

MIZUHO CHINA MONTHLY

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- Executive Summary -

China's Economy	Observations of Debt-equity Swaps Attracting Attention Again in China
<p>In China, corporate deleveraging has been an urgent issue, and a comprehensive measure was announced in October 2016. In particular, debt-equity swaps (DESs), which are to be re-introduced, are gathering significant attention. DESs were first implemented in the late-1990s, but as a result of implementation mainly led by the government, there were issues related to the improvement of management efficiency at target companies, as well as exit strategies, while there was success in temporary improvement in corporate financial conditions, as well as in the clearing of bad debts. On the other hand, this time, DESs are being used for market mechanisms. There have already been multiple plans for DESs for industries with excessive production capacity, as well as state-run companies. Although DESs started smoothly, it is necessary to continue observing whether DESs can contribute to the improvement of corporate management efficiency in the times ahead.</p>	
Industrial and Regional Policies	The Implementation of and Prospects for China's Medium- and Long-term Development Plan for the Automotive Industry
<p>Nine years have elapsed since China's auto industry emerged as the world's largest in 2009, but it continues to trail in the wake of the world's leading industrialized nations in terms of its technological capabilities, brand strength and capacity for technological development. China recognizes that it is a long way from establishing itself as an automotive powerhouse and in late May this year implemented the Medium- and Long-term Development Plan for the Automotive Industry, the goal of which is to affect this transformation by 2025. This report offers an overview of the current state of China's automotive industry, examines the background to the Plan's formulation along with a summary of its essential content, and explores the challenges to and feasibility of accomplishing key Plan goals.</p>	
News from the China Advisory Division	Outlook for the Chinese Yuan Exchange Market Based on the Trade Environment
<p>In the <i>Report to Congress on International Economic and Exchange Rate Policies</i> that was released in April, the identification of China as a currency manipulator was postponed. However, China was included on a watchlist according to a criterion newly introduced this time. The U.S. thus continues to pressure China for the correction of its trade imbalance. This review will summarize the key points in the <i>Report to Congress on International Economic and Exchange Rate Policies</i> along with the trade situation in China, in order to examine the future outlook for the Chinese yuan exchange market.</p>	

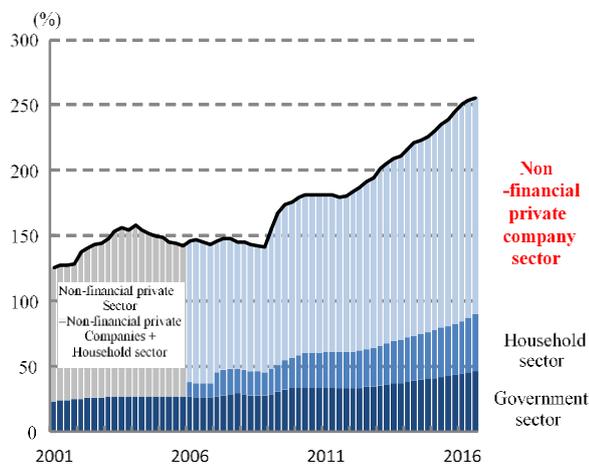
Observations of Debt-equity Swaps Attracting Attention Again in China

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1. Role of debt-equity swaps with growing expectations for accelerating deleveraging

In China, corporate debt increased sharply after the large-scale economic stimulus plan of CNY 4 trillion introduced at the end of 2008. The increase of debt did not slow down thereafter, and the balance of corporate debt mounted to CNY 120 trillion (166.2% as a ratio to the GDP) as of the end of September 2016 (Fig. 1).

Fig. 1: Balance of debt in the Chinese economy as a ratio to the GDP



Source: Compiled by Mizuho Research Institute based on material from BIS

The Chinese government has been increasingly cautious about this problem of corporate debt as a possible cause of downward pressure on the Chinese economy, along with the instability of the financial system. Thus, the government has started to focus on corporate deleveraging (to lower dependency on debt) as a key economic measure along with the cutting overcapacity, as well as the reducing housing inventory. In October 2016, the government has released its basic principle, *Opinions on Actively and Steadily Reducing the Leverage Ratio of Enterprises*, proposing various methods of deleveraging, such as the promotion of corporate mergers and reorganization, debt reduction through the use of portfolio assets, the implementation of bankruptcy according to legal regulations, and the promotion of the development of equity finance, etc.¹

In particular, expectations are growing for debt-equity swaps (债转股 in Chinese; hereinafter referred to as “DESS”). Even though DESs seem like a new method at first glance, they were used around 20 years ago when excessive debt by certain companies and the disposal of bad debt by financial institutions were

¹ 劉家敏, 企業のレバレッジ比率の積極的かつ安定的な引き下げに関する意見 (みずほ総合研究所『みずほ中国政策ブリーフィング』 issued on November 15, 2016)

key economic issues. This review will thus discuss the outlook of deleveraging through DESs by examining the past evaluation of DESs.

2. Characteristics and evaluation of DESs implemented in 1999

(1) Reasons for which DESs were implemented in 1999

DESs were last implemented in 1999. The following are the main reasons for the increase in the corporate debt of that time that triggered the implementation of DESs. In China, the economy was overheating due to economic reforms, such as accelerating deregulation for the transition into a market economy since 1992 in which the Southern Tour Speeches delivered by Deng Xiaoping, resulting an increase of debt for state-owned enterprises.² Thereafter, the Chinese government carried out monetary tightening in order to control the economic overheating and inflation. As a result, in the second half of the 1990s, state-owned enterprises in China faced difficulties with a decline in their revenues, along with an increase in interest payment. In addition, the majority of the debt for state-owned enterprises consisted of loans from the four major state-owned commercial banks, which accounted for a larger share in the financial system of that time than they do currently. Therefore, the struggles of state-owned enterprises directly lead to the instability of the financial system in China.

As a consequence, the Chinese government focused on the improvement and reform of the management structure of state-owned enterprises in the second half of the 1990s. In 1998, goals for problem-solving were identified for state-owned enterprises for a period of three years. While such measures were being taken, the first asset management company (hereinafter to as an “AMC”) was founded in April 1999 in order to dispose the bad debts of banks. In July of the same year, *Opinions on Several Issues Concerning the Debt-for-Equity Swaps* was released and DESs were implemented for the purpose of (i) the recovery of bad debt for commercial banks and the acceleration of repayment and the prevention and resolution of financial risks through the enhancement of the liquidity, (ii) acceleration in achieving a surplus for large-scale and medium-scale state-owned enterprises with a deficit and that implemented DESs, and (iii) the promotion of the conversion of the management mechanism of the companies involved and the acceleration of the construction of a modern corporate system.

(2) Characteristics of previous DESs based on a comparison with DESs today

What were the characteristics of DESs implemented in the past in comparison with current DESs? Figure 2 summarizes the key characteristics of the DESs in the past and today.

² It should be pointed out that state-owned enterprises already had a significant amount of debt, as a reformed known as “撥改貸” was introduced in 1984, shifting the source for funds for investment by state-owned enterprises from direct supply from the national budget to bank loans. “债转股 温故 1999” (“经济观察” issued on October 17, 2016)

Fig. 2: Comparison between previous DESs and current DESs

	Previous DES	Current DES
Document for comparison	<i>Opinions on Several Issues Concerning the Debt-for-Equity Swaps</i>	<i>Guidance opinion on marketizing the bank debt-for-equity swap</i>
Target companies (debtors)	<ul style="list-style-type: none"> - (Major) Selection criteria <ul style="list-style-type: none"> • Industrial companies that face difficulty in the repayment of principal and interest because of deficits based on heavy debt burdens that resulted from a lack of equity capital after investment through mainly bank loans between 1986 and 1997, but that can return to a surplus after the implementation of DESs • Among the 521 companies identified by the government, those with deficits due to heavy debt burdens inflicted by reform and expanded investment, but with the possibility of returning to a surplus through the optimization of the asset debt structure • Selected companies must be industrial companies with bad debts regarding bank loans taken in 1995 or before - (Main) Conditions <ul style="list-style-type: none"> • The products correspond to needs of the consumers, fulfill the conditions related to product quality and competitive. • The manufacturing facilities are at an advanced level both inside and outside of the country, corresponding to conditions for environmental protection. • The company has a high level of management, and the debt and credit relations are clear, while finances are normative, corresponding to financial principles and accounting rules. • The management reform plan corresponds to the conditions of the modern corporate system. 	<ul style="list-style-type: none"> - Conditions <ul style="list-style-type: none"> • Companies that are promising, and have a detailed and feasible plan to reform or recover from difficulties. • The facilities and products correspond to the orientation of industrial development with advanced technologies and markets, fulfilling the standards of environmental protection and safety. • Companies with good credit conditions without any record of bad credit such as intentional default - Recommended target <ul style="list-style-type: none"> • Companies in difficulty due to economic fluctuation but with a possibility of recovery • Growing companies with heavy financial burdens as a result of a significant amount of debt (growing companies in strategic emerging industries) • Major companies ranking high in industries with overcapacity, along with strategic companies related to national security - Prohibited target <ul style="list-style-type: none"> • “Zombie companies” that do not have the prospect of a surplus and no possibility of continuation • Companies with no intention to eliminate debt • Companies with complicated and unclear debt and credit relations • Companies that may compound problems of overcapacity, along with an increase of inventory
Implementers (recipients of stocks)	<ul style="list-style-type: none"> • AMCs 	<ul style="list-style-type: none"> • It is recommended to have various institutions participating, such as AMCs, insurance companies, and state-owned capital investment operating companies. The participation of companies under the bank that fulfill the conditions is also supported. (However, there are restrictions on DESs between a parent company and its subsidiary.) * It is prohibited for banks to directly implement DESs.
Fund procurement method	<ul style="list-style-type: none"> • Government funds (The AMCs with funds all provided by the government take over bad debt and implement DESs for it.) 	<ul style="list-style-type: none"> • Funds are procured through market-based methods and channels. • It is recommended to widely raise funds from PE funds and investors including the funds entrusted to manage • The issuance of marketed financial bonds solely for DESs is supported.
Implementation process, etc.	<ul style="list-style-type: none"> • Discussed based on surveys on the financial situations carried out by the State Economic and Trade Commission, AMCs, and commercial banks • The State Council gives final approval before implementation, after the assessment of the State Economic and Trade Commission, the Ministry of Finance, and the People's bank of China. 	<ul style="list-style-type: none"> • There is no clear statement. • The government only organizes the environment surrounding the implementation of DESs, and it cannot force concerned parties to take certain decisions regarding the implementation of DESs, along with their various conditions.
Calculation of the stock value	<ul style="list-style-type: none"> • Book value 	<ul style="list-style-type: none"> • Calculated through discussions among concerned parties

	Previous DES	Current DES
Exit strategy	<ul style="list-style-type: none"> Stock transfer, buy-backs by target companies, etc. 	<ul style="list-style-type: none"> If approval is given, it is possible to refer to the stock price in the secondary market or the rate in competitive markets. Listed companies: stock transfer; unlisted companies: transfer to be achieved through a method of listing, etc.
Implementation scale	<ul style="list-style-type: none"> 580 companies, CNY 405 billion 	<ul style="list-style-type: none"> A contract has been concluded for CNY 430 billion as of March 5, 2017.

