese kids to come and meet at Shanghai Disney resort. It's a long story, but there is a lot of opportunity to create a stronger connection with the consumers today.

Q: Creating that connection has obviously been successful, but what are some of the challenges in connecting with consumers in China?

A: First, the biggest challenge is to know what the consumers' expectations are, and then be true to those expectations. Today Disney in China means excellence. How you define excellence is your choice, but it means something quite big. So when you come into the Shanghai Disney Resort, you expect from the moment we open, excellence, excellent service, excellency of the immersions in the stories, excellence in everything we do. And that has been our biggest objective and our biggest challenge.

We have a brand new park, with brand new technology, with brand new themes, brand new stories with brand new cast members. There are 10,000 cast members and employees who come from all over China, and they create the environment for our guests, from the moment they arrive. It is difficult for people to measure how hard that is.

And when it comes to purely how we define our job, it is staying relevant. A piece advice I need to give to any company that comes with a strong culture is that company culture is as good as its ability to find a balance, and be relevant to the expectations of the people. And so one of the things we have tried to do here is to bring things that are not necessarily Disney, but that guests expect to find. Food is a good example. People in China like to eat Chinese food, and we developed a menu throughout the park that is maybe the most diverse menu we have ever developed for any Disney, with 80% of the food representing the eight cuisines of China, and also representing the traditions of Indonesian, Malaysian and Thai food. Actually we only have one place where we serve burgers.

Q: That touches on localization—can you get into more details about how you crafted an experience that is truly Disney and also truly China?

A: China is an amazingly buzzing place, with a lot of ability from the people of China to embrace changes, and to embrace new things, and we thought it was a great opportunity to do something we have never done before. We just allowed ourselves to think differently. For example, in every Disney park you have a main street, but we don't have main street here. We felt it was a very Midwestern America concept from the turn of the 20th century, and not something that was the most compelling or relevant to Chinese consumers.

So what we have here is Mickey Avenue, with beloved Disney friends welcoming our guests at their entry into the park. This is because people come to Disney for

Disney, whether you are in Shanghai, in Hong Kong, or Tokyo. They want to see the Castle, they want stories they can recognize, and they want to see their favorite character. So we have people see things they know when they come into the park, and have them say "I know where I am." It's like if you go to Sydney harbor and you see the Sydney Opera House, you know where you are in the world, you don't have to guess. You say "I am here, I have arrived." That's the same thing we tried to apply here.

But there are some elements that are important to me as my culture tells me, food is one. Language is one. And it is not just saying every sign has a version in Chinese, that's something we do everywhere. If you go to see our shows, take the stunt show, the pirate show, this show was developed in Mandarin. The story, the dialogues, everything was developed by local Chinese writers for a Chinese audience, not as we do it usually in English and then translate in Japanese or French. No, we have done this with the consumer in mind, so the stories, the jokes, the humor is actually relevant to you because it is your culture talking to you, it is not us trying to look like Chinese.

The architecture has changed some as well. Some elements, like the Castle, remind people of where they are, but we subtly recognize that we are in China at Shanghai Disney. The highest finial of the castle has the Peony flower, the national flower of China. The architecture of Disney town is done in Shikumen style that once again reflects the culture of China. Those are elements that people can appreciate. And with those elements we have tried to express our pride to be in Shanghai, to be hosted and welcomed by the country.

Q: Being a Western brand, do you think Chinese people then see the magic kingdom as something "Western," or is it a place that is fantastical and beyond that kind of distinction?

A: I don't think they think about it terms of Western and Chinese. I think they think about Disney as Disney, and the stories and characters. Our values go across borders: kindness, family, friendship, those are values that are very important in China, all those values go across borders. And you can oppose Western versus Eastern, but when it comes to Disney people tend to have a truce, and those values that are communicated, for most of us, if you are an eight year old child, or an old man like me, a lot of our memories start with a Disney story, and so it brings the child back into who you are. And I see that even now in my life. I meet very senior executives, or very serious businesspeople, who turn into kids when they realize I am working for Disney. And why? Because it brings the kid back in you. Either because you are a granddad, and your grandchild now is playing with a Disney toy, or because of yourself. Maybe your dad took you to see a Disney movie. That kind of thing goes beyond borders.

Q: The park has been open for a few months now. How is it going so far?

A: It has been an amazing first few months. But I'll repeat what I said before: We are here forever. So we are not here to think just about the first few months. Speed is not an object, we want to do things right. This is a new market for us, a market that knows our name, knows a few things about us. And we have one opportunity to make the first good impression, which is critical.

And let me tell you this is the most balanced opening I have seen, and I have been exposed to three, Disneyland Paris, Hong Kong and Shanghai. This one is amazing, and not only because of the popular success, we welcomed four million guests in our first four months of operation, which included the peak summer season, and that's just an amazing reflection of the demand. We have also achieved a fantastic balance when it comes to communication, the reception of the local market, from all the stake holders, from the guests, the public parties, the press, everyone has been so supportive of the arrival. We feel we are already part of the environment, which is something very important to us. We want people to recognize we are here, and we want to be a citizen of Shanghai, and we have been, right from the opening day. It is amazing to see the reaction of the guests to what we offer them. They love our rides, they love the shows, they spend the maximum amount of time in the property to see everything. We are very happy with the opening.

Q: Right now is a high-growth period for theme parks in general in China, with venues opening all across the country. What do you think of the competition?

A: I don't let myself get bothered by things that I don't control. But I think we help the competition by helping to raise the standards, and raise the level of entertainment. Because when you have a great experience, you want to have more. Meaning if you have a great experience in a park near me, you will want to come to have a great time at Disney. And if you have a great time at Disney, you will want to have a great time somewhere else. And so quality feeds success, and that to me I would say comes back to our mission in China, which is to help raise the standards. I think we came at the right time, because clearly tourism is growing in the country, and that's great. And second we can help bring more quality entertainment, more quality tourism to China and that is the way I am looking at it. Every day I am thinking of how we can be better at what we do, that's what really matters to me.

I don't control what the competition does, but I hope they do great, because it will help us. But we don't let ourselves be bothered by any of it, because we are here to do the best for our guests.

Q: You mentioned that Disney is here forever—can you give us any inkling about future plans?

A: It is definitely just the beginning, and we just recently announced we're already expanding our park with the addition of Toy Story Land. We are here to stay and grow, and we are convinced of the long-term success. But it is a bit early to talk about plans for the future, because we are focused on making this park a success, we've been open not even five months. It would be very presumptuous to tell you about the next phase. We need to make sure we have a stabilized operation, and that we have a momentum that continues to build. So my focus is on this first phase, but we definitely have a high ambition.

Innovation the Smart Way

Georg Tacke, CEO of Simon-Kucher & Partners, discusses common pitfalls in product innovation and how to avoid them

By John Christian

In our increasingly fast-paced world, there is no room for companies to be complacent. To survive in the competitive marketplace long term, constant product innovation is a basic necessity. However, nearly three-quarters of new products either fall far short of their targets, or fail entirely. Not only that, businesses have become tolerant of this high failure rate to the point where it is treated as a given risk.

Dr. Georg Tacke, CEO of the global management and consulting firm, Simon-Kucher & Partners, emphatically disagrees with this presumption. According to Tacke, failing to make a product financially successful is very often the result of a homegrown issue—rather basic flaws in the process, from the initial design to end marketing. In his new book, *Monetizing Innovation*, co-written with his colleague Madhavan Ramanujam, he explains the traps many companies fall into when creating new products, offering refreshingly commonsense principles to avoid them. To him, it is all about "designing the product around the price."

