

# Automobile Market Outlook

## China

2012  
Economic Analysis

- **This is our first annual Automobile Market Outlook for China.** It describes the evolution of the domestic auto market, which by 2009 had become the world's largest, and assesses the outlook for the coming years.
- **Despite a recent deceleration due to the tightening of credit policies in 2010-11, we project auto sales to pick up in the coming years.** Sales are already beginning to rise again on supportive policies, and over the medium term, ongoing urbanization and rising purchasing power should contribute to a further rise in market growth.
- **At the same time, we project auto-finance to expand rapidly under policy support for the growth of consumer finance.** While such finance has been led by banks so far, the role of auto finance companies is expected to increase over time as financial sector liberalization leads to an increase in their access to a wider range of funding sources.

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## Summary

**China's domestic auto market has grown rapidly since the country's 2001 accession to the World Trade Organization.** By 2009 the domestic market had become the world's largest, surpassing the US both in terms of domestic sales and production. Growth has been underpinned by market liberalization and greater economic openness. While the liberalization process still has a long way to go, it has fostered increased foreign investment and imports of automobiles and auto parts. At the same time, demand has been facilitated by rising income levels, urbanization, and policies to rebalance growth toward private consumption.

**After growing rapidly in recent years, auto sales decelerated in 2011 due to tighter credit policies and slowing economic growth.** Auto sales growth fell from 46% in 2009 to 2½% in 2011, well below the average of previous years. The factors for the slowdown are tighter credit conditions, the removal of subsidies for auto purchases that were in place during 2009-10, and new restrictions on licensing to curtail congestion in major cities. Recent monetary easing and the renewal of auto subsidies should support a resumption of growth in the coming year.

**Despite rapid sales growth in over the past decade, car ownership rates in China remain low by international standards.** While ownership rates have increased by more than five-fold since 2003 and are broadly in line with those of countries at similar GDP per capita levels, they are still half the global average (56 per 1,000 people in 2011 vs. 125 globally in 2009) and far below the average for OECD economies (456 per 1,000 people in 2009).

**Ongoing urbanization, rising purchasing power, and policy initiatives to support private consumption bode well for the sustained growth of China's auto market in the years ahead.** Based on these factors, we project passenger car sales to rise from around 10% in 2012 to 20% by 2014 despite relatively sluggish sales growth for the remainder of 2012. On this basis, ownership rates should more than double over the next few years, to 113 per 1,000 people by 2015. The outlook is consistent with the growth and development experience of other emerging economies in Asia, such as Taiwan and Korea. Risks to the outlook stem from the possibility of slower economic growth, rising energy costs, and environmental sales restrictions.

**Government policy has been an important driver of production and market trends.** The approach so far favours joint ventures with international producers. Passenger cars produced by local Chinese brands account for around 40% of total market share at present. German and Japanese joint venture brands dominate the rest of the market, accounting for around 35% of domestic market share. Policies are shifting gradually in favour of local brands, as well as in support of the growth of auto and auto parts production for export. The government has also been a strong advocate for the development of electric powered and energy efficient vehicles, which are expected to underpin growth of domestic production in the coming years.

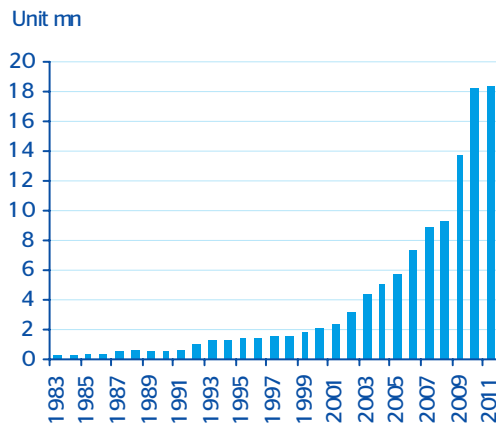
**Despite the large size of its market, China's auto industry still lags behind the top global players in terms of technology and competitiveness.** In this regard, the government's so-called "market for technology" strategy aims to encourage technological spillovers and the sharing of sound management practices from joint venture partners.

**The development of auto finance in China is still at an early stage, accounting for only around 15% of total sales.** That said, along with the growth of sales, China's auto-finance market has been expanding by a cumulative 174% since bottoming out in 2007. While auto-finance has been led by banks so far, the role of auto finance companies is likely to increase over time as financial sector liberalization leads to an increase in their access to a wider range of funding sources, and has enhancements are made to credit information sharing within the financial system. Overall, we project growth of the auto finance market to outpace the growth in auto sales as a larger share of purchases are financed with credit.