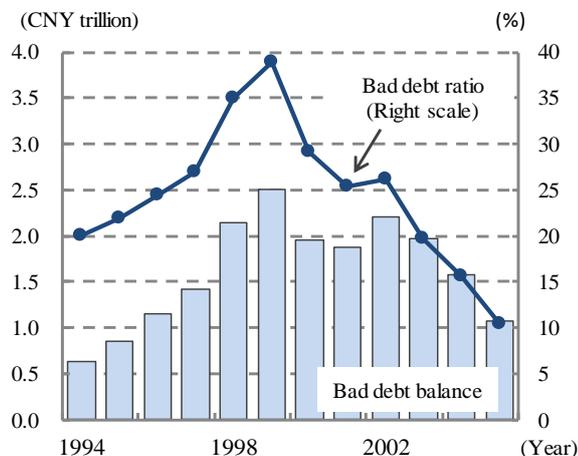
Note 1: The translation in English is a provisional one prepared by Mizuho Research Institute.

Note 2: The subsidiaries of banks established for the main purpose of the implementation of DESs started to be approved by the China Banking Regulatory Commission in May 2017.

Source: Compiled by Mizuho Research Institute based on “关于实施债转股若干问题的意见” issued on July 30, 1999, “关于市场化银行债权转股的指导意见” issued on September 22, 2016, and 李佩珈 (2016) “全面辩证看待“债转股”重启对商业银行的影响” (Bank of China “中银研究 宏观观察” issued on October 28, 2016)

At the time of the implementation of previous DESs, the implementation was mainly led by the government, which can be observed in the fact that all the funds for implementation were provided by the governmental budget, along with the fact that final approval for the implementation process was given by the State Council. Furthermore, as is clear from the purpose mentioned above, the first target companies were state-owned enterprises. In addition, at the time of previous DESs, the capital market had not yet developed and stock prices were based on the book value. The estimated total ratio of bad debt was 39% as of the end of 1999, among the four major commercial banks (Fig. 3). Under such circumstance that economic and financial deterioration was becoming clear, the previous DESs can be largely understood to be part of urgent measures.

Fig. 3: Balance and ratio of bad debt in China



Note: Up to 2003, the figures consist of estimates from four banks: the Industrial and Commercial Bank of China, Bank of China, China Construction Bank Corporation, and Agricultural Bank of China. From 2004, the figures are those published by the China Banking Regulatory Commission for five banks: the above four banks plus the Bank of Communications.

Source: Compiled by Mizuho Research Institute based on 施华强 (2005) “国有商业银行账面不良贷款、调整因素和严重程度” (金融研究杂志编辑部『金融研究』2005年12期), the China Banking Regulatory Commission, and CEIC Data.

On the other hand, it has been emphasized that DESs today should be based on market principles, and this idea is reflected in the details. For example, funds for implementation are to be procured through market-based methods and channels. Thus, various methods of fund procurement have been recommended, such as PE (private equity) funds, along with funds from general investors. With regard to the implementation process as well, there have been no clear regulations observed in previous DESs. This is probably because

the government promises that the institutions directly involved in the implementation of DESs, such as financial institutions and target companies, are expected to make judgment related to implementation. On the other hand, the role of government is limited to the organization of necessary systems and surveillance. The government is not allowed to force concerned parties to make certain judgment related to implementation, to select certain target companies, or to set various conditions. The involvement of the government has thus been restricted.

Thus, it can be said that the major difference between previous DESs and DESs today is whether the central role is played by the government or by the market. However, there are also commonalities in the conditions for selecting target companies. For example, in both cases, companies are required to: have a market with advanced facilities and products, meet the standard related to environmental protection, and have an efficient plan for company reforms. Furthermore, we can see that companies are mainly considered for DESs if they are expected to return to a surplus after the implementation of DESs.

(3) Effects and limit of DESs mainly led by the government

Then, what effects were there after the previous implementation of DESs mainly led by the government? As for the three goals of implementation, (i) the disposal of the bad debts of commercial banks, (ii) the acceleration of the achievement of a surplus for state-owned enterprises with debt, and (iii) the improvement of the management mechanism for the company involved, it can be said that there was certain success for (i) and (ii). For example, with regard to (i), bad debts of CNY 405 billion, approximately 16% of the total debt balance of CNY 2.5 trillion at the peak time, was disposed as a result of the implementation of DESs. With regard to (ii) as well, according to the survey by the National Bureau of Statistics, out of the 504 target companies for which DESs were implemented, 87% of them, 439 companies, responded that “There will be a surplus this year,” and the average interest payment expense also declined in the survey conducted in 2000.³

On the other hand, with regard to (iii), the outcome of DESs is considered to be insufficient. For example, as was mentioned above, according to the survey carried out by the National Bureau of Statistics in 2002 targeting the companies for which DESs were implemented, the percentage of companies that answered that “There will be a surplus this year” declined to 70% despite the fact that the economy was on a recovery.⁴ As was mentioned above, in selecting the target companies, there were various conditions such as “There is a prospect to return to a surplus,” “The products meet the needs of consumers,” etc. Despite such conditions, the improvement of corporate performance did not last. This suggests that there was a limit regarding the competence necessary to select target companies with the main leadership of the government. Thereafter, because the pace of economic recovery accelerated further from the middle of the 2000s until the financial crisis in 2007, the inefficiencies of state-owned enterprises did not come to the surface. However, the financial situation has been deteriorating again in the 2010s until now, due to the debt burden for the debt that increased at the time of the implementation of an economic stimulus measure

³ “国家统计局：近九成债转股企业今年有望盈利”（“经济日报” issued on December 6, 2000）

⁴ “国金证券：1999年债转股的北京、经验和启示”（“中国证券网” issued on October 13, 2016）

worth CNY 4 trillion, along with a slowdown in economic growth. It seems that, among the companies selected as the target of previous DESs, there are some that were selected for DESs again because of debt burden. It can be pointed out that the financial situation deteriorated partly because of the fact that the corporate governance system was not fully established.

In addition, it seems that the exit strategy of the AMCs, which was stock sales, did not advance because of the slow development of the capital market. China Huarong Asset Management Co., Ltd., an AMC that took over the bad debt of the Industrial and Commercial Bank of China, still held the stocks of 196 companies, approximately 70% of about 280 target companies for DESs implemented in 1999, as of the end of June 2015.⁵

3. Outlook for the future of DESs this time

(1) Smooth start after the release of the government principle

Since the release of the basic principle of DESs in October 2016, the number of DESs arrangement started to increase sharply. For example, Guo Shuqing, the chairman of the China Banking Regulatory Commission, stated during the press interview conducted on March 2, 2017 that “The total amount of contract DESs capitalized on has exceeded CNY 430 billion as of now.” In addition, one of the official newspapers of the Communist Party of China, the *Economic Daily News* (經濟日報, in Chinese) (issued on May 2, 2017), reported that the total amount of contracts had exceeded CNY 500 billion.⁶ According to the research by the local media, along with research institutions, major cases that have been made public are summarized in Fig. 4, with the following characteristics.⁷

First of all, the target companies are mainly state-owned enterprises, local state-owned enterprises representing each region, in particular. With regard to industry type, they are mainly in resources and materials industries such as coal and steel, along with nonferrous steel. There are also some in the transport industry.

Secondly, with regard to the financial institutions that are the implementers, they are mainly subsidiaries of state-owned commercial banks such as the China Construction Bank. For example, in many cases, DESs are implemented through the establishment of a fund by a subsidiary or target company, while in other cases, funds are procured from wealth management products and pension funds. The bank loans that are the target of DESs consist of loans graded as pass and special mention, and they are not bad debts. In addition, some of them are consisting of loans from other banks. This seems to be due to the fact that, this time, there are restrictions on the implementation of DESs by subsidiaries targeting the debts of its own bank. In addition, the exit strategy is mainly sales in the stock market, while buybacks by the target companies are also considered to be an alternative option.

⁵ “债转股疾行挑战” (财经网) issued on January 22, 2017)

⁶ “新一轮债转股落地进度待提速” (经济日报) issued on May 2, 2017)

⁷ “债转股的天津实践” (财新网) issued on February 16, 2017)

Fig. 4: Summary of major DESs since October 2016

Timing	Target companies			Implementer*	Contract value
	Company name	Ownership type	Industry type		
October 2016	Wuhan Iron & Steel (Group) Corp	Central state-owned enterprise	Steel	China Construction Bank Corporation	CNY 24 billion
	Yunnan Tin Company Group Limited	Local state-owned enterprise	Nonferrous metal	China Construction Bank Corporation	CNY 10 billion
November 2016	Guangzhou Communications Investment Group Co., Ltd.	Local state-owned enterprise	Transport	Guangzhou State-owned Assets Supervision and Administration Commission, China Construction Bank Corporation	CNY 10 billion
	Shandong Energy Group Co., Ltd.	Local state-owned enterprise	Coal mining	China Construction Bank Corporation, Shandong State-owned Assets Supervision and Administration Commission	CNY 21 billion
December 2016	Shanxi Coking Coal Group Co., Ltd.	Local state-owned enterprise	Coal mining	China Construction Bank Corporation, Shanxi State-owned Assets Supervision and Administration Commission	CNY 25 billion
	Sinosteel Corporation	Central state-owned enterprise	Steel	Bank of China, Bank of Communications Limited, China Development Bank, Agricultural Bank of China Limited, Export-Import Bank of the Republic of China, Shanghai Pudong Development Bank Co., Ltd.	CNY 27 billion
	Shaanxi Energy Group Co., Ltd.	Local state-owned enterprise	Coal mining	Industrial and Commercial Bank of China	CNY 10 billion
	Gansu Provincial Highway Aviation Tourism Investment Group Co., Ltd.	Local state-owned enterprise	Transport	Bank of China	CNY 10 billion
February 2017	China Railway Materials Company Limited	Central state-owned enterprise	Wholesale	China Great Wall Asset Management Co., Ltd.	CNY 27.8 billion
	Nanjing Iron and Steel Co., Ltd.	Private company	Steel	China Construction Bank Corporation	CNY 3 billion
	Shandong Hi-Speed Group Co., Ltd.	Local state-owned enterprise	Transport	Agricultural Bank of China	CNY 30 billion
March 2017	Shaanxi Coal and Chemical Industry Group Co., Ltd.	Local state-owned enterprise	Coal mining	China Life Insurance Asset Management Company Ltd.	CNY 10 billion

* Even though the bank concludes a contract for DESs with the target company, the implementation of DESs is carried out by a fund established by a subsidiary, etc., within the actual scheme.

