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The Road Ahead

*China's Passenger
Vehicle Market In 2015*

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The Road Ahead: China's Passenger Vehicle Market in 2015

Every executive wishes for a crystal ball that could provide a glimpse into the future and reveal what his or her industry will be like in ten years. While that's likely to remain an impossible dream, it doesn't hurt to look for the next best thing. In 1999, when the Shanghai Municipal Government asked Booz Allen Hamilton to review the impact on Shanghai of China's entry into the World Trade Organization (WTO), we made a number of predictions on where the Chinese auto market would be today that have largely been borne out; many have exceeded even our most optimistic expectations.

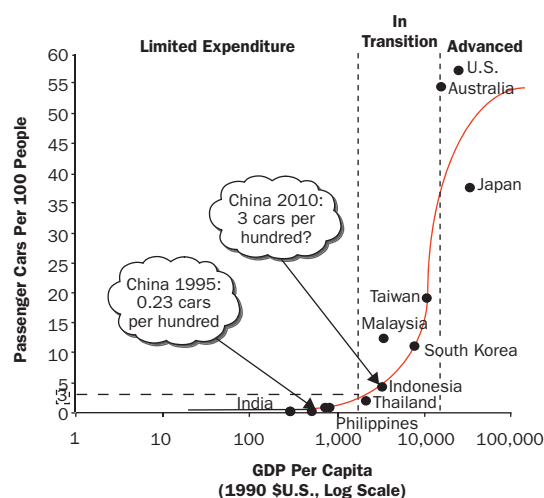
Today, we're looking into the future again and painting a picture of what China's auto market will be like in 2015 across six key dimensions: overall market; regulatory context; products and markets; manufacturing and assembly; supply base; and branding, sales, and the aftermarket. We highlight five major trends and the accompanying market discontinuities and how vehicle manufacturers, suppliers, and other market participants can best prepare for them.

Overall Market: China's gross domestic product (GDP) is expected to grow at annual rates of 8 percent to 9 percent for at least the next several years and possibly until 2015. With this growth in wealth, the demand for automobiles will rise, with forecasted figures putting China's annual vehicle sales at more than 10 million by 2015. This growth will make China the second-largest auto market in the world, establishing it as a market of such size that it will have a direct impact on the fortunes of many vehicle manufacturers (VMs) and suppliers worldwide. The Chinese market will likely see periods of overcapacity—driven, on one hand, by occasional government policies that manage demand-side growth through various policy levers, and, on the other hand, by VMs' and suppliers' strong appetite for a share of this fast-growing market and consequent

tendency to invest. Along the way, VMs will likely shorten new-product-development cycles in pursuit of market share, which will also serve to spur demand. Exhibit 1 provides an illustration of the potential of the Chinese market following the penetration S curve.

Regulatory Context: For the auto industry, the Chinese government will continue to balance overall development of the domestic industry with its WTO commitments. The early 2005 slowdown in the auto sector demonstrates that it is still very much a managed sector, with the government pulling policy levers to control both demand and supply. Some of the levers being used and/or under consideration to manage demand include credit tightening (for example, banning four state-owned banks from providing automotive financing); the introduction of a fuel tax; tariffs and non-tariff barriers; and an increase in license fees. The government is also managing supply by trying to cool upstream capacity investments through more stringent investment controls.

Exhibit 1
Automobile Penetration "S-curve"



Note: Assumes average useful life for vehicles is 10 years
Source: China Auto Yearbook; China Statistical Yearbook; Morgan Stanley; Goldman Sachs; State Information Center; Booz Allen Hamilton

However, the government stated in its objectives for 2010 that it would like to create a mature, globally competitive automotive sector in China, and the sector is targeted to become one of the pillar industries by 2010. At the same time, the industry has also been tasked with delivering 15 percent or more fuel efficiency versus 2003 levels. Given this commitment to reducing oil dependency, China may well be forced to take the offensive in developing a highly affordable, fuel-efficient car, whether hybrid, hydrogen, alternative technology, and/or lightweight existing technology.

Products and Markets: The Chinese market is currently dominated by foreign brands and joint venture (JV) brands that are partnerships between foreign and domestic companies. While this was considered expedient to growing the industry during the early stages of market development, it is now increasingly undesirable for the government and Chinese VMs. Therefore, we expect to see a divergence of brands among local and foreign VMs over the next ten years. Large Chinese VMs can be expected to acquire research and development (R&D) platforms to develop their own Chinese brands that will be targeted, at least initially, at the entry-level, mass-market segment. As a result, many existing JVs may be restructured. Some JVs may even be unraveled to allow both sides to go their own direction, free of encumbrances. Chinese VMs may go one step further and design a car that is specifically tailored for emerging markets globally, such as Eastern Europe, Southeast Asia, or India, and eventually go global with a quality, reliability, and dependability (QRD)/cost positioning lower or similar to Korean VMs.