Q: In the beginning of the book, you point out and criticize the fact that a high rate of financial failure for products and innovations—72% to be accurate—is deemed acceptable. Where does this attitude of inevitable failure come from?

A: Yes, and in Asia it is 76%.

This is a difficult question, there is not one single answer. A little bit comes from the Silicon Valley attitude of VC-based businesses, which are very much about statistics. The assumption is that if I invest in many companies, there's a higher probability of investing in a unicorn, a business valued above $1 billion. But there's a major flaw in this attitude, because it assumes the probability of success is independent from the probability of failure, and that success is a given. In our view, that couldn't be more incorrect.

We are already seeing a slight change in attitude. Back to the VCs for instance, investors are starting to see that their job goes beyond financial investment, and they're going more into the businesses, trying to do turnarounds and take more of an influential role than five or seven years ago.

On the US West Coast, I also see the development that the pure growth orientation, which ignores profit or revenue, is gradually vanishing. We have lots of projects where people don't ask us "how can I grow volume," but rather "how can I grow revenue and how can I become profitable?" This means the traditional way of looking at businesses is experiencing a comeback.

Q: Can you tell me about a product that you consider one of these unnecessary failures?

A: Take for instance Amazon's Fire Phone. Amazon wanted to attack Apple's iPhone and put every feature you can think of into the phone. That included, among others, a 3D-display, which needed several cameras to generate the 3D effect. The cameras used a lot of energy, which significantly reduced battery life.

The Fire Phone was a disaster. Already after a few weeks it was given away with a cell phone contract for just $1; Amazon had to write off $170 million on the Fire Phone inventory. But this disaster could have been avoided. Amazon could have asked the customers about how important certain features are to them. They would have found out well in advance that smartphone users don't care about a 3D effect and several other Fire Phone features. Amazon surely wouldn't have started the Fire Phone adventure, or they would have at least designed the product to be completely different. But Jeff Bezos did none of that; he built it, tried to sell it, and failed.

Another example is the Segway. If you look at the initial numbers it is a super flop. But if the developers had started talking to customers in advance, they would have found out that the price they needed to cover the costs was far too high to make a mass product. Accordingly, they would

> Amazon had to write off $170m on the Fire Phone inventory. But this disaster could have been avoided

have either come up with cheaper and simpler technology, achieving a price point to make it a mass product, or they would have recognized it works well with a segmented approach, for example, for security workers in a shopping mall, or tourists. They then could have designed it specifically for these segments. But they did none of that, and so it failed in its original positioning.

Failure is also possible on the other side of the coin. The Asus Mini EEE PC, introduced in 2007, was the first mini notebook when it was released. Many people would call it a success: it was completely sold out, and after three or four months on the market the CEO said they were unable to produce more than 10% of their current demand. To my mind that is a failure. Could they have done better? Yes. They could have found that out earlier on, and either gone higher with the price or increased production capacity.

Q: So this is building the product around the price. Can you explain more about how it differs from just picking the optimum price?

A: If the task is to pick the optimal price, you first have the final product and then you determine the price. In the way we describe it in the book, and the way we recommend, you start early on, right at the beginning of the innovation process when you don't yet have the product. You have what we call the "willingness to pay" talk and you find out which features are important and which are less so. With this information you design a product with an optimal value-cost-price ratio. In the other scenario, without using the information on willingness to pay, you simply hope to design the right product and then you try to find out what the best price is. But if the product does not fully meet customer needs, the price cannot correct that mistake, and the product ends up as a flop.

To give you an example, if you do it our way, you would perhaps find out that an SUV does not necessarily need a four-wheel drive, because people use their SUVs to drive along city streets. They just want a bigger car. Your analysis shows that half of these drivers don't want a four-wheel drive, and the other half do. You then have to make the decision: Do I integrate the four-wheel drive feature into the product, or do I leave it out? You maybe decide that it won't be included in your base version. That reduces costs and gives you the opportunity to offer a lower price tag, leaving the customer to choose whether they opt for a four-wheel drive.

Without having made that analysis, you most likely would have put everything into the product. It would have been fully loaded and a big segment of drivers would have perceived it as too expensive. In the end you would have ended up with lower volume.

Q: That is one of the big lessons in the book: Ask the target customer what they are willing to pay for, which is a very simple principle. What flawed thinking causes companies to skip that basic question?

A: It is so easy, right?

I think it is a combination of three things. First, what we see in many companies is laziness. They have always done it that way, they don't think about it, and they leave the innovation process unchanged. The second is a conscious decision, to do things without analyzing the willingness to pay. The principle is: trust the engineers, they know what they are doing, they will come up with the right thing and let's not disturb them in the innovation process. All the other things, like pricing, customer segments, positioning etc. are afterthoughts and will come later. Several companies have that as a conscious principle.

And the third thing is: companies believe that it cannot be done, that the customer has no idea what he or she wants, that there are no reliable methods to find out the willingness to pay before the product is ready. That's incorrect. You can describe things to potential customers and they are able to state their preferences and willingness to pay. And nowadays we have excellent methods for every product and situation imaginable to measure customers' willingness to pay in a precise and reliable way.

It's a combination of these three ways of thinking.

Q: You also mention flawed demographics, for example the point that, technically speaking, Ozzy Osbourne and Prince Charles belong to the same group. In China the buzzword is the middle class, which is extremely diverse. What is behind this flaw?

A: If you do segmentation based on socio-demographics such as age, status, income, region, etc., you end up with Prince Charles and Ozzy Osbourne being in the same segment. This is of course nonsense, but is a good illustration of the classical segmentation deficit. For new product development, segmentation should always be needs or value-based, that is to say homogenous groups with the same or similar needs. In this sense, the middle class you mentioned is not a precise enough segmentation for product innovation. It is too broad, fuzzy and not needs-based. Products aiming at such an unspecified large group will most likely end up as average products, which don't really fit anybody.

Q: Yes, and there is yet another distinction you also make here, between features and values. Is this a branding issue?

A: It is a product communication issue

Companies believe that it cannot be done, that the customer has no idea what he or she wants... That's incorrect

rather than a branding issue. Product communication often focuses on technical features, in telecommunications for example it could be megabits per second, LTE, etc. The value of these technical features is that you can download a 90 minute movie in X minutes, which is much more meaningful than the technical specification, which is often not understood by the customer. We observe that for this reason a lot of products flop. To fix that, we recommend to involve marketers early on in the innovation process, so that they fully understand the true customer value of the new product. Only with this understanding are they in a position to develop an appropriate product communication strategy.

Q: It seems this would make sense especially in B2B, because the value you are trying to create with the product is probably more specialized and something that you really have to understand.

A: I couldn't agree more. And the takeaway for lots of people in innovation is: communication is not a task to be given to so-called specialists. Or you at least need to check the communication they come up with. What we very often see is that this part of the process is handed over to other functions, while the innovation people think they are done and start with a new project. They are not done. The product is only ready when it is on the market and successful, not before.

Q: Speaking of B2B, the book uses examples of both the B2B and B2C sector. How do the approaches differ when applying the book's lessons?