Source: Compiled by Mizuho Research Institute based on 管清友等 “债转股的目标企业梳理” (民生证券 “固定收益专题” issued on March 8, 2017), etc.

(2) True success of DESs: Depends on whether the market principle is accomplished

Thus, DESs have currently been smoothly arranged. How much does this contribute to the corporate deleveraging in the future?

First of all, with regard to the improvement of the revenues of the target companies for DESs, a certain

effect is expected. For example, at the press interview held by the National Development and Reform Commission in October 2016, after the release of the instruction opinion concerning DESs, the debt ratio (debt/capital) for target companies is expected to lower by 10–20% and to achieve a reduction of financial expenses.⁸

On the other hand, from the point of view of the overall economy, the effect would be limited. In China, some expect the scale of DESs this time would be nearly CNY 2 trillion.⁹ However, this is still a small amount compared to the current balance of corporate debt, which amounts to CNY 120 trillion. Furthermore, as was mentioned at the press interview of the National Development and Reform Commission above, DESs this time are based on market principles, and there is no target figure defined. Therefore, it has to be said that the scale of DESs depends on implementation in the times ahead.

Based on the outcome and issues of previous DESs and given that market-based implementation is emphasized this time, it is more important to achieve long-term and qualitative goals such as the improvement of corporate structure at the target companies rather than short-term and quantitative goals. From this point of view, the following points are important in evaluating the effects of DESs in the times ahead.

The first key element is the selection criteria for the target companies of DESs. As was discussed in the previous section, at the time of previous DESs, despite the fact that there were selection criteria such as future prospects, along with the advancement of facilities, many companies fell into difficulties once again, in the end. While there are similar selection criteria this time as well, the target companies thus far are mainly in industries with overcapacity such as the coal mining industry and the steel industry. At the current moment, it is not possible to evaluate success because, even in these industries, the implementation of DESs is recommended for major companies, and the situation of each company is different. However, it would be important for the implementer of DESs, such as a commercial bank or an AMC, to have competence in evaluating the target companies that truly fulfill various conditions. The involvement of the government in the selection process is also an important key. For DESs this time, the government is generally not supposed to be involved in the company selection process, out of respect to market principles. However, at least among the cases observed so far, there are many concerned parties closely related to the government, such as state-owned enterprises and state-owned commercial banks. Thus, it is important to observe whether there is excessive involvement by the government in making decisions related to the implementation of DESs,

The second key element is the contribution of DESs to the improvement of the management efficiency of the target companies. At the time of previous DESs, despite one of the objectives was the improvement of management efficiency, the outcome was insufficient, and there were many companies that saw a deterioration of financial condition once again after the implementation of DESs, as was pointed out above.

⁸ “国家发改委就宏观经济运行情况举行发布会” (中国网 issued on October 13, 2016)

⁹ “五问五答看懂 3270 亿债转股” (证券时报网 issued on March 20, 2017)

This is partly because of the fact that the AMC, the recipient of stocks, were not able to participate sufficiently in the decision-making process related to a company's management, due to the significant influence of the local government for the target companies of DESs.¹⁰ It seems that the matters to be discussed at the board of directors' meetings for decision-making were identified in advance by the target company and the supervising local government, while the representative of the AMC was only to agree to the decisions at the board of directors' meetings, or the members of the management were selected by the local government without passing through the board of directors' meetings or stockholders' general meetings.¹¹ For the implementation of DESs this time as well, the importance of the improvement of management and the reinforcement of competitiveness have been recognized. However, if the target companies of DESs are state-owned enterprises, there is necessarily the risk that the improvement of management efficiency may become difficult with the influence of a local government that focuses not only on the improvement of management efficiency but also on other issues such as the maintenance of local employment. From this point of view as well, for the success of DESs, it is important for the implementer such as commercial banks and AMCs to have competence and influence as a stockholder.

Finally, the third key element is the clarity and feasibility of the exit strategy of the stockholding institution. At the time of previous DESs, the main exit strategy was to collect funds via sales of land owned by state-owned enterprises rather than by stock transfers.¹² Therefore, the AMCs that were the implementers of DESs still hold a large number of stocks today. On the other hand, for the implementation of DESs this time, the goal is to dispose of stocks through "various market-based methods" based on the lessons learnt from the previous exit strategy led by the government. For example, if the target companies of DESs are listed in the stock market, it would be sales in the stock market, while if they are not listed companies, it would be corporate mergers, registration in the National Equities Exchange and Quotations, transactions in regional stock markets, and listings in security markets, etc. However, the actual implementation of the suggested exit strategy is expected to be difficult, as the stock market in China is still underdeveloped, and there is a limit to the variety of investors.

Thus, it is possible for the same type of mistake as previous to be repeated, with the target companies falling into difficulties again if DESs are implemented carelessly without accomplishing market principles in each process as discussed above, from entry to exit, thus failing to improve management efficiency, even if the immediate reduction of debt may be achieved. If such happens, the commercial banks and other investors would also be affected in the end. In addition, general investors that are providing funds through wealth management products, etc., may also suffer from losses. Therefore, the substantial progress of DESs should not be assessed simply based on the value and number of cases of DESs implemented. The ideal path for the times ahead is to accumulate experience in implementing market-oriented DESs while increasing the amount of implementation at the same time.

¹⁰ Other than this, there are other problems pointed out, such as the weakness of the will of AMCs to be actively involved in the management of the target company, with an attitude of a temporary stockholder, as well as a lack of personnel dispatched to the target company.

¹¹ "久华：市场化债转股如何以史为鉴？"（"观察家网" issued on October 14, 2016）

¹² See footnote 5.

At the National People's Congress held at the beginning of March 2017, the Chinese government emphasized the importance of reforms based on the condition of economic and social stability. At the beginning of the "Major areas of work for 2017," the government listed "five priority tasks" through reforms (the cutting of overcapacity, reducing excess inventory, deleveraging, lowering costs, and strengthening areas of weakness).¹³ The success of the reforms by the government under President Xi Jinping in his second term will be measured by whether it is possible to implement DESs that can contribute to the improvement of corporate management efficiency ,without being concerned too much with short-term objectives to reduce corporate debt.

¹³ 伊藤信悟・玉井芳野「2017年中国全人代のポイント～党大会を見据えた習政権の『安定重視』路線と課題～」(みずほ総合研究所『みずほインサイト』 issued on March 16, 2017.

The Implementation of and Prospects for China’s Medium- and Long-term Development Plan for the Automotive Industry

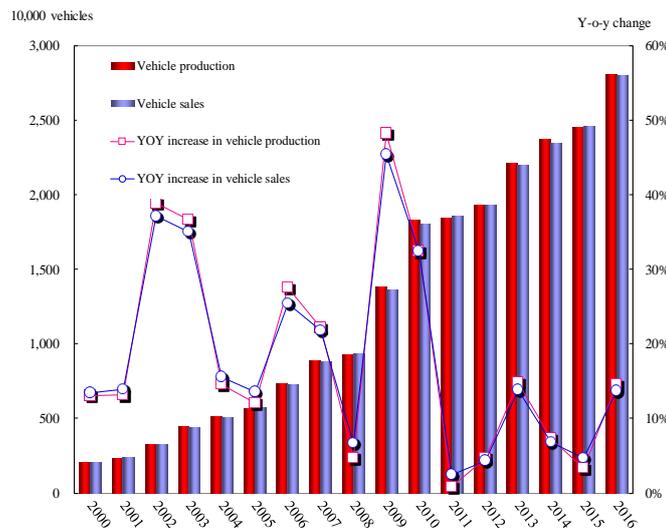
- China fires starter pistol on its goal to become an automotive powerhouse, but will face challenges along the way-

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1. Introduction: The importance of being the world’s largest auto industry

China’s automotive industry is frequently cited as epitomizing the development of China’s industrial economy and the transition in its standing within the global community¹. Buoyed by the growth in production and supply capabilities that has come with the rush of companies breaking into its auto industry and vigorous demand from the market, China’s auto industry has emerged as a lynchpin for economic growth and has sustained its double-digit growth rates even as China confronts a “new normal” of slower growth (**Fig. 1**). In the seventeen years between 2000 and 2017, vehicle production increased approximately 3.08 fold, whilst vehicle sales grew 3.06 fold, which translates to average annual growth rates of 18.2 percent for production and 18.0 percent for sales.

Fig. 1: Transitions in Auto Production and Sales in China (2000-2016)



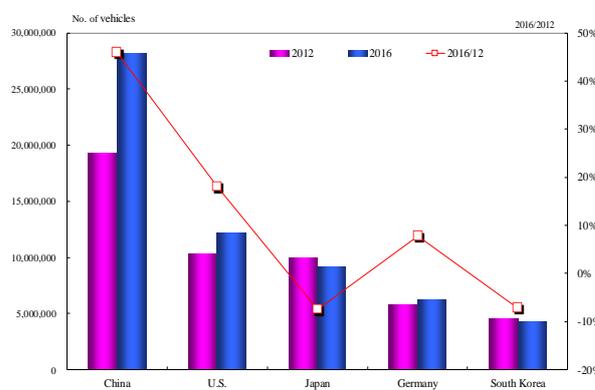
Source: Compiled using official National Bureau of Statistics and China Association of Automobile Manufacturers (“CAAM”) statistics

In 2009, immediately after the international financial crisis, China overtook the United States to become the world’s largest auto market simultaneously eclipsing Japan to become the world’s largest producer of automobiles, an unshakeable position it occupied for the next eight years. China’s auto industry accounted for more than 20 percent of global production in 2012 (i.e. the top 50 countries; officially 22.6% as compared to 12.1% for the United States, which was the world’s second largest producer that year) and for

¹ KAMIYAMA Kunio, HAO Yanshu, OH Jewheon, “An Empirical Analysis of Changes in the International Competitiveness of the Auto Industries of Japan, China and South Korea: The Current Status of the Automotive and Electric Industries and the Possibilities for Partnership” (Japanese only), SOSEISHA, 2011. SHAO Yongyu “Research on Urbanization and Industrialization in China: Historical and Spatial Developments against a Backdrop of Resource and Environmental Constraints” (Japanese only), Taga Shuppan, 2012, etc.

approximately 30 percent in 2016 (officially 29.1% as compared to 12.6% for the United States). In 2000, prior to its accession to the World Trade Organization (WTO), China produced a mere 2.09 million vehicles, which is fewer than it now produces per month, and this, set against the vehicle production figures for the top five car producing countries in the world in 2012 and 2016, offers irrefutable evidence of the rapid growth of its automotive industry (Fig. 2)². More recently, with the implementation of *Made in China 2025*, China’s answer to **Industry 4.0**, there has been a shift towards eco-friendly, computerized, smart production³. As Fig. 3 demonstrates, there has been rapid growth in both production and sales of new energy vehicles, which already account for more than 50 percent of the global market as of 2016. This is widely seen as a result of the Chinese government’s aggressive policy to promote eco-car production.