Beyond 2015, we envision at least one Chinese VM making initial moves toward entering the near-luxury segment, following the tradition set by the Japanese and Korean VMs, which took roughly 50 years and 30 years respectively to reach a similar stage of product development.

Manufacturing and Assembly: As a result of over-investment in recent years, some VMs operating in China are now facing excess capacity as well as pricing and profitability pressures, shaped by a maturing, consumer-driven market and overly optimistic capacity additions in the past. We expect these VMs to acquire manufacturing and sourcing capabilities to compete globally, seeking cost leadership and increased value chain participation to capture more of the economics across the value chain. We will probably see a fairly dynamic industry structure over the next ten years.

Many VMs will try to achieve larger scale and scope through consolidation, acquiring smaller Chinese VMs and potentially their JV partners' stakes. A commonly held view today is that the market will consolidate to three or four remaining full-line domestic VMs by 2015 with, at most, a few additional domestic players occupying niche segments.

Supply Base: Currently, many suppliers are uncompetitive as they continue to import a significant portion of their components and operate at subscale production in order to be close to their VM customers in China. However, a consolidation of VMs would allow for further consolidation among Tier 1 suppliers—creating scale, achieving stronger profitability, and ultimately creating a world-class cost base. National suppliers with R&D, supply chain, and export capabilities will emerge with the ability to take their businesses to a new level. They will do so by leveraging their scale positions in the Chinese domestic market to compete on cost, and will likely leverage lower-cost process technologies and production footprints to sell components cost-effectively into offshore markets.

Branding, Sales, and the Aftermarket: VMs and dealers will confront considerable marketing, sales, and service challenges as empowered consumers demand lower prices, more sophisticated products, and better service. Branding will become more important and VMs will have to invest in marketing in order to establish brands and to promote new product positions and differentiation as the number of models in the market proliferates.

By strengthening their brands, we expect VMs to take a much more active role in distribution through rationalization and equity participation of existing dealers. The focus will be on improving the overall standards of their dealer networks to be closer to the standards of developed markets. One of the key challenges will be managing profitability, as volume per dealer will still be low while investment costs per outlet will rise as VMs increase their geographic coverage to reach new consumers.

The used car market will flourish and support the motorization of China's less economically developed regions. At the downstream end of the value chain, VMs or a major group of independents will likely begin managing vehicles across their lifecycles, reselling used cars from Tier 1 and Tier 2 cities to Tier 3 cities, in order to promote overall car ownership and to reduce

purchase cycles of new cars in the major markets. To meet the aspirational needs of increasingly wealthy Chinese consumers, parts and accessories distribution will also rapidly evolve through world-class branded distribution.

Major Trends and Discontinuities

We see five major trends that are logical extensions for 2015 and four discontinuities (see Exhibit 2):

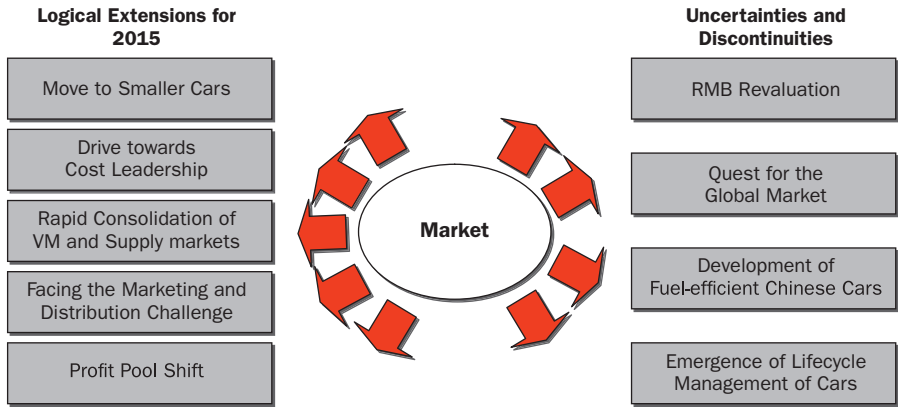
Move to Smaller Cars: The passenger car market today is heavily weighted toward mid- to smaller-size vehicles and this is unlikely to change fundamentally. Affordability and the shift toward consumer versus institutional sales will continue to drive the development of smaller cars. China's thirst for oil will put increasing pressure on energy conservation and accelerate development of fuel-efficient cars. In 1995, the eighth five-year plan showed heightened concern for the environment and for renewable energy sources, and the tenth and, most recently, eleventh five-year plans continue to put a strong emphasis on energy conservation and resource utilization. Recent policies in the auto sector focus on reducing demand for larger vehicles via taxation, a necessary step since one-third of total oil consumption in China can be attributed to the auto sector. The government is also increasing taxes on gas guzzlers in a serious effort to curb fuel demand. China's production and consumption of crude oil are increasing, yet China's self-sufficiency rate is decreasing. Though the current self-sufficiency rate of crude oil is at 70 percent, projections show this number declining in the near future. The Chinese government's recent announcement to relax a series of restrictions on small cars provided

another impetus for the rapid development of more fuel-efficient cars.