A: The principles are 100% the same, there is absolutely no difference. The ways to apply them are of course slightly different because if we take private customers in the B2C area, the user and decision-maker are the same person. But in the corporate world, we have a buying center, we have users, procurement people, influencers, decision-makers and so forth. So the situation is a bit more complex. It's also more difficult to identify needs. You have to go to and take into account all of these target groups. So, while it is a different method of investigating, the general process remains the same. The key principle is also the same: Go early and ask.

Q: How do you make sure you get this stuff right and make a successful product?

A: What you have to realize is that most of these failures are really homemade. No external factors can be blamed; success or failure—it solely depends on us. That first of all is good news. We have developed a bulletproof nine-step process, which will lead to innovation success, almost guaranteed. It includes all the mentioned elements such as a willingness-to-pay analysis, price before product, communication, etc. Equally as important as the process itself is getting it into the organization and making it stick. For many companies, this is a difficult and challenging transformation process. Here leadership and top management come into the game. If the C-level executives do not drive that transformation and put a clear focus on monetization and pricing, this transformation will not come to life. In the end, monetizing innovation is a C-level task.

Up Close and at a Distance

Bill Bishop, author of the *Sinocism* newsletter, talks current affairs and China in the media

By John Christian

Bill Bishop was once called "the China hand's China hand." Co-founder of the stock market news website MarketWatch, where he worked until the company's 2004 sale to Dow Jones, Bishop lived in Beijing from 2005-2015, a span that included the Beijing Olympics, the Global Financial Crisis, and the rise of Xi Jinping. Long a commentator of China affairs, Bishop started the *Sinocism* newsletter 2010, which is read by journalists, policymakers, analysts and diplomats—more than 27,000 people in total.

In this interview, Bishop talks about how China's relationship with the world has changed during its ascendance to second-largest economy in the world, as well as some of the serious economic challenges it faces today, including the current backlash against globalization. But along with that, he also discusses the many bright spots, and the hazards of getting caught up in what can be a biased and negative news cycle mentality.

Q: You lived in China during a very eventful period. How did China's relationship with the world change along with the various developments that you witnessed?

A: I think that China is far more integrated with and impactful on the world than it was [in 2005]. China is a much more powerful country now across pretty much every dimension, and so its influence is felt much more profoundly globally, both good and bad. I think that along with that increase in power and the continuation of China's rise, that now versus ten or 11 years ago, China looks to a lot of countries like a bigger opportunity economically, but also a bigger challenge… from a geopolitical perspective. And that's not just from a US perspective. All over the Asian region, Europe, the US, there's a lot of good that has come with the rise of China, but there's also a lot of concern and a lot of problems, too.

The other [big change] is that the economy looked like it was potentially on a pretty healthy trajectory in 2004, 2005. Not great, but it had more potential. Now when you look at China's economy, it's a lot bigger, but it's got a lot more problems and a lot more debt and so it is a bit harder to be as optimistic as people were back in '04, '05, and certainly harder to see the low-hanging fruit that's going to drive a lot of economic growth. And the Chinese themselves say this. This is a much more difficult time for the economy and for reforms.

Q: In any given news cycle, there's a raft of negative or alarming stories about China's economy, from rising debt to the aging population and many more. How would you rank these problems in terms of importance?

A: They are all massively complex and difficult problems. I think the thing that is probably the most pressing at this point, and certainly potentially the most constraining when it comes to near- and medium-term policy, is the excessive growth in debt and the mal-investment. If there is something that ties it all together—and this is something that is not controversial in China, it is something the party says itself—is that reforms are not complete, and that you've got this kind of semi market-based economy with too much and lately growing interference and control from the party-state… I think when you look at the mal-investment, that comes down to again too much party-state interference in the economy. The Third Plenum talked about having the market being the deciding factor, but in fact it has seemed to have gone the opposite direction since then because the party-state is much more focused on control right now. And I think that is ultimately going to be… the biggest barrier, or the most likely element that derails or significantly hampers the reform efforts.

> China is far more integrated with and impactful on the world than it was [in 2005]. China is a much more powerful country now across pretty much every dimension, and so its influence is felt much more profoundly globally

Q: So what should we make of those mixed messages?

A: Well, the Chinese Communist Party is always good at contradictions. When it comes to SOEs, it's not just about having them large, it's actually about putting the party back in command. The central SOEs, all big decisions at the board level are supposed to be approved by the party committee, and so it is reinserting the Communist Party back into business and society in a way that it had not been for a long time… I think they see enough problems in society and in the economy that their natural instinct is to go back toward more control. And this is the main contradiction. They can keep going for a while [this way], but they are not going to hit their maximum. It is going to hinder hitting the maximum potential for the Chinese economy.

It's also not a binary success or failure, it is more of an 'okay, so it won't be as good as it could be.' But at the same time I think the party would argue that if they released control too much then it will be chaotic. And so the solution is to basically tighten the party and muddle through, which they have been doing for quite some time.

Q: What bright spots would you identify?

A: In the current media environment in the West, you mention some bright spots and you get shot down as like a reform optimist or naive. The internet economy is a bright spot. It's still relatively small, but it is a remarkably vibrant, robust and quickly-growing place. Just look at Alibaba's [growth] numbers. The consumer sector is not growing as fast as people thought it was going to be, but it is still growing, and so there is still a lot of opportunity in the consumer area, and certainly from a perspective of investment in businesses. Much of China is still relatively poor, and so there are still lots of opportunities, and the consumer sector is still backwards in a lot of areas.

As difficult as the economy can be, and as bad as the situation looks, and as negative as the commentary is that you get in Western media, there are still plenty of opportunities in the Chinese economy. Certainly if you go there and spend time in the big cities like Beijing and Shanghai, you don't feel like the place is in a depression or about to collapse. It's the opposite.

Q: You have been back in the US, in Washington DC, for about a year now. Has the distance given you a different perspective?

A: You know, it is difficult to avoid the DC groupthink and getting in the DC fishbowl. But the flip side is, through the *Sinocism* newsletter, regularly having lots of interesting conversations [with people about China].

One thing that I think is important for American businesses is that I think there are some [business leaders] that have not quite grasped how much the attitudes in DC have changed... I think you are a going to see a much harder approach to China, and a greater willingness to tolerate friction and conflict. I don't mean military, kinetic conflicts, but just much more willingness to push hard on China to protect American interests, something that Obama has not [done] in some areas. From that perspective, it has given me a better insight into how the US is going to deal with China. I think there's a desire in Europe and other parts of Asia for the US to take a tougher stance toward China. And if the US does it, other countries may follow.

Q: The recent past has seen a marked move away from globalization, at least in rhetoric, with countries talking about trade barriers and so on. Why is that happening now?

A: I think it ties into the broader questioning of whether or not globalization and trade have worked for everybody. And this is why you see Brexit, why you see various populist movements in Europe, and why you see Trump. There have been a lot of losers to globalization, and one of the key components of globalization has been the rise of China and trade with China. But I think that the benefits have accrued to a smaller number of people than were told were going to be getting the benefits. And then you look at the way that China, when it comes to free trade, [restricts investment]. People ask, if we can't go buy a media company or a chip company in China, why can China buy a media company in the US, or a chip company in Germany? You are going to see a lot more discussions around reciprocity.