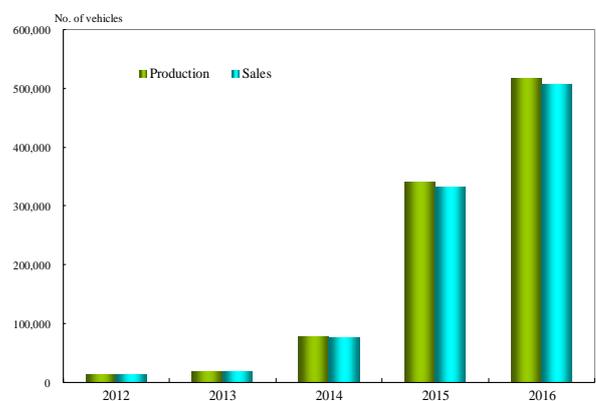
Fig. 2: A Comparison of Vehicle Production and Sales for the Top Five Car Producing Countries Worldwide



Source: Compiled from respective auto industry association data.

Note: India ranked as the world’s fifth largest auto producer in 2016, but sixth-ranking South Korea is given for convenience of comparison.

Fig. 3: New Energy Vehicle Production and Sales in China



Source: Compiled using official CAAM data. Data for 2016 are from a MITT press release.

Government policy on the automotive industry dates back to 1994, two years after the late Chinese leader Deng Xiaoping boosted China’s policy of reform and opening-up through his landmark *Southern Tour Speeches*. The 1994 *Policy on Development of the Automotive Industry* highlighted the importance of transforming the auto industry, one of the country’s biggest industries, into a strategic industry at the earliest possible opportunity. Following the flood of foreign direct investment into China that came with WTO accession at the end of 2001, in 2004, the government issued a revised *Automotive Industry Development Policy*, and for several years there was no new policy for the sector, but in January 2009, it unveiled stimulus plans for ten major industries, including the automotive and steel sectors, to reinforce the ambitious fiscal investment program it launched in response to the global financial crisis of 2008, and these led to a slew of priority projects aimed at making consumer spending an engine of economic growth, which resulted in operational expansion and stronger capabilities for China’s auto industry. Again, China is acutely aware, given the nature of the auto industry, of the constraints it imposes on the nation’s environment and resources,

² Two major changes that were to impact on China’s automotive industry occurred in the global environment during this time. The first was the increase in foreign players in China’s market that came with WTO accession; the second was China’s implementation of a policy aimed at consolidating and promoting national industries in response to the global financial crisis of 2008.

³ China is aware that cars are a major contributor to the country’s air pollution problems and, in recent years, has been tightening its environmental regulations on vehicles. In 2017, it introduced tough new emissions standards that are on a par with those in effect in the EU.

and has subsequently implemented strategies aimed at promoting the development of energy saving and new energy vehicles, which have been a mainstay of its policy for the auto industry since (Table 1). New energy vehicles, which were identified as one of seven strategic emerging industries in the *Guideline on the Development of Strategic Emerging Industries* that was unveiled in 2010, thus emerged as a cornerstone of government plans for the development of the auto industry, and policies relating to promoting the development of energy saving and new energy vehicles began being implemented with full-scale momentum in 2012. Numerous policies have been issued by the government in the ensuing years, both by individual ministries and frequently under the joint auspices of several, and the important position of China to be the world's leading automotive power not only extends to the significance of that industry to the global market but has also lent a sense of both mission and urgency to its bid to find ways of promoting the healthy development of its auto industry in the face of serious environmental and resource constraints, to equip it with the capabilities needed to prevail against intense global competition, and to emerge as a leading presence in the field of technological development for the global auto industry of the future.

Table 1: The Development of China's Energy Saving and New Energy Vehicle-centric Auto Industry Policy

No.	Name of related policy/program	Issuing organ	Year of issue
1	Major Energy Saving and New Energy Vehicle Project under the "863 Program" (a National High-Tech R&D Program)	MOST	2001
2	Automotive Industry Development Policy	NDRC	2004
3	Administrative Regulations on Permission Requirements for Entry into New Energy Vehicle Production	NDRC	2007
4	Notice on the Promotion of an Energy Saving and New Energy Vehicle Pilot Program	MOF, MOST	2009
5	"Ten Cities, Thousand Vehicles": Electric Vehicle Pilot Program	Four ministries	2009
6	Auto Industry Restructuring and Revitalization Plan	The State Council	2010
7	Notice on the Expansion of the Energy Saving and New Energy Vehicle Pilot Project to the Public Service Sector	Four ministries	2010
8	Notice on the Development of a Subsidy Pilot for Individual New Energy Vehicle Buyers	Four ministries	2010
9	Notice on Enhancing the Expanded Energy Saving and New Energy Vehicle Pilot Project	Four ministries	2011
10	Energy Saving and New Energy Vehicle Industry Development Plan (2012-2020)	The State Council	2012
11	Notice on the Ongoing Promotion of Expanded New Energy Vehicle Application	Four ministries	2013
12	Plan for the Purchase of New Energy Vehicles by Government Agencies and Public Authorities	The State Council, four ministries	2014
13	Announcement of the Exemption of New Energy Vehicles from Purchase Tax Requirements	MOF, SAT, MIIT	2014
14	Notice on Encouraging the Construction of New Energy Vehicle Charging Infrastructure	Four ministries	2014
15	Proposal on the Implementation of New Energy Vehicle Priority Projects under the National Priority Research and Development Plan (draft for public consultation)	NDRC	2015
16	Opinion on Promoting and Accelerating the Use of New Energy Vehicles in the Public Transport Sector	MOT	2015

No.	Name of related policy/program	Issuing organ	Year of issue
17	Notice on Financial Support for the Expanded Use of New Energy Vehicles Between 2016-2020	Four ministries	2015
18	Notice on Vehicle and Vessel Tax Breaks for the Use of Energy Saving and New Energy Vehicles and Vessels	MOF, SAT, MIIT	2015
19	Electric Vehicle Power Battery Recycling Technology Policy (2015 edition, draft for public consultation)	NDRC, MIIT	2015
20	Opinion on Accelerating the Construction of Electric Vehicle Charging Infrastructure	NDRC, MOT	2015
22	Guideline on the Development of Electric Vehicle Charging Infrastructure (2015-2020)	NDRC, NEA, MIIT, MOHURD	2015
23	13 th Five-Year Plan Notice on Encouraging the Construction of New Energy Vehicle Charging Infrastructure and Expanding the Use of New Energy Vehicles	Four ministries, NEA	2016
25	Action Plan on Promoting the Development of Vehicle Power Cells	MIIT, NDRC, MOST, MOF	2017
26	Medium- and Long-Term Development Plan for the Automotive Industry	MIIT, NDRC, MOST	2017

Source: Compiled using materials published on Chinese government websites and government think tanks.

Note: “Four ministries” refers to MIIT, MOST, MOF and NDRC. This table lists the major policy documents that have been formulated and issued by the central government, but does not include general policies on the promotion of industry technology or the regional policies for the auto industry that have emerged in recent years.

2. Background to China’s Medium- and Long-Term Development Plan for the Automotive Industry and its Goals

China has entered the second year of its 13th Five-Year Plan (2016-2020). On April 25, the *Medium- and Long-Term Development Plan for the Automotive Industry* – a critical plan for China’s auto industry – was issued under the joint auspices of three government ministries (Item #26 in **Table 1**; the “Plan” hereunder). Whilst the *Plan* makes no reference to an official start date, the years 2020 and 2025 are cited as end and/or target years, and it is attracting attention not only as a plan for the development of China’s auto industry over the mid- to long-term, but also as key implementation plan with strong connections to *Made in China 2025*, which was unveiled in May 2015. The unveiling of an integrated development plan for the auto industry at this time is unexpected, but given the state of progress in the industry and the current state of policy development targeting its growth, the following factors are thought to be behind the *Plan*’s formulation.

First and foremost is the significance of the auto industry to China’s economy, a matter that is dealt with in the preamble to the *Plan*. In the second instance, the development of China’s auto industry has stimulated other industries and the regional economy (the opening paragraphs of the *Plan* emphasize the fact that auto-related industries account for more than 10% of national tax revenue, hiring rates, and retail sales nationwide, respectively). Thirdly, auto industry technologies are the most intensively used of all industry technologies. Fourthly, the focus on the development of China’s auto industry as a means of overcoming the nation’s resource constraints is a matter that has already been put forward in the detailed blueprint for the development of energy saving and new energy vehicles that is given in *Made in China 2025*.

Added to which, there is the fact that the auto industry continues to be a growth industry and, as such, its utility as a strategy for national growth remains considerable. Moreover, as the configuration of the system of policy measures designed to promote new energy vehicles drafted by the National Development and

Reform Commission (NDRC), which is the ministry with principal responsibility for enacting industrial policy, shows (Table 2), many are oriented towards macroeconomic policy, and the *Made in China 2025* initiative,

released in 2015, is also categorized as one of the macroeconomic policies.