Drive Toward Cost Leadership: Continued foreign and domestic investments in the automotive sector will create periods of overcapacity. VMs will also continue to increase the number of vehicle models to preserve or increase market share (see Exhibit 3). The rapid decline of Volkswagen in China in recent years as it failed to refresh its models is a clear warning to others. New car prices in China will continue to drop, stimulating demand. However, VMs that cannot cut costs by an estimated 8 percent annually will likely face sustained losses beginning in 2005, as volume increases will be insufficient to offset declining prices. Components today account for the majority of vehicle cost and the higher component costs in China contribute to overall costs of manufacturing that are sometimes as much as 20 percent above world-class levels, despite China's low labor costs.

The Chinese auto component market today remains fragmented and subscale, with the top ten players accounting for only 20 percent share. As the component market consolidates, VMs will find it increasingly feasible to achieve true cost reduction without having to sacrifice quality for cost savings from procurement. While China sourcing will continue to increase over time, the relative attractiveness of China versus other locations in Asia and in Eastern Europe will continue to vary by commodity, requiring companies to continue making sourcing decisions at the commodity level. Given its factor cost advantages, it is realistic to project that China will become globally competitive across more component categories as scale and technology improve.

Exhibit 2
Major trends and discontinuities



Source: Booz Allen Hamilton

Rapid Consolidation of VM and Supply Markets: Driven by decreasing unit costs for auto components and systems and increasing competition, global VMs will continue to vie for position in the market through JVs with smaller VMs outside of the Big Three (First Auto Works-FAW, Shanghai Automotive Industry Corporation-SAIC, and Dongfeng). The VMs, though highly fragmented today, will likely consolidate to three or four full-line VMs along with a few niche players by 2015. The dozens of smaller VMs that currently exist will find it difficult to achieve scale and will eventually exit the market (see Exhibit 4, page 5).

Facing the Marketing and Distribution Challenge: As Chinese consumers are still in the process of forming brand preferences, brand loyalty in China is quite low by global standards. As a result, VMs will need to make major investments to establish and reinforce their brand positions. While brand awareness and preferences will ultimately influence buying decisions, the overriding key purchase criterion in the foreseeable future will remain value for money—or at least the consumer's perception of value. Brand image and services will also be critical purchase criteria for vehicles in the mid-market segments and above. Ultimately, they could also encompass the lowest-end segments as brand positions and performance among all the foreign and domestic players become clear.

The auto distribution landscape has come a long way since the days of state-planned allocations, when supply was apportioned through central agencies and VMs had

little or no control over where or how their cars were sold. Looking to the future, we see the market heading toward VM-controlled distribution, facilitated by WTO commitments. Over time, we expect to see full-service retailers that will also provide financing for both local and imported products.

Most VMs will continue to face major issues in all key dimensions of distribution and this will likely take years and substantial investments to address. Logistics networks will continue to be upgraded, with the experience of Shanghai Volkswagen and Shanghai General Motors (GM) providing important lessons for VMs in China. Volkswagen and GM have arguably created some competitive advantages by expanding the service networks for their cars, with national networks of warehouses and transportation and logistics linkages that support their customers needs' for parts and services throughout the lifecycle of their vehicles. The lack of such networks is a challenge for smaller players or more recent entrants that can't cost-effectively deliver high service levels for parts and repairs. Newer entrants into the market, such as Ford, will need to build these networks quickly to become long-term contenders in China.

Value Shifting Downstream: Revenue and profit pools in China today are currently heavily weighted toward the upstream value chain, with significant investments in vehicle manufacturing and wholesale parts. However, as was the case in other markets, the revenue and profit streams will likely migrate downstream into auto