> As difficult as the economy can be, and as bad as the situation looks, and as negative as the commentary is that you get in Western media, there are still plenty of opportunities in the Chinese economy

You also have sectors, for example semiconductors, where for a long time China has been trying to build its own semiconductor industry to be able to basically indigenize the industry so they no longer have to use foreign chips. We are seeing this across the tech sector, across the Chinese IT stack … They have actually said they want to replace Western firms. Part of it is just listening to what the Communist Party says. Under Xi, of course, the party is much more robust… If you are a responsible politician and you couple that with what is going on in your own country, conversations around dissatisfaction with globalization, the problems that foreign companies are facing in China anyway, it's really hard to make the case that we should continue business as usual. It certainly feels like the Chinese are getting a much better deal than the rest of us.

Q: But do you think the reaction thus far has been the correct one? Was Brexit the right way to react?

A: No! But I think that, for example, it would be great if the US-China bilateral investment treaty would pass. I think it's a long way away, longer than people think. The problem is that trade is very important, but it does have to be within rules, and China can't have its own set of rules and then play by the rest of the world's rules. There is some dissatisfaction with parts of their compliance with the WTO.

You asked earlier about what are the good spots. When you look at the service sector, and you look at things like media and the internet, those are basically closed to foreign investment, and those are some of the most exciting parts of the Chinese economy. And so something needs to change. If those sectors are blocked to foreign companies, then the Chinese companies should have some limitations on what they can do outside of China. Otherwise it is fundamentally unfair, and it is not like China is some two-bit little country where it doesn't matter. They are incredibly smart, incredibly wealthy, incredibly large and have much more ability to have impact than pretty much any other country in the world.

Talent Management

Edward E. Lawler III, Distinguished Professor at the Marshall School of Business, talks about how the nature of employment has changed

By John Christian

Business has changed, specifically the relationship between management and employees. Once upon a time, companies offered careers—long-term, stable employment wherein the employee filled a narrowly-defined role. In past generations, it was common to spend an entire working lifetime at a single company.

But with globalization and the ratcheting-up of competition, employers have both the ability and the need to be more nimble. Edward E. Lawler III, Distinguished Professor of Business at the University of Southern California, Marshall School of Business, expounds on the new model, which he terms "talent management." This new paradigm focuses on the critical needs of a business, and finding the right people that can fulfill them. It is a model that is highly flexible, and also much more open about the needs of the company and how employees fit in with them.

Q: You've published over 50 books on organizational strategy, management, human resources and other topics in almost as many years. How have corporate challenges in these areas changed over time?

A: They have changed in many, many ways. I think the global economy has made an enormous difference in how people think about designing organizations. Technology has changed dramatically, particularly the information technology piece of it, and that has had a big impact on how you can manage and how you can treat people. Those changes in many ways have made my area of interest much more important, that is human capital, because in today's environment access to the right human capital, the right talent, has become a very important source of competitive advantage for organizations. The global supply of talent has made a big difference in where people do work, what kind of work is done, and how people work.

The options that organizations have with respect to where they do work is a good example, and we see it playing out both politically and economically depending on where the talent is located at the right price. Organizations can now much more easily move work to the place where they can get the best value for their dollar, in ways that simply were not possible 20, 30 years ago. That is partly technology and partly just political openness to work being moved around the globe. Yes, there are a lot of restrictions and limitations on trade and the movement of work, but compared to the past it is much more possible to produce major products like computers, autos, and software from work places around the globe, that don't necessarily match where you are going to sell the product.

Q: What are some of the key challenges to managing talent? And are corporations doing a good job on average?

A: It does depend somewhat on where you are in the world. For the last 20 years I've been doing a survey of large corporations in terms of their HR practices and the last couple of rounds have included data from China (Lawler, E., and Boudreau, J., Global Trends in Human Resource Management, Stanford Press, 2015). It is notable that the Chinese companies tend to be much more traditional in their HR policy, practices, and the way they staff and manage HR. They take a more traditional bureaucratic job-focused approach, one that has been around for centuries. Whereas if you look at European and US companies, they are moving toward what I call a human capital orientation. They have changed polices around job security, stability of employment, and are much more focused on talent development and work relationships that are more transactional, and often don't involve the career element that they used to involve 10, 15 years ago. We are seeing in companies a new talent management model slowly but surely developing. It combines short-term type employment for some people and relatively brief periods of employment (three to five years) for a significant part of the workforce, to give organizations a kind of agility that they haven't had traditionally.

And of course there are more rewards for performance in the West as another factor. We also have seen the decline of unions, which provided a number of restrictions on organizations. In the United States they have become a less and less important factor. One exception to that is public service, government employment, which still has strong unions.

Q: Can you explain more the differences between the old approach and the human capital approach?

A: A number of features are different. The old model focused on having a job whose characteristics did not typically change and looking for somebody to fit that job. The human capital model focuses more on the talent that individuals have. It is much more "what is our strategy, what are our difference-making skills, where can we find people with those skills and how much do we need to pay them so that we can be the employer of choice for them." So in some ways it is more of a competency-based, or skill-based way of thinking about talent, versus a job-based approach where we have a task and we need somebody to perform it.

Q: Did the change in models happen because the nature of worked changed?

A: Certainly the nature of work has changed. As I said, it has become more mobile and diverse in terms of what situations you can do work in. Increasingly the simpler work is done by machines and computers. What we are left with is stuff that is more difficult to do, and you can't often do that with an organization that doesn't have a focus on getting the right talent, developing the right talent and rewarding the right talent for their performance. You certainly still, of course, have fairly low-skilled labor in various parts of the world and that's all going on, but on top of that, or separate from that, is this evolving infrastructure of companies that are moving toward talent doing more complex things and doing the simpler things with technology.

Q: So we are thinking, for example, about the difference between people who assemble cars versus the people that design them, right?

A: Actually, the auto industry is one that I spent a lot time working on years ago when I was at University of Michigan. At the time there were many repetitive, 50-second cycle jobs on the assembly line, and a little bit of robotics. You go there today and you will see far fewer people and many of them will be monitoring and setting up automated processes and not actually touching the product—that's being done by machines. And a lot of the scheduling and speed of the assembly line is determined by computers. That is what dominates the auto industry today, and as a result not as many jobs are leaving the US as there used to be, because you need skilled people to do them. So it makes a lot less sense to outsource or move offshore from the United States at least many of the jobs that are left in the factories. They are skilled jobs, whereas the jobs that used to receive high pay weren't skilled and could be done elsewhere by less well-trained much cheaper labor or by machines.

Q: You have singled out Google as a company that has done a terrific job at talent management. But not every company is a Google. How can an average company do it?

A: You're correct in saying Google is an outlier. Very few companies can afford to have 40 or so PhDs using smart data to decide how much to pay people and who to hire, and measuring the performance of individuals on an ongoing continuous basis, and providing all sorts of perks and extra benefits to make sure they can attract and keep the best and the brightest. They are an exception. You also get into a cause and effect issue: maybe they can provide these benefits because they have done really well financially.

What most organizations can do is focus more on how talent is managed relative to their business strategy, and make smart decisions about how talent can provide them, with a competitive advantage. Most organizations have at least a set of tasks that need to be performed at an above-competitor level. If they can identify those and figure out what talent that they need to get a competitive advantage, that will be a difference maker. They can look for people they can attract with particularly good packages, become more individualized or differentiated, segmented as some people call it, in terms of how they treat their talent and really focus on the talent that makes a difference.