Table 2: Policy System of Government Measures to Promote the Development of New Energy Vehicles

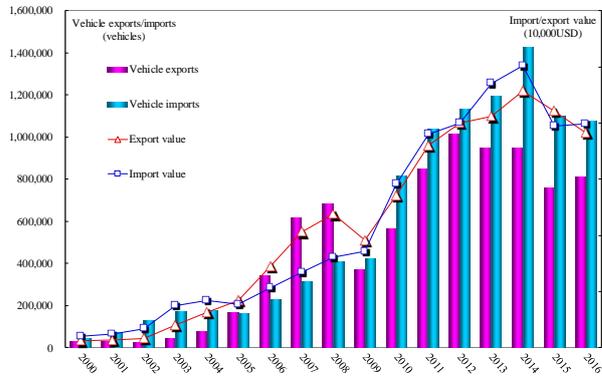
Macroeconomic Policy	Financial Support Measures	Technology Development (R&D)	Administrative Structure
<ul style="list-style-type: none"> ⇒Auto Industry Restructuring and Revitalization Plan ⇒Energy Saving and New Energy Vehicle Industry Development Plan (2012-2020) ⇒Notice on the Ongoing Promotion of Expanded New Energy Vehicle Applications ⇒Guideline on the Development of Electric Vehicle Charging Infrastructure (2015-2020) ⇒Guiding Opinion on the Ongoing Promotion of Expanded New Energy Vehicle Applications ⇒Guiding Opinion on Accelerating the Construction of Electric Vehicle Charging Infrastructure ⇒The Technology Roadmap for Energy Saving and New Energy Vehicles ⇒Made in China 2025 	<ul style="list-style-type: none"> ⇒Financial Support Measures for Promoting the Expanded Application of New Energy Vehicles (2016-2020) ⇒13th FYP Notice on Encouraging the Construction of New Energy Vehicle Charging Infrastructure and Expanding the Application of New Energy Vehicles ⇒Announcement on New Energy Vehicles Exempt from Purchase Tax ⇒Notice on Vehicle and Vessel Tax Breaks for the Use of Energy Saving and New Energy Vehicles ⇒Notice Regarding Several Issues relating to Electric Vehicle Pricing Policy 	<ul style="list-style-type: none"> ⇒Special Action Plan on the Science and Technology for Energy Conservation and Emissions Reduction (2014-2015) ⇒Guideline on the Development of Core and General Industrial Technologies (2015) ⇒Special Promotion Plan for Priority New Energy Vehicle Projects under the National Priority Research and Development Plan ⇒Notice Regarding the Packaging of Major Projects Targeting Enhanced Core Competitiveness in the Manufacturing Industry ⇒Notice Regarding the Packaging of Major Projects Targeting the Upgrading and Remodeling of the Manufacturing Industry 	<ul style="list-style-type: none"> ⇒Administrative Measures on New Investment in and Production Permits for New Electric Passenger Vehicle Producers ⇒Technology Policy on the Recovery of Electric Vehicle Power Cells (2015 edition) ⇒Standards and Requirements for the Automotive Storage Battery Industry ⇒Notice on the Development of a Research and Elimination Project to Address the Potential Safety Risks involved in Promoting Expanded Application of Energy Saving and New Energy Vehicles ⇒Notice on the Development of Safety Inspections for Basic Electric Vehicle Charging Infrastructure ⇒Regulations for Newly Established Electric Passenger Vehicle Producers ⇒Administrative System and Technical Standards for Electric Vehicle Long Distance Services

Source: NDRC “Status Report on the Development of China’s New Energy Vehicle Industry” (November 25, 2016)

Another key purpose and aim of the *Plan* is to address matters such as the shortfalls in the technological capabilities of China’s auto industry and the lack of key parts production capabilities, something that is touched upon briefly in its opening paragraphs. Trends in China’s international auto trade and in the ratio to total production of the own brand vehicles of Chinese auto producers offer an additional gauge to the extent of the problem. As Fig. 4 illustrates, barring the three-year period spanning 2006-2008, China’s auto imports continue to exceed its exports by a wide margin, though both imports and exports have dropped off in recent years. On an import-export value basis, whilst China’s trade deficit is not as substantial as the vehicle numbers suggest, in essence, its trade balance remains negative. Again, as Fig. 5 shows, whilst Chinese auto brands have maintained a share of more than 40 percent of the domestic passenger vehicle

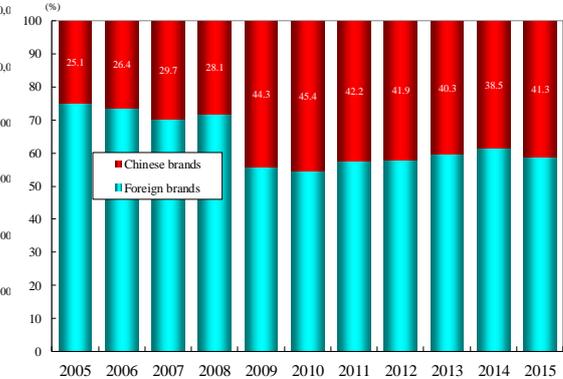
market since 2009, they have yet to secure a 50-percent share of the market, and in the sedan segment, Chinese brand market share continues to hover below 20% (Fig. 6).

Fig. 4: Trends in the Volume and Value of China's International Auto Trade (2000-2016)



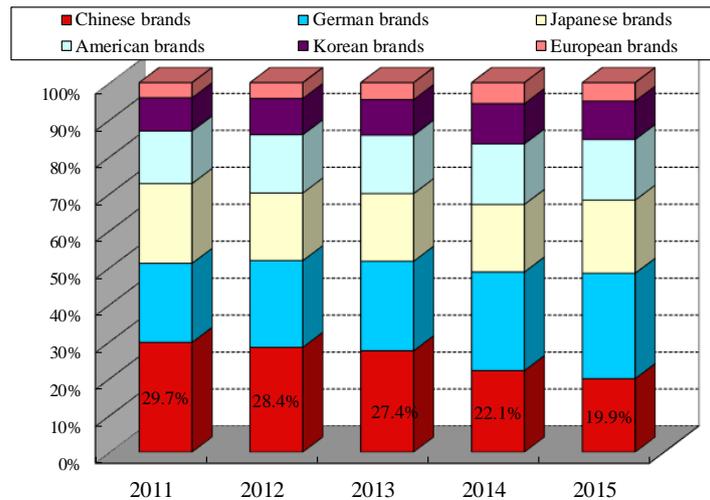
Source: CAAM "China Automotive Industry Yearbook (2016)"

Fig. 5: Chinese Brand Market Share of the Domestic Passenger Car Market



Source: Industrial Economic Institute, respective editions of the Chinese Academy of Social Sciences "China Industry Development Report", and the CAAM "China Automotive Industry Yearbook (2016)"

Fig. 6: Trends in Chinese Brand and Foreign Brand Market Share of China's Sedan Market



Source: As for Fig4., CAAM "China Automotive Industry Yearbook (2016)"

The current situation confirms that China is a major force in the global auto industry but has yet to emerge as an auto industry powerhouse, something that the Chinese government is acutely aware of and is attempting to change as quickly as possible via its technology strategy for the auto industry. As is evidenced by the list of *Plan* goals and projects given below, in formulating this *Plan* the Chinese government has effectively fired the starter pistol on its race to transform China into an auto industry powerhouse, a goal that is realizable but that will present challenges along the way.

3. An Outline of China’s Medium- and Long-term Development Plan for the Automotive Industry and the Major Projects Included Therein

The recent *Plan* provides direction for technical progress and corporate structures and sets forth a global strategy for China’s auto industry, and is characterized by its emphasis on internal reform and operational expansion, two elements that set the auto industry apart from many other industries (including the steel, petrochemical and textile industries).

At a policy briefing, an official from the Equipment Industry Division of the Ministry of Industry and Information Technology (MIIT), the ministry primarily responsible for drafting the *Plan*, summarized its contents by describing it as a “1-6-6-8” policy. In short, the Plan comprises one overall goal, six subdivided goals, six major tasks, and eight priority projects. The overall goal is to have China join the ranks of auto industry powerhouses through a decade of hard work, a goal it intends to achieve by fulfilling six objectives: (1) making major breakthroughs in the development of core technologies; (2) building a safe and reliable supply chain; (3) pushing forward with the development of Chinese auto brands; (4) creating the basic structures for a new industry ecosystem; (5) achieving unequivocal improvements in China’s global development capabilities; and (6) significantly enhancing its green (ecological) development standards. The *Plan* presents numerous specific numerical targets in respect of these objectives.

It states, for example, that China will bring up several Chinese automakers to rank among the top ten new energy car companies worldwide by 2020, and that by 2025, it aims to increase the global influence and expand the market share of Chinese new energy vehicle manufacturers, and to develop globally recognized cutting-edge standards for smart cars. According to the *Plan*, China will nurture local auto parts manufacturers targeting annual sales exceeding RMB 100 billion by 2020 and the development of globally competitive core technologies, and will bring up local auto parts manufacturers to rank among the top ten by 2025. By 2020, it aims to grow several local brands into world-renowned brands in the passenger car segment of the market, to significantly improve the safety of Chinese commercial vehicles, and to help several local carmakers rank among the top ten auto manufacturers by sales before 2025. By 2020, China aims to have raised its smart technology standards and to have increased the added value share of the automotive aftermarket in the supply chain to 45 percent or more. By 2025, it aims to apply smart technologies in key industrial segments, while increasing the added value share of the aftermarket in the supply chain to 55 percent or more. It further aims to be exporting Chinese auto brands to developed nations by 2020. The six major tasks that have been aligned to these policy objectives are as follows: (1) enhance the systems for innovation and cultivate indigenous development capabilities; (2) strengthen basic capabilities and refine the industry supply chain; (3) make breakthroughs in major areas and take the lead in transforming and upgrading industry patterns; (4) speed up cross-industry integration and establish a new industry ecosystem; (5) improve brand quality and develop world-leading enterprises; and (6) deepen openness to foreign investment and levels of international cooperation, and enhance global expansion capabilities. The eight priority projects that are set down alongside the aforementioned objectives and major tasks are presented as columns, and are noteworthy for their concreteness. These columns are presented in **Table 3** through **Table 6**, but to summarize, with the exception of **Table 3**, the content of which primarily deals with efforts to catch up with the auto industries of the developed world, the projects presented in **Table 4**

through **Table 6** targeting the promotion of energy saving, new energy, eco-friendly and smart technologies clearly reflect China’s intention to promote their development either in step or in collaboration with developed nations.

Table 3: The Innovation Center Construction and Key Parts Breakthrough Projects

[Innovation Center Construction Project]

- Formulate a roadmap for energy-saving cars, pure electric vehicles, plug-in hybrid cars, hydrogen fuel cell vehicles, IoT connected smart vehicles (intelligent connected vehicles), automotive power cells, vehicle weight reduction, and vehicle manufacture, etc.; guide the consolidation of existing innovation resources for the automotive and auto-related industries; carry out collaborative breakthroughs; build open and share platforms for innovation; increase R&D investment; encourage collaborative R&D on frontier technology and major generic technologies; promote the transfer, dissemination and commercialization of research results (new technologies); offer public technical services to the industry and enterprises.
- By 2020, complete construction of a manufacturing innovation center for the power cell and connected car sector.
- By 2025, ensure that the innovation center is capable of delivering efficient services for industry development and has relatively strong international competitiveness.

[Key Parts Breakthrough Project]

- Support the upsizing and strengthening of distinctive, superior parts manufacturers and develop leading, globally competitive parts manufacturers. Support the collaborative efforts of leading parts manufacturers in areas such as joint government, industry and academia research to compensate for the shortfalls in the industry supply chain.
- Overcome the bottlenecks to production and industrialization, focusing on power cells, automotive sensors, automotive chips, electronic control systems, and weight reducing materials; encourage the development of high-end components, including cutting-edge models and high value-added and knowledge intensive parts, such as modular supply.
- By 2020, create a number of globally competitive corporate groups in several major and/or core technical fields.
- By 2025, create a number of auto parts manufacturer groups that rank amongst the top ten worldwide in terms of production output.