# 1. Introduction: a rapidly growing market

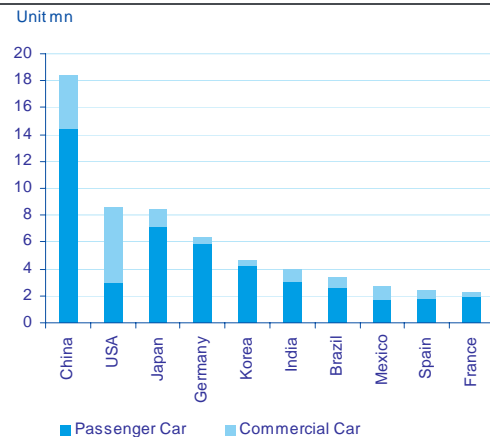
China's domestic auto market has grown rapidly since the country's 2001 accession to the World Trade Organization (WTO) (Chart 1). By 2009 the domestic market had surpassed the US, both in terms of domestic sales and production, to become the world's largest. And by 2011, production and sales reached record highs of about 18.4 and 18.5 million units each, larger than those of the US and Japan combined (Chart 2). Auto sales account for an increasing share of China's retail sales, from just 7% in the early 2000s to more than 25% at present (Chart 3).

Chart 1  
Rising auto production,,,



Source: CEIC and BBVA Research

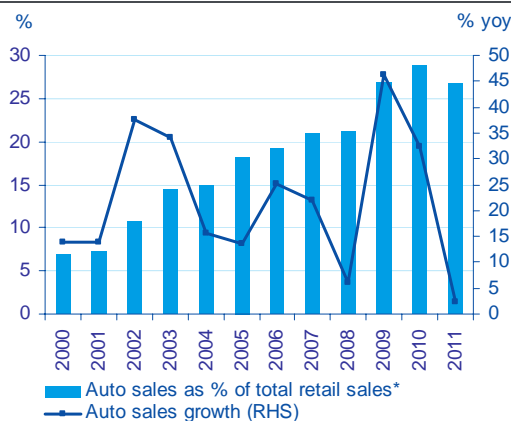
Chart 2  
...has made China the world's largest producer (2011)



Source: OICA and BBVA Research

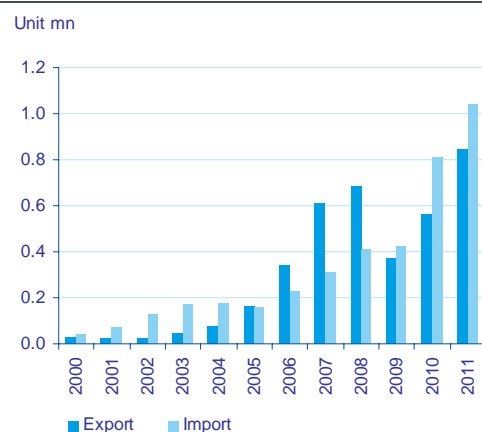
The growth of China's auto market has been facilitated by a trend toward greater market liberalization and economic openness. Foreign investment and imports of automobiles and auto parts have increased (Chart 4 and Box 1). At the same time, demand has been fostered by rising income levels and urbanization.

Chart 3  
Auto sales as a percent of total retail sales



\*Above designated size enterprise  
Source: CEIC and BBVA Research

Chart 4  
China's vehicle import and export volumes



Source: CEIC and BBVA Research

Domestic auto sales grew by an astounding 46.1% in 2009, reaching 13 million units. However, auto sales have more recently encountered headwinds following the tightening of monetary policy in 2010-11. In 2011, unit sales fell to 2.5% (see Chart 3 above) and auto production grew by less than 1%, below the global average. As such China's contribution to world production fell to its lowest level in the past decade, at 0.2 pp compared to around 6-7pp in 2009 and 2010 (Chart 6). In addition to tighter credit conditions, the factors for the slower growth include the removal of subsidies for auto purchases that were in place during 2009-10, and new licensing restrictions to curtail congestion in major cities.

**Box 1: The development of China's modern auto industry**

China's automobile industry dates to the 1950s when, in 1956, the "Jiefang" truck became the first domestically produced commercial vehicle. Two years later, the "Hongqi" car became China's first branded passenger car, and served as a government official vehicle.

Production capacity, however, grew slowly until the beginning of market reforms. In 1986, under the 7th Five-Year Plan (1986-1990), the automotive industry was designated as a national "pillar industry". In 1994, the "Formal Policy on Development of Automotive Industry" was promulgated by the State Council as a further guide to the development of the industry.