This is in contrast to the bureaucratic model, which treats everybody the same is the least disruptive and is the easiest to explain and justify. It is also the best way to avoid unions because they aren't going to get complaints about unfairness or preferences.

The newer models say, what we need to do is think about how we can get a competitive advantage, and we have to be open about that and up front with that. I have argued for public pay and more open information about what is going on, which is still resisted in most of the Western world, so you can show people what the strategy is, how you are implementing talent management practices as a portion of the strategy, and you can justify it on that basis. This is better than saying we treat everybody equally here, and maybe we do a little more for the better performers, but we can't tell you what we do, at least in terms of dollars, and of course we reward seniority and so forth.

Q: You've recently written against too many benefits, for instance free workplace childcare or unlimited vacations. Office ping pong tables also come to mind. What is the smart way to use extra benefits?

A: I'm a bit ambivalent about some of those extras, in the sense that it may be that they make a significant enough buzz impact that they improve a company's brand as an employer to the point where they do pay off for the company. Looking at this issue goes back to research that I did in the 1970s when in the US people began introducing what is called cafeteria benefit plans that gave people choices that included cash. It turned out that many benefits are valued less than their cost. When all is said and done, if you ask people if they want cash equal to the cost of the benefit, or the benefit, by and large people want the cash.

What we did then, and a number of companies have built it into their systems now, is suggest more choice for people so they can pick a benefit package that fits their values. Where I work I have multiple different insurance plans that I can choose from, which makes sense because people here have very different lifestyles, very different risk tolerances and of course at very different ages you have very different preferences.

> What most organizations can do is focus more on how talent is managed relative to their business strategy

So my concern about the Silicon Valley thing, at least from a return on investment point of view, is that some of the things that they are giving out, free meals, or dry cleaning services is that they may not be well valued relative to their cost. But that may also create buzz and make you a magnet employer. I think Google now says that they get two million job applicants a year. That improves their selection ratio to a level that is mind boggling, in fact it is probably a negative because they have to process all those applications.

Q: What do companies need to be looking at right now to be more agile and adaptable today?

A: Obviously a whole bunch of things. I think a fundamental point, at least on the talent side, is what is your contract with your employees? What is your basic proposition around how long can they expect to be employed, what they have to do to continue to be employed, what you are going to do and what they need to do to make a successful employment relationship.

One extreme is a company I have written about with my coauthor Christopher Worley (*Built to Change*, Jossey-Bass, 2006), Netflix. The thing I like about them is that they are very, very clear. Basically they put the responsibility for development on the employee. What they say to people is: Look, you have a job here, a very well-paid job, as long as your skills match what we need. Then the question becomes who is responsible for seeing individual skills meet what the company needs. And they say, we take some responsibility, we'll try to give you information about what is happening, what skills we need, but we can't guarantee that we are going to be right, or that your skills will match what we need in the future. So be prepared to not be an employee here. Ironically, their HR VP who lectured us on the advantages of this system lost her job because the organization decided she was no longer what they needed in the HR function.

I say all that because Netflix has successfully made several transitions in the way they do business in a relatively short time. There aren't very many companies like that around. Most aren't agile enough to make a major change—Kodak, Xerox.

Q: But is there some part of that very open statement that is hostile?

A: Oh definitely, it doesn't attract everybody! But they say: That's good. We don't want to employ everybody. We need the agility and the flexibility that we get from that kind of employment relationship. But while you are here we will treat you really well. We'll tell you where we are going, we will pay you above market wages, we'll treat you well and we will have a good relationship. I'm not big on the existence and importance of age differences, but I think this does go over better with many younger employees, people that have grown up in a generation where they may not want a career with a company and so on.

When I was graduating: I interviewed with AT&T and they said, we are not offering you a job, we are offering you a career. And if you don't perform at a high level, you won't keep going up the management hierarchy, but you will still have a job. The ultimate of course is to keep going up the hierarchy. But if you don't prove to be that kind of person, that's okay you will still have a job.

Larry Summers on China's Development

Larry Summers assesses Chinese economic challenges and reflects on the worldly lessons of China's success

By Maurits Elen

China is facing one of the toughest economic restructurings in world history: changing the growth model of a colossal economy against the backdrop of ebbing domestic growth, environmental degradation, and financial disequilibrium. But in the global political economy, the world looks at China gaining weight in the existing economic order and pushing for greater influence.

Larry Summers, now President Emeritus at Harvard University, has advised the United States on economic affairs for many decades in various roles, meeting numerous times with the Chinese leadership to help deepen Sino-US relations. In this interview, the former Treasury Secretary in the Obama administration discusses various Chinese domestic challenges, as well as China's relationship with the rest of the world.

Q. In the past few decades, millions of people have been pulled out of poverty in China but the country still faces, along with the US, one of highest levels of income inequality. How can China make growth more inclusive?

A. In driving prosperity, markets work much better than planned-economies. After all, letting market forces operate so individual initiative can flourish and so individuals are rewarded for taking initiative can produce staggering opportunities and returns.

The other side of markets, however, is that rewards can be very unequally distributed. It is the role of policy to try and make sure that everybody has an opportunity to share in economic growth. There are many dimensions of that, there is giving everybody a chance to compete in the marketplace, that's why education is so central and it must be made sure everybody can get as good an education as possible, regardless of family background. Taxes must be collected in a fair manner and in which those who are positioned to pay more are expected to pay more. It is important that prosperity be based on giving people what they want, producing new products, and producing old products in more efficient and effective ways, rather than working the system to get monopoly power.

China needs to work on all of these elements. Making sure that opportunities for children are the same, regardless of where in China and to whom in China they are born. Making sure that the success of enterprises depends on the quality of what they sell, not on the depth of their relation with officials in government. Making sure that taxes are collected in a fair way, and making sure that those who lead enterprises and communities do so for the benefit of their stakeholders, rather their own. I think these are all core elements of inclusive prosperity that China should take into account as it moves forward.

Q. China needs to attract more private investment. What can the government do to stimulate private investment in an environment with a relatively low returns on assets?

A. For enterprises to be able to succeed it is key to have a relatively predictable business environment. In a situation where the rules for private enterprises are very unclear, it is going to be seen as very risky to make investments in private enterprises and that is likely to discourage the level of investment. So it comes back to a predictable path for policy and certainly for a non-punitive approach to businesses that are succeeding. It also goes to creating a freer environment in areas relating to in particular the provision of consumer services in China.

Q. Real estate is a driver of Chinese growth, but recently has looked bubbly—asset prices in some cities have risen more than 30% this year alone. What are your views on how Chinese policymakers are dealing with this situation?

A. I think they are pursuing the right kinds of approaches. They are looking hard at various kinds of controls on down-payments and the like. Moreover, they are implementing restrictions on leverage, both for purchasers of homes and for developers.

International experience suggests that when you have residential real estate bubbles it is hard to know, because sometimes real estate bubbles can rise very substantially and keep rising. This makes it very hard to gauge the timing. I think it is a somewhat problematic type of question. But surely the inflated asset prices are a sign of distress and a sign of potential problems to come, and so it is appropriate for the Chinese authorities to respond to that.

Q. What is your broad view on the future of China and the world in terms of growth?

A. I would be surprised if either China or the world economy grew as rapidly in the coming 15 years as they have grown in the last 15 years. Some of that is demographic, some of that is technological, and some of that is political. I think that it is reasonable to aspire to continue significant progress, although I doubt it will be as rapid as it has been historically in the non-crisis years.