Source: The Chinese government’s (MIIT, NDRC and MOST) “Medium- and Long-term Development Plan for the Automotive Industry” (April 25, 2017)

Table 4: New Energy Vehicle Development, Expanded Use and Intelligent Connected Vehicle Promotion Project

[New Energy Vehicle R&D and Expanded Use Promotion Project]

- Acquire core technologies, including drive motor and control system, electromechanical coupling device, electromechanical interlocking device, and extended range engine technologies; support efforts to overcome barriers in supply chain technologies for power cells and fuel cells; achieve revolutionary breakthroughs and make significant improvements in the integration control levels and positive development capabilities for new energy vehicles; encourage development of state-of-the-art, practical new energy vehicle parts.
- Build a convenient, efficient and moderately advanced charging network; create a new energy vehicle safety monitoring platform; develop a support system to facilitate the expanded use of new energy vehicles.

➤ By 2020, have annual production and sales of new energy vehicles at 2 million units; increase the specific energy density of fuel cells to 300Wh/kg (or 350Wh/kg, if possible); bring the specific energy density of power battery systems to 260Wh/kg; and lower the cost to RMB 1/Wh. By 2025, bring the share of new energy vehicles to 20% or more of total vehicle production and sales, and increase the specific energy density of fuel cells to 350Wh/kg.

[Connected Smart Car Promotion Project]

➤ Promote innovation in intelligent connected vehicles; focus on R&D on key parts; support R&D and industrialization of core technologies, including key sensors, control chips, Beidou satellite high-precision positioning, vehicle terminals, and operation systems, etc.

➤ Carry out application tests and pilot demonstrations; and develop an assessment system and legal and regulatory framework for this segment of the market.

➤ By 2020, increase the percentage of vehicles equipped with Driver Assistance (DA), Partial Automation (PA) and Conditional Automation (CA) systems to at least 50%; the percentage of vehicles equipped with connected DA to 10% and vehicles should meet the requirements for smart city construction. By 2025, 80% of new vehicles should be equipped with DA, PA or CA systems, of which 25% should be provided with PA or CA-level equipment; get highly and fully autonomous vehicles on the market.

Source: As for Table 3, “Medium- and Long-term Development Plan for the Automotive Industry”

Table 5: Energy Saving, Environmental Protection Vehicles & “Car +” Cross-Industry Integration Promotion Project

[Advanced Energy Saving and Environmental Protection Vehicle Technology Upgrade Project]

➤ Create a joint platform for overcoming barriers that relies on existing funding channels and is in conformity with current regulation; focus on capturing engines, hybrid power, advanced electronics, appliances and other energy saving and environmental protection technologies for passenger vehicles, as well as high-pressure common rail injection systems, cost-effective hybrid power plants, efficient exhaust treatment equipment and other energy saving and environmental protection technologies for commercial vehicles. Use tax breaks on energy saving vehicles and vessels, vehicle consumption tax breaks and other tax policies to guide and encourage the use of small displacement and energy saving passenger cars.

➤ By 2020, bring the average fuel consumption of passenger cars to 5L/100km, and the application rate of energy saving technologies, such as idle stop-start, to 50% or more.

➤ By 2025, reduce the average fuel consumption of passenger cars to 20% relative to 2020, and have energy saving technologies such as idle stop-start in general use.

[“Car +” Cross-Industry Integration Project]

➤ Promote the expanded application of smart, digital technology in corporate R&D and design, manufacturing, logistics and warehousing, management, and after sales services, etc.; make constant improvements to the smart technology standards used in production equipment and processes; and promote the construction of fully inter-connected collaborative smart manufacturing systems.

➤ Innovate travel and service models utilizing big data, and promote the switch to production service provision among auto manufacturers.

➤ Accelerate the green transformation and upgrading of the auto industry, and actively construct green manufacturing systems.

➤ By 2020, affect significant increases in smart technology levels. By 2025, bring about the unified switchover to smart technology in the R&D, production and sales operations of backbone auto manufacturers; bring the specific energy consumption levels of core parts up to international standards; and increase the share of auto services in the industry value chain by an average 2 percentage points annually over the next ten years.

Source: As for Table 3.

Table 6: Chinese Auto Brand Growth Project & Global Expansion Project

[Chinese Auto Brand Growth Project]

➤ Build and improve the mechanisms for cultivating and developing high quality Chinese auto brands; encourage industry organizations in the construction and promotion of a system for evaluating Chinese auto brands; develop a special project for assessing automobile brand value; encourage auto manufacturers to strengthen their brand cultivation efforts; encourage transcendental development in the area of brand cultivation by leading auto manufacturers buy out internationally-renowned auto brands.

➤ By 2020, increase the ratio of R&D expenditure to sales of backbone auto manufacturers to around 4%, reduce the average accident (failure) rate of new cars to 30% relative to 2015, and create a number of world-renowned auto brands.

➤ By 2025, increase the ratio of R&D expenditure to sales of backbone auto manufacturers to around 6%, bring the average accident (failure) rate of new cars produced by backbone auto manufacturers to the same level as top international auto brands, and have a number of Chinese auto brands in the world's top ten in terms of output and sales.

[Overseas Expansion Project]

➤ Use high-level multilateral and bilateral mechanisms for cooperation to encourage the reaching of an agreement on a cooperative strategic framework for the auto industry. Encourage major auto manufacturers to deepen levels of international cooperation; develop a project for international production capacity cooperation at strategically located state-run auto industry parks; and promote the expansion into overseas markets of Chinese commercial vehicle brands through international construction projects. Provide guidance on the establishment of an alliance for external cooperation in the auto industry, and enhance the overseas expansion and service provision capabilities of Chinese auto manufacturers.

➤ By 2020, achieve demonstrable increases in the level of influence wielded by Chinese auto brands in foreign markets, and realize bulk exports to the markets of developed nations.

➤ By 2025, affect a significant increase in the market share of Chinese auto brands in the global market, and be at the stage of global expansion.

Source: As for Table 3.

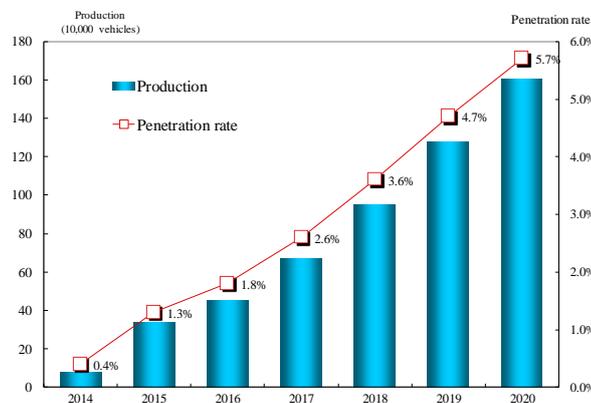
4. Policy Outcomes and Key Challenges

As mentioned in the opening paragraphs of this report, the Chinese government has, for many years and particularly over the past few years, been promoting policy aimed at encouraging the development of new energy vehicles; the demonstrable outcomes of these policies have served to boost the government's confidence, thus laying a positive foundation for the formulation of the recent mid- to long-term plan. Whilst China is unlikely to achieve all the goals set forward in the *Plan*, new energy vehicle development, which the government has promoted using various tax breaks and incentive packages, continues to progress, and China has amassed technological capabilities in the technologies used in eco car production and fuel

cells, which suggests that those goals are more than achievable.

Fig. 7 gives the market forecasts released by the NDRC (which put new energy vehicle production at 1.6 million units by 2020). The Plan increases this target to 2 million vehicles by 2020 and raises the market penetration rate to between 7 and 10 percent, with a target rate of 20 percent by 2025. At present, China is falling behind in its construction of charging infrastructure, though construction rates were up 65 percent on a year earlier in 2016 (during which 86,000 charging points were added to the network), and it plans to install at least 200,000 more charging points by 2020. The automobile penetration rates and its ownership figures suggest that charging infrastructure is more advanced in China’s eastern coastal region (see insert to **Fig. 8**). **Table 7** gives the market growth predictions by region that are presented in the 2015 *Guideline on the Development of Electric Vehicle Charging Infrastructure (2015-2020)* (though new energy vehicle ownership already exceeds the forecast), suggesting that the implementation of the *Plan* will go a long way to furthering the development of energy saving and new energy vehicles, and that production levels could well exceed the targets set forward therein. Chinese brand new energy vehicles already account for more than 50 percent of global production making it highly likely that China will emerge as a giant in the energy saving, new energy vehicle market, with Chinese made new energy vehicles available in all corners of the globe within the next decade, but its dream of becoming an automotive powerhouse will depend largely on whether its auto industry succeeds in strengthening its capacity for technological development, can realize steadfast improvements in the market competitiveness of Chinese brand autos, and achieve significantly more in the area of industry innovation.

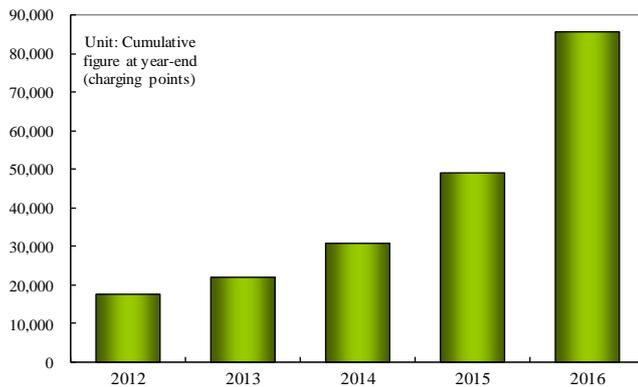
Fig. 7: Trends in New Energy Vehicle Production and Market Penetration Rates in China



Source: NDRC “Status Report on the Development of China’s New Energy Vehicle Industry” (November 25, 2016)

Note: The figures for 2014-15 are actual values; those for 2016 and beyond are NDRC forecasts. The penetration rate refers to the ratio of new energy vehicles to the total auto market.

Fig. 8: Number of New Energy Vehicle Charging Points in China



[Insert] No. of poles in major provinces and municipalities

Guangdong	15,425
Beijing	13,071
Jiangsu	10,277
Shanghai	9,915
Shandong	4,873
Anhui	4,559
Hubei	2,957
Tianjin	2,937
Liaoning	2,529
Shanxi	2,223

(Cumulative values as of 2016)

Source: All figures are taken from the NDRC “Status Report on the Development of China’s New Energy Vehicle Industry”. The figures for 2016 are cumulative values as of December 31.