Exhibit 3

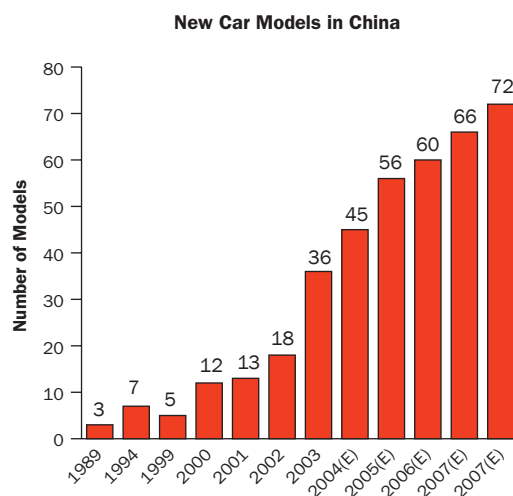
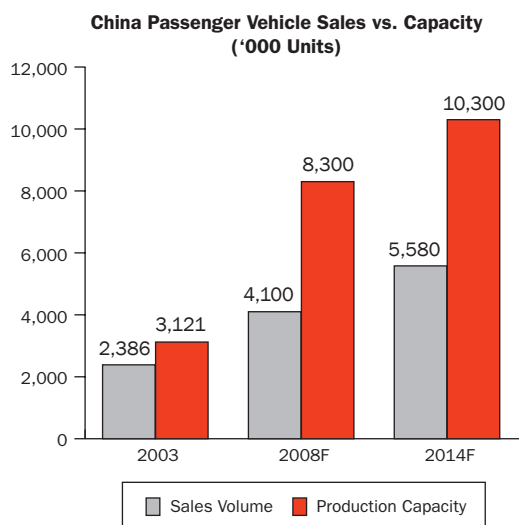
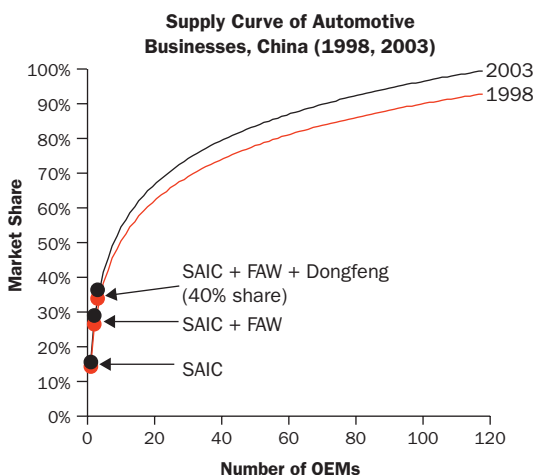


Exhibit 4



Source: Booz Allen Hamilton

finance, leasing, repairs and service, auto accessories, and other auto services.

Along with these trends, there are also major uncertainties:

RMB Revaluation: For most multinational companies, a revaluation of RMB will need to be anticipated and managed. While currency movements are difficult to predict, the RMB will likely gain value against the U.S. dollar over time, rather than lose value, but revaluation will likely be gradual so that China and its trade partners can make adjustments that minimize disruptions to their respective economies. The RMB revaluation in July 2005 is expected to be but the first of a series of gradual adjustments. For Chinese VMs, a revaluation of the RMB would reduce the attractiveness of exports from China while lowering the cost for imported parts. For foreign VMs, revaluation would increase investment costs in China from overseas, but also reduce import costs into China. For auto suppliers, it would reduce sourcing costs for imported raw materials and components and increase price pressure for exported components. Finally, there will be an increase in operating costs for overseas financial services companies in China.

Quest for the Global Market: Pressures at home, as well as their likely success in the domestic market, will spur some Chinese VMs to go global, including into other emerging markets. The move outward will be driven simultaneously by a push from the local market and a pull from global markets. It appears that leading

Chinese VMs, such as Chery and Geely, will likely be ready soon. Chinese VMs are already displaying their products at overseas auto shows, including the recent Frankfurt auto show. Chinese VMs are also selling into other developing markets to gain experience in operating abroad. The Korean auto experience provides a compelling parallel for Chinese auto makers. Whether Chinese VMs ultimately succeed abroad, the quest for the global market will undoubtedly spur the adoption and development of new capabilities that will also be useful in building capabilities in China.

Development of Fuel-Efficient Chinese Cars: With an overriding concern about fuel consumption, China could become a global leader in regulatory compliance and launch a highly affordable, fuel-efficient car. China today faces significant challenges in energy conservation and air and water pollution. The government has publicly stated its goal to improve fuel efficiency and the Chinese government has a strong track record in meeting its commitments. If China does end up taking the lead, this will force VMs from other markets into a game of catch-up. Development of a highly affordable fuel-efficient car will require a fundamental change of mindset and VMs will need to learn new skills in R&D for producing drive trains based on alternative fuels. This will require setting up R&D centers and investing in applied research to develop commercially viable technologies.

Emergence of Lifecycle Management of Cars: We can envision the rapid emergence of a “lifecycle asset manager” player in China, riding the motorization trend westward. This could trigger domestic (and some foreign) VMs to manage the entire lifecycle of the car in order to capture profits across the value chain. The used car market is currently supply-constrained. However, the pace of new car price declines will shorten repurchase cycles and rapidly introduce a new supply of used cars. In addition, VMs taking a more active role in managing the used car market will improve consumer acceptance.

While our crystal ball may be a bit cloudy, we hope to outline major trends and discontinuities that will likely influence the development of the industry over the next 10 years. The road ahead will not be smooth, but the rewards will be significant for those who navigate it successfully.

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