Q. Given the slowing growth and other economic challenges facing China today, some Chinese officials have expressed concern about the economy falling into the middle-income trap. What are your views?

A. I never been really a huge believer in the middle-income trap as a concept. I am not sure that it is really true that there a certain levels of development at which growth slows. What is true is that as you get richer, the easiest opportunities for convergence have already been captured. This makes things harder, especially now China has both challenges in maintaining stability in the near term and challenges with respect to the achievement of longer-term growth at rapid rates. Nonetheless, I do not see any reason why China should not aspire to be a significantly larger fraction of the global economy in 2030 than it is today. Certainly China cannot assume rapid growth in the future because it has achieved so in the past. Still, I do think this is a reasonable aspiration for China.

Q. You have written that international economic arrangements need to be adjusted to reflect the reality of a more powerful China—in what ways?

A. China needs to be given more of a voice and have more to say in a range of international fora, in particular the international financial institutions. There needs to be more willingness to learn the lessons of China's tremendous economic success, but also the canon of traditional Western economics, as Western institutions provide technical assistance to developing countries. I think there needs to be more serious conversations with China about what the nature of the global system ought to be looking like in a go-forward basis, rather than simply conversing in ways that are focused on Western visions and trying to have China to become involved in those Western visions. In general, it needs to be a process of mutual respect in the formulation of international economic policies.

Q. Could you expand on what the lessons of China's economic success are?

A. It is more for China to draw the lessons from its experience than it is for me. China has certainly demonstrated a power in certain circumstances of a gradual liberalization strategy, they have demonstrated the power of an urbanization strategy, and they have demonstrated that a basic governmental responsibility for education and healthcare can have very substantial benefits.

They have also operated in a model that has had more reliance on administrative controls and direction, and less pure reliance on prices, especially in earlier stages of economic development, than would be the traditional advice of the international institutions. In just what ways those lessons do or do not carry over is subject to ripe debate, but in light of the fact that China has for several decades achieved more rapid growth than anyone else has, over a very long time period, one has to regard that as an impressive achievement, from which the world should be prepared to learn.

Working it Out

Chinese businesspeople are finding new ways to be fit

By Ida Knox

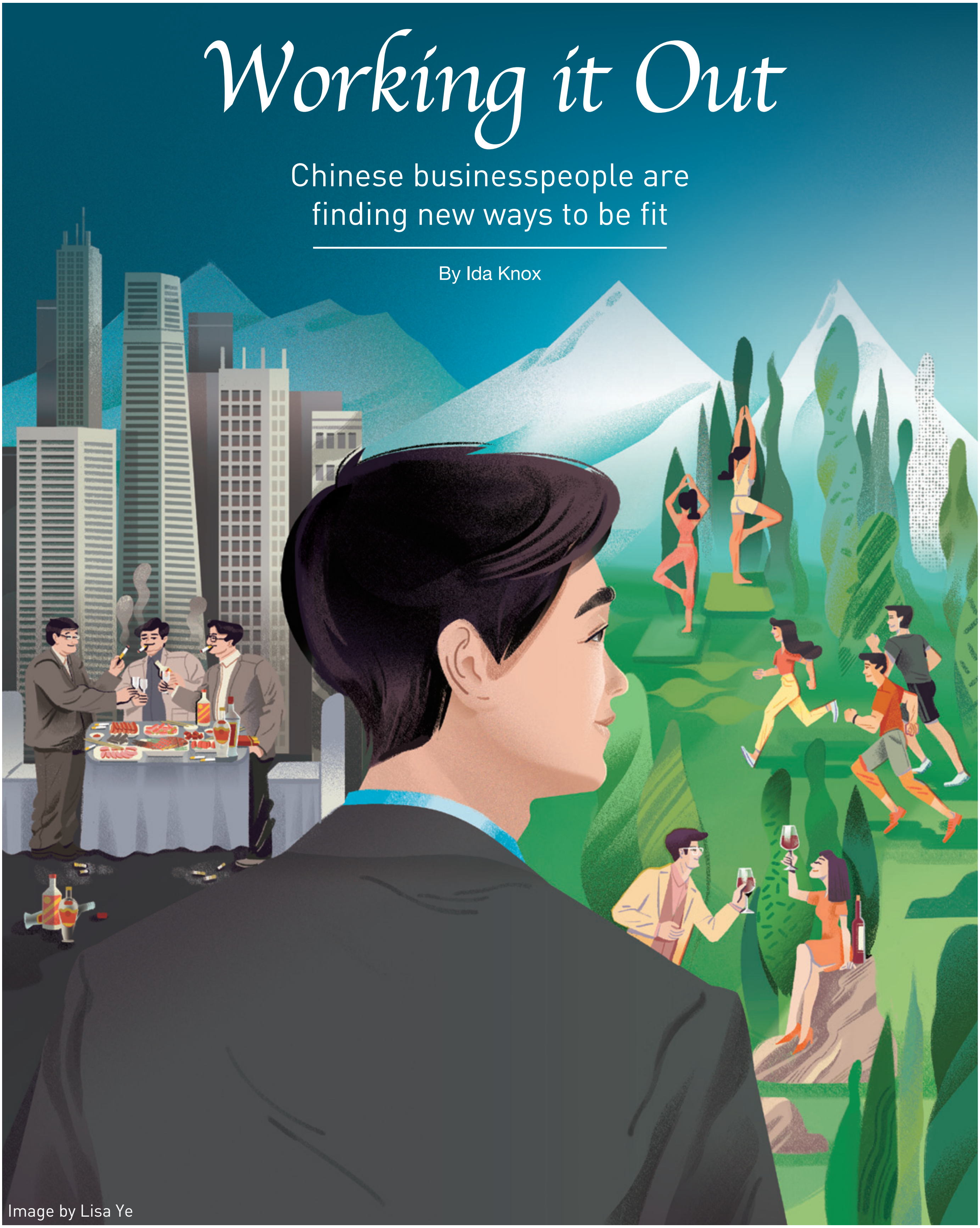


Image by Lisa Ye

Doing business in China can be a fraught affair. Overly lavish banquets and too much baijiu have long been a part of the process, and combined with the high-stress culture of today's China, business executives and workers alike can be easily led down the path to ill-health.

A study published last year in *BioMed Research International* found that cases of gout—also known as the 'disease of kings' due to its association with a rich diet—are generally high in China, but tellingly concentrated in the south, where the economic boom is concentrated. Jiang Zuiyi, a 55-year-old government official in Shenzhen, told *The Diplomat* in April that he developed the painful condition around the time he moved to Shenzhen from the countryside. In his view, business banquets were among the culprits, along with lack of sleep.

But the good news is that a new generation of Chinese work warriors are rebelling against the over-indulged status quo.

"Your bosses always ask you to drink a lot to show your attitude towards the company," says Zhang Lan, who works in real estate in Shanghai. "I don't like [this] drinking culture."

And just as these bad habits are coming into question, new approaches to health and wellness are coming into vogue—particularly among the young, hip and urban. Rising with this trend is a multibillion-dollar fitness and food industry. Fitness apps are being downloaded by the tens of millions, and gyms are popping up almost everywhere you look in major cities. According to Ibis World market research, the gym, health and fitness clubs industry in China is set to generate "$5.81 billion in 2016, with annualized growth of 11.8% from 2011 to 2016." And that does not include sales of health food, which seems to be a craze all its own.