Table 7: New Energy Vehicle Ownership and Charging Infrastructure Targets as given in the *Plan*

[A] New Energy Vehicle Ownership and Charging Point Figures for 2015-2020			
Category	No. of vehicles owned	No. of charging stations/points	
EV Buses	200,000	3,848	
EV Taxis	300,000	2,462	
EV Environmental Health, Logistics and other Specialized Vehicles	200,000	2,438	
EV State and Privately-owned Passenger Cars	4,300,000	4,300,000	
Urban Public Use Charging Stations	-	2,397	
Dispersed Public Use Charging Points	-	500,000	
Intercity High-speed Charging Stations	-	842	
Total	5,000,000	4,811,987	
[B] Region-specific New Energy Vehicle Ownership and Charging Point Figures for 2015-2020			
Region	No. of vehicles owned	No. of charging stations	No. of charging points
[Accelerated development regions] Beijing, Tianjin, Hebei, Liaoning, Shandong, Shanghai, Jiangsu, Zhejiang, Anhui, Fujian, Guangdong and Hainan	2,660,000	7,400	2,500,000
[Pilot promotion regions] Shanxi, Inner Mongolia, Jilin, Heilongjiang, Jiangxi, Henan, Hubei, Hunan, Chongqing, Sichuan, Guizhou, Yunnan, Shaanxi and Gansu	2,230,000	4,300	2,200,000
[Actively promoted regions] Guangxi, Tibet, Qinghai, Ningxia and Xinjiang	110,000	400	100,000

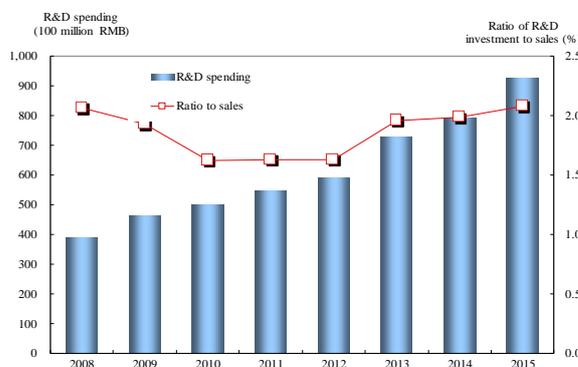
Source: NDRC, NEA, MIIT, etc. Guideline on the Development of Electric Vehicle Charging Infrastructure 2015-2020 (October 9, 2015)

Note: The targets presented are taken from the Guideline, which was issued in October 2015; the pace of growth has already outstripped these targets.

As is well known, Chinese auto manufacturers are currently the leading players in the eco car segment of China’s auto industry, but it is foreign automakers and the joint ventures they have formed with large state-

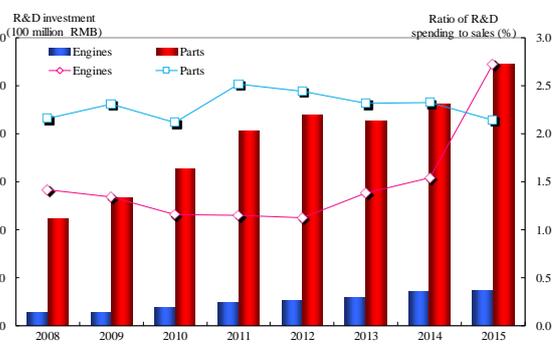
owned enterprises that dominate the market. Given the structure of China’s auto industry (wherein results are largely dependent on joint ventures and capital ties are intertwined), which is sometimes said to be in a “same bed, different dreams” relationship⁴, the implementation of industrial policy is not necessarily advantageous. The *Plan* does not give a specific timeline on the loosening of restrictions on the joint venture equity ratio for foreign and domestic investment, but according to recent press reports there is talk of loosening the restrictions on foreign investment for advanced manufacturers, which would include the auto industry⁵, and the effectiveness and success of China’s technology strategy, which involves “exchanging market for technology”, will largely depend on whether Chinese auto manufacturers can increase their capacity for technological development and make significant headway with innovation; however, as **Fig. 9** and **Fig. 10** demonstrate current efforts are neither ideal nor consistent.

Fig. 9: R&D Spending in China’s Auto Industry



Source: “China Automotive Industry Yearbook (2016)”

Fig. 10: R&D Spending on Vehicle Engines and Parts in China’s Auto Industry



Source: “China Automotive Industry Yearbook (2016)”. R&D expenditure on parts includes that for motorbike components.

As might be expected, with the number of breakthroughs made by Chinese companies in the IT industry on the increase, China can be expected to move from element technology to system technology, and in working to upgrade the auto industry as a whole with its groundbreaking focus on developing the new energy vehicle segment, the Chinese government’s strategy agenda is unmistakable. China may not succeed in realizing its dream of becoming an automotive powerhouse within the next decade, but it is tightening its environmental regulations with a view to promoting new energy vehicle growth and as demand expands is on the verge of introducing entry requirements and a date for foreign investment in the eco car market, and with progress in technical innovation and enhanced capabilities in the eco car and intelligent connected vehicle segments through Sino-foreign joint ventures and collaborations not only Chinese buy-outs of foreign companies, China’s auto industry could well emerge as a global force and superpower in the eco car and intelligent connected vehicle market in ten years.

⁴ SASAKI Nobuaki “China’s Auto Industry and the First Automobile Works Group”; SASAKI Nobuaki “Modern Chinese Industries and Enterprises” (Japanese only), Koyo Shobo, October 2016

⁵ According to several news reports, on May 25, Ministry of Commerce spokesman Sun Jiwen revealed that the Chinese government will “encourage foreign investment in high-end manufacturing sectors, including the auto industry”, and said specifically that the government is working on a revision to the *Catalogue of Industries for Guiding Foreign Investment*. He stated that the government is considering loosening the restrictions on foreign investment in key sectors, including auto manufacturing, electric vehicle batteries, motorcycles and electronics. Evidently, these sectors are the major fields of technology mentioned in the “Medium- and Long-term Plan”.

At the same time, the implementation of the Plan, which combines technology policy with measures to stimulate the economy, will actively promote the development both of the auto industry as a whole and of the regional governmental policies aimed at promoting local auto industries (including a package of new energy vehicle development incentives), and is already serving to spur broad-based investment in the auto industry and to attract more companies, both domestic and foreign, into the market. China's auto industry policy has already served to stimulate economic growth and increase production, including the growth in new energy vehicle charging infrastructure, which could lead to new problems in the form of excess investment and excess capacity, which have the potential to counteract measures to boost the economy and could also have a negative impact on the primary goal of strengthening auto industry technology, and China's success in marrying industry policy to economic-stimulus measures will need to be carefully monitored over the coming years.

Outlook for the Chinese Yuan Exchange Market Based on the Trade Environment

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1. Introduction

On April 14, the *Report to Congress on International Economic and Exchange Rate Policies* was released for the first time after the inauguration of the new presidential administration in the U.S. In this report, there was no fundamental change, postponing the identification of China as a currency manipulator. However, the trade policy of the U.S. is highly influential on the foreign exchange market. Thus, this report must attract significant attention in the market, as U.S. President Donald Trump has been actively calling for the correction of the trade imbalance. This review will summarize the key issues related to China in the *Report to Congress on International Economic and Exchange Rate Policies*, along with the situation of trade, in order to examine the future outlook for the Chinese yuan exchange market.

2. U.S. semiannual *Report to Congress on International Economic and Exchange Rate Policies*

The *Report to Congress on International Economic and Exchange Rate Policies* is a report submitted semiannually by the U.S. Department of the Treasury as an analysis of the economic situation and the monetary policies of related countries. If a country is considered to be manipulating its foreign exchange rate in an unjustifiable manner, the country is identified as a “currency manipulator” and will receive a request to re-evaluate its currency, or it may incur sanctions such as punitive custom duties.

President Trump has long been repeating his claim that China is controlling the Chinese yuan exchange rate against the U.S. dollar to keep the value of the Chinese yuan low, in order to raise its export competitiveness. Market participants were thus waiting to see whether China would be identified as a currency manipulator in the report this time around.

3. Changes in the criteria for the identification of currency manipulators and pressure on China

The conditions for the identification of a currency manipulator are the following: (1) must have a trade surplus against the U.S. (USD 20 billion or higher annually), (2) must have a current account surplus (3% as a ratio of GDP or higher), and (3) must be carrying out one-sided and continuous exchange market interventions by selling its own currency. If a country fulfills the above three conditions, the country will be identified as a “currency manipulator.” If the country fulfills two of the three conditions, the country will be included on a watchlist and will be under surveillance for at least a year. The situation for each country is shown in Fig. 1. There was no country identified as a currency manipulator this time around, and six countries/regions—China, Japan, Germany, South Korea, Switzerland, and Taiwan—were included on the watchlist.

Fig. 1: Criteria for the identification of currency manipulators and the situation for each country and region

(The countries and regions in red are on the watchlist, along with the figures fulfilling the criteria for identification.)

Identification criteria	Trade surplus against the U.S.		Current account balance	Foreign exchange market intervention
	Actual figures in FY2016 (USD 1 billion)	Significant and disproportionate	Percentage against GDP (%)	Percentage against GDP (%)
	USD 20 billion	Unknown	3.0%	2.0%
China	347.0	*	1.8	-3.9
Japan	68.9		3.8	0.0
Germany	64.9		8.3	-
Mexico	63.2		-2.7	-0.5
Italy	28.5		2.8	-
South Korea	27.7		7.0	-0.5
India	24.3		-0.5	0.4
France	15.8		1.2	-
Switzerland	13.7		10.7	10.0
Taiwan	13.3		13.4	1.8
Canada	11.2		-3.3	0.0
U.K.	-1.1		-5.1	0.0
Eurozone	125.7		3.4	0.0

Source: Department of the Treasury of the United States

Even though China fulfills only the first condition based on the previous standards, it was included on the watchlist because of the fact that “it accounts for a disproportionate ratio in the U.S. trade deficit” (“significant and disproportionate” in Fig. 1). This criterion was newly introduced this time, but it was not applied to Mexico, which is fourth in ranking in terms of its trade surplus against the U.S., which suggests that this was introduced clearly for targeting China.

It seems that China has recently been intervening in the exchange market in order to prevent the sharp depreciation of the Chinese yuan (based on accelerated capital outflow). If we only look at this fact, it would not correspond to the controlled depreciation of the currency as claimed by President Trump. However, the report released this time criticized China, emphasizing that: “China has been intervening in the foreign exchange market in a continuous and one-sided manner using a significant amount of funds in order to prevent the appreciation of the Chinese yuan. As a result, the correction of the undervaluation of the Chinese yuan has been taking a long time, and in the meantime, laborers and companies in the U.S. have been incurring significant burden.” The U.S. is therefore likely to continue pressuring China for a while. Regarding postponing the identification of China as a currency manipulator, it should also be pointed out that President Trump made the comment: “If we identify China as a currency manipulator now, we would lose future opportunities for discussions on issues related to North Korea, which have been in progress.” Thus, it is possible for the U.S. to identify China as a currency manipulator under a new rule in the times ahead, once the situation changes, such as in the calming of issues related to North Korea. If that

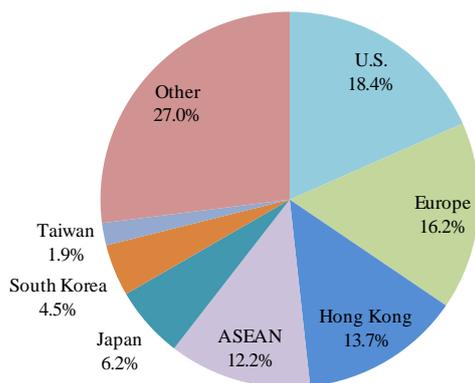
happens, there will be stronger upward pressure on the Chinese yuan from the U.S., obliging China to revise its trade policies. Prior to the release of the *Report to Congress on International Economic and Exchange Rate Policies*, there has been an agreement concluded between the U.S. and China to set up a “100-day plan” to resolve the trade imbalance, which is also an important factor for the future outlook.