At its heart, all this represents a fundamental generational change in attitude, one linked to the emergence of broad prosperity.

"Growth [in this industry] will continue for sure, because of the middle class and millennials," says Thibaud Andre, a research associate with Daxue Consulting.

The 2016 Shanghai Marathon attracted tens of thousands of young professionals

Fitness Fashion

The traditional Chinese approach to fitness is slow and steady, as evidenced in the apparently languid movements of tai chi. Elderly practitioners of these ancient arts can still be seen everywhere in Chinese cities, particularly in the morning.

But younger people do not seem so interested in continuing that particular tradition which may have to do with the newly frenetic pace of life in 21st century China.

"Young people live and work under increasing amounts of stress," says Guo Yaxuan, a Jilin-based fitness instructor. "Those born in the 1990s have less job stability, many of them are not getting married."

He says that this crop of stressed-out workers are drawn to gyms, especially as they work their way up the ladder. With China's 385 million millennials now edging towards 30, gym memberships, exercise classes, jogging, sports teams, and marathons—all very Western sports concepts—have taken off in the Chinese fitness world. Running in particular has become hugely popular.

"Running is often seen as a means to balance the lifestyles of office workers," says Noora Ronkainen, a postdoctoral researcher at Jiao Tong University's Exercise, Health and Technology Center. "The more-modern companies seem to have increasing support for this in the form of running groups."

China, she says, is morphing from a culture where peaceful walking in the park ruled supreme to a place where marathons and "10k's" (10-km running competitions) are taking over, and it is not happening quietly, despite the relatively solo nature of the sport.

"Running seems very social and even though many do some running alone they make sure it is known in their social media groups," Ronkainen says.

This social media connection is key, due to the fact it is largely millennials who are joining the running craze.

"On Weibo, '#fitness' is huge in China,

over 100,000 people have used it," says Andre. "It's trendy to post a picture while in the gym."

That gym trendiness has also caused the options to multiply to the point where there seems to be something in the gym line for almost everybody.

"Anyone can choose from yoga, Crossfit, HIIT classes, etc," says Vidal Narvious, who owns a Golden Gloves Gym in Shanghai.

For Narvious, the need for stress relief and the need to socialize go hand-in-(boxing)-glove.

"There really isn't a better feeling than hitting a pad or heavy bag when you are stressed," he says. "And as a side effect, you are meeting new people."

Gym and Juice

The newfound popularity of modern fitness in China has brought with it a multibillion-dollar opportunity.

According to a Xinhua news report, "the total number of gym attendees across 70 major Chinese cities has increased by four to five million each year since 2011."

Prices of memberships at these gyms range from RMB 2,000 to 15,000 a year in Shanghai. It is a hefty price in a city where the average monthly salary is around RMB 6,000, but then again it is not average people buying them—customers are comparatively wealthy and members of the growing middle class.

The buying power of this group has attracted a huge amount of private investment, and given the social media aspect pointed out by Andre, a lot of it is going into apps and tech.

"Apps can provide a full line of services, from individual coaching of performance to incentives," says Andre.

Venture capital firms GGV Capital and Morningside Ventures are leading a $32 million Series C funding round in the Chinese fitness tracking app Keep, which has 30 million users. Codoon, a close competitor that tracks movement and sleep, has more than $91 million in funding.

The government has also expressed the desire to get in on the action. Liu Qing, the deputy secretary-general of the Chinese Association of Sports Industry, told Xinhua News Agency that the fitness industry will become a "pillar in the national economy" when China's GDP per capita reaches $8,000—and according to the World Bank, it was $7,924 in 2015.

"The government wants to put money into fitness and sports in general," says Andre. "Investment [by] the government in fitness will focus on all levels."

Data from Daxue Consulting puts the current annual output value of China's fitness and leisure industry at about $150-200 billion, accounting for about 0.15%-0.20% of domestic GDP, and growth in the sector shows no sign of slowing.

The opportunities also extend to food and beverage. Sales of 'health food' in China are around RMB 200 billion annually, according to the China Health Care Association. Forbes and Mintel, meanwhile, have reported that "nearly nine in ten Chinese consumers now drink plant-based concoctions, be it soybean drinks, juices or grain drinks."

Diet and health supplements are also seeing a hike in popularity. Data from market research firm Euromonitor International notes that in 2013, sales of protein powder reached nearly RMB 392 million, up from RMB 275 million in 2012.

But healthy lifestyles might negatively impact one particular beverage industry: baijiu, the grain-based alcohol drunk across China that has a kick like a mule. The World Alcoholic Beverage Alliance's 2016 Development Report of the Global Alcohol Industry notes that sales revenues slipped 3% from RMB 528 billion to RMB 512 billion.

Not all alcohol is treated equally in the health industry, however. Red wine is often considered to have health benefits, and Chinese consumers drank 1.86 billion bottles of it in 2013, becoming the world's biggest market for the beverage.

Leading From the Top

But does the burgeoning growth of the health industry mean that China's stressed-out office workers are having an easier time of it? Not necessarily.

"According to some market surveys, it stops at a desire to work out," says Yaxuan, the fitness instructor. "People often tend to come up with excuses, or would rather grab a drink and hang out with friends after work."

But ironically, Chinese companies that push their employees to drink and banquet are now also beginning to push them to be healthy. Zhang Lan, who complained about work-related boozing, has found that fitness may be taking a seat alongside the usual feasting.

"[We do] hiking or some team building activities at least once a year," says Zhang.

This fall, her entire company went to hike around a lake in Zhejiang province not far from Shanghai. At first she was decidedly unexcited about the prospect of spending the weekend with her co-workers, especially because it is was compulsory in addition to being unpaid. In the end, however, she says she had a pretty good time, and she's unequivocal about which she prefers.

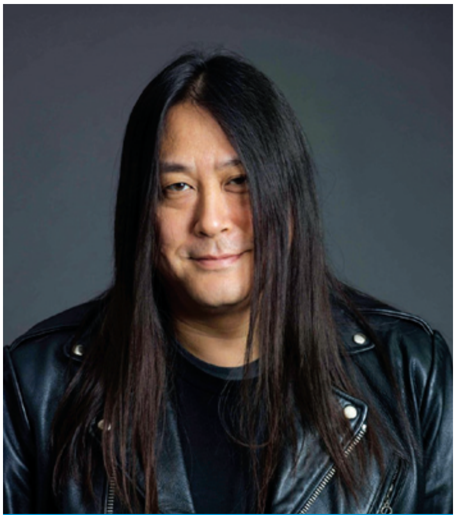
"Definitely the hiking," she says with a laugh. "At least it's good for the health!"

Color and Context

Kaiser Kuo recommends a range of books on China

My job is running a podcast about current affairs in China, the Sinica Podcast powered by SupChina, and so I actually have a lot of homework reading to do. Many of the people we interview for the podcast are authors, so that makes up a good portion of my China-related reading.

For people that are new to contemporary China as a topic, there are a few introductions that I recommend. One that doesn't get nearly enough play is by Damien Ma and William Adams, called *In Line Behind a Billion People*—it is a readable, sensible introduction to China, centered around scarcity in what is the world's most populous country. Another one I would highly recommend is Arthur Kroeber's new book, *China's Economy: What Everyone Needs to Know*. It's a very accessible, very smart book about the most important economy in the world outside the United States, and how it came to be what it is today. Other books I recommend are *Wealth and Power*, by Orville Schell and John Delury, Evan Osnos's *Age of Ambition*, as well as Peter Hessler's body of work.