4. Possible monetary strategy for China based on trade statistics

The trade situation in China is also an important factor. Figure 2 shows the export partner countries/regions of China, and as is shown in the figure, the U.S., Europe, and Hong Kong together account for approximately half of the total export value of China. Other Asian countries excluding Hong Kong account only for approximately 25%.

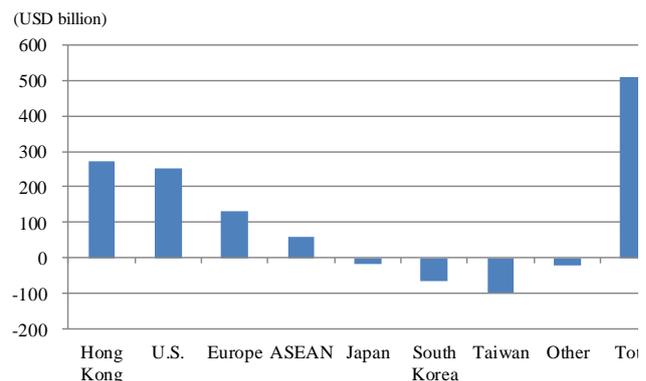
The trade balance is shown in Fig. 3, and a large part of the trade surplus is from Hong Kong, the U.S., and Europe, while there is a trade deficit for Japan, South Korea, and Taiwan.

Fig. 2: Export partner countries and regions for China (2016)



Source: Bloomberg

Fig. 3: Trade balance of China by partner country and region



Source: Bloomberg

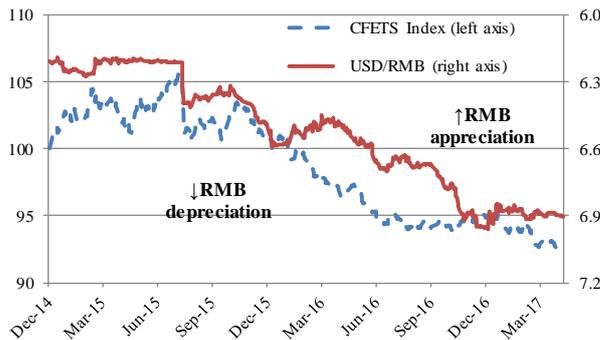
With regard to Hong Kong, the U.S., and Europe, for which China has a trade surplus, it is considered undesirable for China to have a strong Chinese yuan in order to avoid reduced export competitiveness. The Hong Kong dollar can be seen as a currency close to the U.S. dollar because of its U.S. dollar peg system. Furthermore, as many countries in Europe use the euro, it would not be ideal for China to have a strong Chinese yuan against the U.S. dollar and the euro. On the other hand, with regard to Japan, South Korea, and Taiwan, for which China has a trade deficit, it can be said that the appreciation of the Chinese yuan against their currencies is more likely to be accepted compared to the U.S. dollar and the euro.

5. Monetary policy of China, with Chinese yuan exchange rates

The exchange rate of the Chinese yuan is shown in Fig. 4. First of all, in order to observe the Chinese

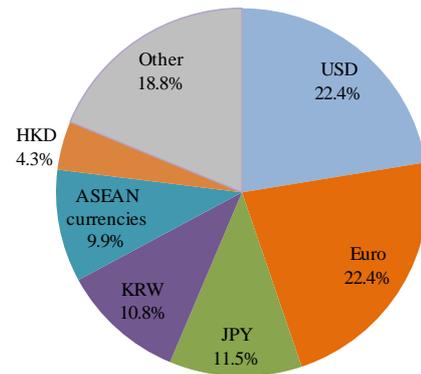
exchange rate, it is necessary to examine the CFETS Index,¹⁴ which shows the U.S. dollar exchange rate and the exchange rates for 24 countries and regions based on the trade-weighted average. It should be pointed out here that a change in the basket currencies for the CFETS Index was announced in December 2016. The structure ratio of each currency after the change is shown in Fig. 5.

Fig. 4: U.S. dollar/Chinese yuan exchange rate and the CFETS Index



Source: CFETS and Bloomberg

Fig. 5: CFETS Index basket currencies



Source: Bloomberg

In August 2015, the People’s Bank of China (PBOC) (the central bank of China) decided to significantly lower the Chinese yuan exchange rate against the U.S. dollar in order to keep the reference rate close to the market exchange rate. In December of the same year, the PBOC released the CFETS Index, shifting its principle of stabilizing the exchange rate from a method based on the exchange rate against the U.S. dollar to a method based on the exchange rate against a currency basket according to the trade-weighted average. It is considered that this decision was made based on the fact that the Chinese yuan exchange rate against the U.S. dollar has not moved while the U.S. dollar remained strong, while the Chinese yuan appreciated by more than 5% since the end of 2014 against the currency basket. The CFETS Index thus fell from around 106 to around 100 during this period.

Thereafter, the Chinese yuan remained weak due to concerns over capital outflow to overseas markets. As a result, the CFETS Index has remained below 95 (weaker by 5% compared to the rate observed at the end of 2014). The Chinese monetary authorities have denied that they took action to keep the Chinese yuan weak. Indeed, there were a series of restrictions on foreign currencies announced in order to keep the Chinese yuan from depreciating, while there were actions to buy the Chinese yuan against the U.S. dollar, which were interpreted as market interventions by the Chinese monetary authorities. However, looking at what actually happened, the 5% appreciation of the Chinese yuan against the currency basket was not tolerated, while the 5% depreciation of the Chinese yuan was.

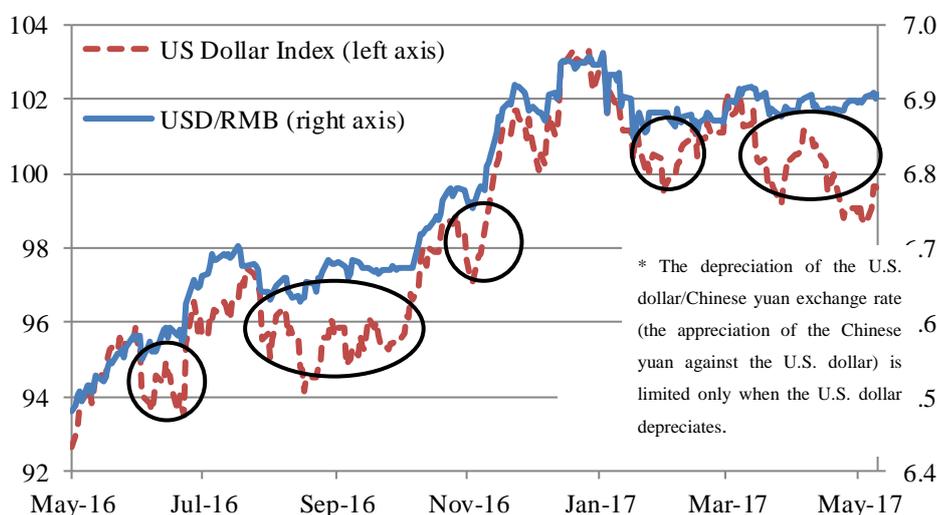
¹⁴ Regarding the details of the CFETS Index, please see Mizuho China Monthly June 2016. <https://www.mizuho.com/service/global/cndb/economics/monthly/pdf/R512-0081-XF-0106.pdf>

For China, which has a significant amount of trade surplus, amounting to USD 500 billion (almost JPY 57 trillion) annually, there are concerns over the acceleration of capital outflow that may be caused by the sharp depreciation of the Chinese yuan, while it is important to avoid the loss of export competitiveness due to the yuan’s appreciation. It is therefore considered desirable for China to keep the Chinese yuan stable or to have it depreciating gradually.

6. Regarding the U.S. dollar/Chinese yuan exchange market

Then, is it difficult for the Chinese yuan to appreciate against the U.S. dollar? According to Fig. 6, the euro accounts for 57.6% of the U.S. dollar index, which shows the strength of the U.S. dollar. Thus, it should be kept in mind that the fluctuation of the euro exchange rate is highly influential. However, in the past year, the Chinese yuan often depreciated against the U.S. dollar directly following the U.S. dollar’s appreciation (the appreciation of the U.S. dollar index), while the U.S. dollar/Chinese yuan exchange rate almost never depreciated at the time of the depreciation of the U.S. dollar, apart from the beginning of 2017. Does this mean that the Chinese monetary authorities have been keeping the Chinese yuan from appreciating? Or is only the depreciation of the Chinese yuan attracting attention in the market? It is difficult to answer these questions. However, the reality is that the Chinese yuan depreciates when the U.S. dollar is strong, while the appreciation of the Chinese yuan is limited when the U.S. dollar is weak.

Fig. 6: U.S. dollar/Chinese yuan exchange rate and the U.S. dollar index (for the last one year)



Source: Bloomberg

If such a situation persists, the appreciation of the Chinese yuan is likely to remain limited, unless there is a significant change in the U.S. dollar exchange market. The Chinese yuan is therefore expected to remain flat or will depreciate in the times ahead.

However, as was discussed in Section 3, the U.S. is likely to remain tough on China, making it hard for China to actively lead the Chinese yuan to weaken. Furthermore, in autumn, the National Congress of the Communist Party of China will be held (held every five years), in addition to the fact that the release of the *Report to Congress on International Economic and Exchange Rate Policies* will occur again in October. Against such a backdrop, it is unlikely for the sharp depreciation of the Chinese yuan to be tolerated. Thus, the fluctuation in the U.S. dollar/Chinese yuan exchange market is generally expected to remain limited.

7. Conclusion

As was discussed above, from the point of view of trade, the Chinese yuan is unlikely to appreciate against the U.S. dollar and the euro, while it is difficult to ignore the pressure from the U.S. China is therefore facing a difficult situation. The “100-day plan” to resolve the trade imbalance was agreed on between the U.S. and China. However, its detailed contents remain unclear for now, keeping market participants curious about the actions taken by each country. Market participants are also curious again about whether China will be identified as a currency manipulator in the *Report to Congress on International Economic and Exchange Rate Policies* to be released in October. Even though the trade policies of the U.S. and China remain unclear, they will remain an extremely important factor in examining the foreign exchange market for a while still.

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