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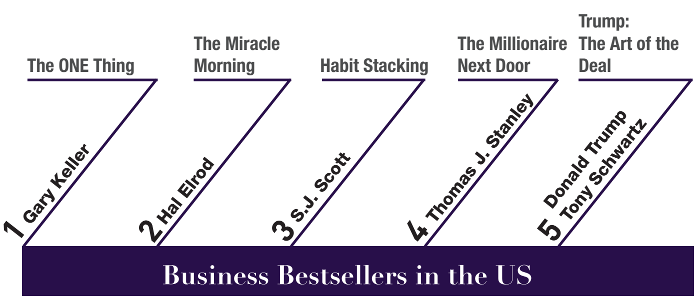
Along with these, there are a few books that, while perhaps not so palatable, were nevertheless very important to me. The work that most informed how I look at things is the trilogy by Joseph Levenson, *Confucian China and Its Modern Fate*, which was written in the 1960s and tracks the decline of Confucian traditions in the 19th and early 20th centuries. It is incredibly dense, and I read it when I was a graduate student when I could untangle the prose. Another formative book for me is *China in Disintegration*, by James Sheridan, about the May 4th period and the absence of political culture at the time.

The next two books I'll recommend are *The Origins of Political Order*, and *Political Order* and *Political Decay*, both by Francis Fukuyama. These books are not directly about China, but they are essential for any Westerner trying to put China in a broader context. I think it is a bit ironic that everyone still associates Fukuyama with the book he wrote in the early 1990s, *The End of History and the Last Man*, which is kind of the epitome of this teleological, built history that is all converging on the victory of democratic capitalism. But these two books are, if anything, total antidotes to that whole end-of-history business. What it really does is to situate development of institutions of constraint, like rule of law, separation of powers and the like, in a very specific historical context and looks at the emergence of these institutions in different civilizations. We really need to understand why it didn't happen in most of the world, and how incredibly contingent it was that these things did congeal in Western Europe and its colonial offshoots. So for me, even though it is not really a book about China, it spends an awful lot of time with China, and I suspect Fukuyama's real mission in doing this was to explain why China is where it is today.

Finally, I do an awful lot of reading outside the topic of China. At the moment I'm in love with *The Nix*, a first novel by a writer named Nathan Hill. It's very much in the tradition of Michael Chabon or Jonathan Franzen, a gigantic sprawling multi-generational tale that's trenchantly observed, and witty and funny. It's also just heartbreaking and the prose is just gorgeous. Worth anyone's time.



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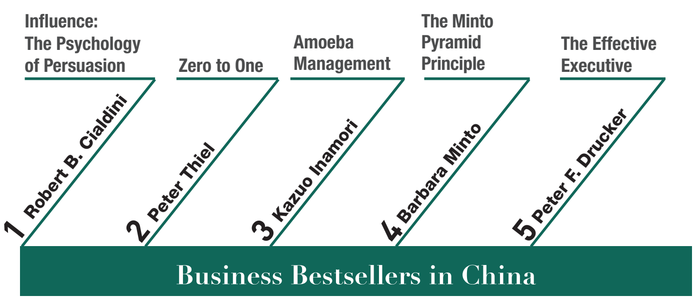

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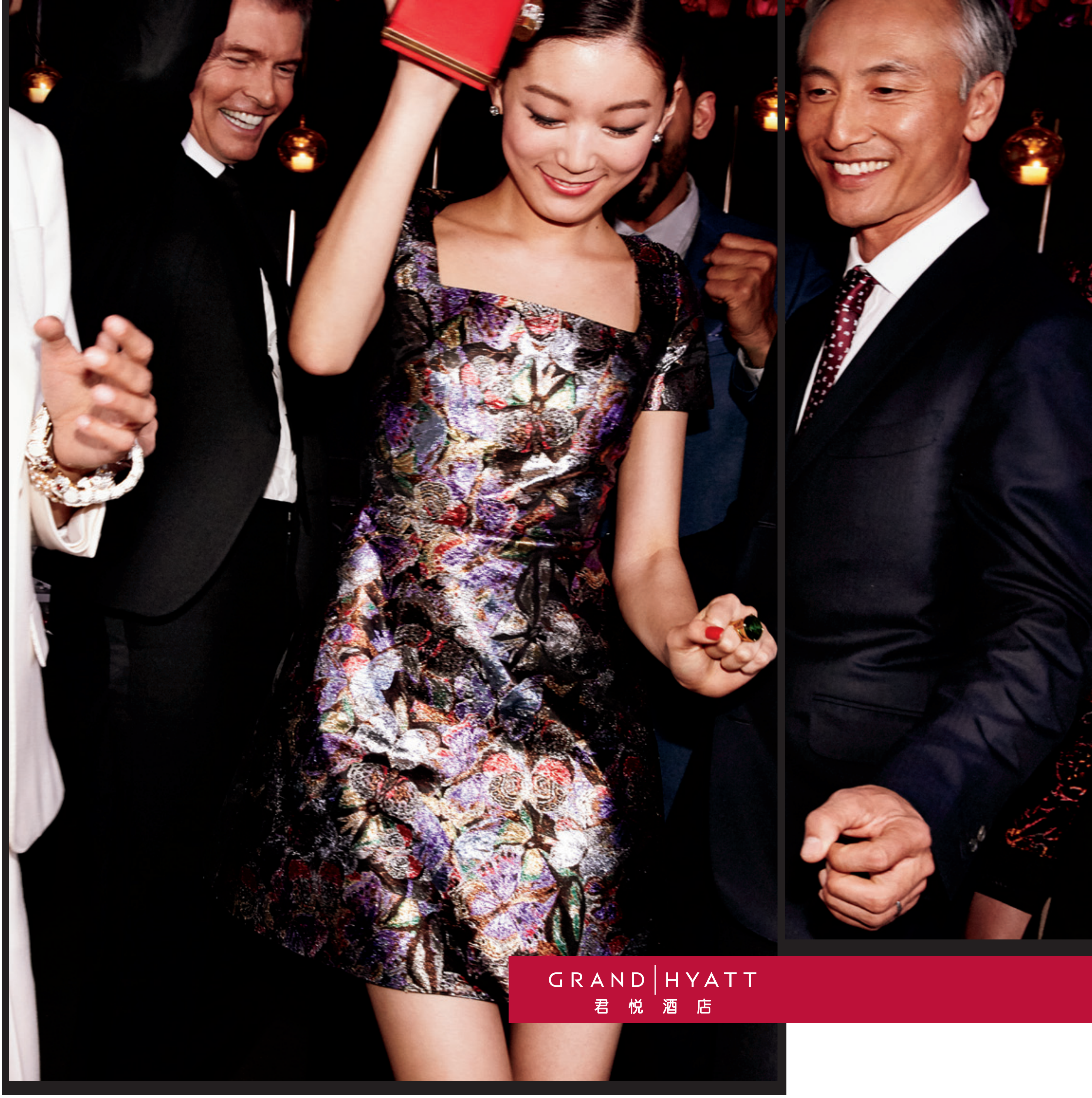

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