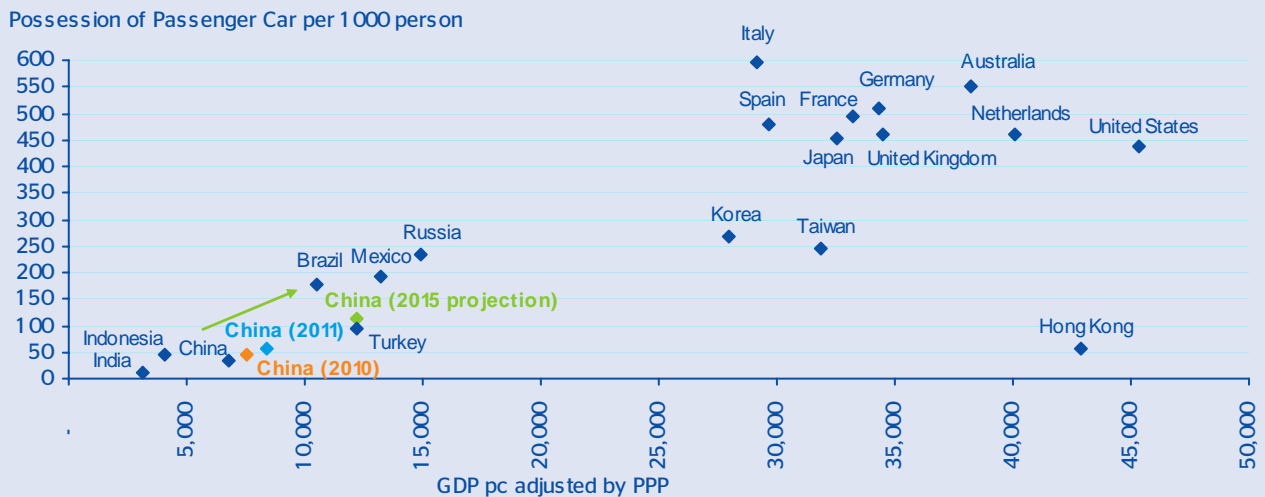
To protect the domestic auto industry, the authorities proceeded gradually and unevenly with the opening of the market to imports. During the mid 1980s, a variety of measures were imposed to restrict auto imports, including tariffs and quotas. As of 2001 import tariffs for finished auto vehicles were in the 70%-80% range, although tariffs for auto parts were considerably lower at around 25%. Foreign investment was allowed only under the framework of joint ventures with major domestic manufacturers. Auto production reached 2 million units by 2000, making China the 8th largest producer in the world at the time, mainly through joint ventures with the major producers.

Prior to China's accession to the WTO, requirements on local input content were common. For example, foreign automakers were not allowed to establish wholly-owned auto companies in China, and joint venture products made in China were required to meet local content rules of 40%. There were also requirements on the balance of auto/auto parts imports and exports as well as the balance of foreign exchange on foreign-invested automakers.

With China's accession to the WTO, commitments were made to reduce tariff and non-tariff barriers, including import tariff cuts for finished vehicles and auto parts to around 25% and 10% respectively. Meanwhile, quotas on auto imports were reduced and finally removed, under the new "Automotive Industry Development Policy" announced by the National Development and Reform Commission (NDRC) in 2004, to bring the market into WTO compliance and the TRIMs agreement (the Agreement on Trade Related Investment Measures).

Complementing the opening progress in the auto manufacturing sector, the China Banking Regulatory Commission (CBRC) also issued new measures to allow foreign investors to establish auto finance companies for the first time.

Chart 5  
**Comparative ownership rates of passenger cars (2009)**



Source: World Bank, Ministry of Transport, CEIC and BBVA Research estimates

## Room for market growth as the economy develops...

While car ownership rates are broadly in line with those of countries at similar GDP per capita levels, they remain low in comparison with more advanced economies (Chart 5 and Table 1). Passenger car ownership per 1,000 people in China was only around 56 units in 2011, up from just 10 units in 2003, but still significantly below the global average of 125 (in 2009) and far from the average for OECD economies of 456 (in 2009). These low ownership rates imply huge potential for further growth of the market. Given the large population base, ongoing urbanization process, and rising purchasing power, China's auto market is likely to sustain rapid growth in the years ahead. Growth of the industry will also benefit from policy efforts to boost consumption as part of the economy's rebalancing and support for energy efficient vehicles. We project auto ownership rates to rise to 113 per 1,000 people by 2015 (see section 5 for details).

Table 1

### China automotive market indicators

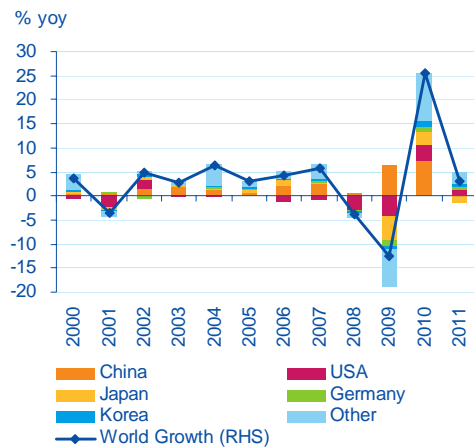
Total population (million of persons), 2011	1,347
Urban population (million of persons), 2011	691
GDP (bn USD), 2011	7,298
GDP per capita (USD), 2011	5,413
Automotive fleet (million units), 2011	93.6
Passenger Car fleet (million units), 2011	74.8
Passenger Car per 1000 people (units), 2011	55.5
Sales of new cars (million units), 2011	18.5
Average price of automotive (USD), 2011	10,348
New car penetration rate (%), 2011	15%
Road network (thousands of km), 2010	4,000
Highway network (thousands of km), 2011	83

Source: IMF, NBS, Ministry of Transport, BBVA Research.

## 2. Production and import of automobiles

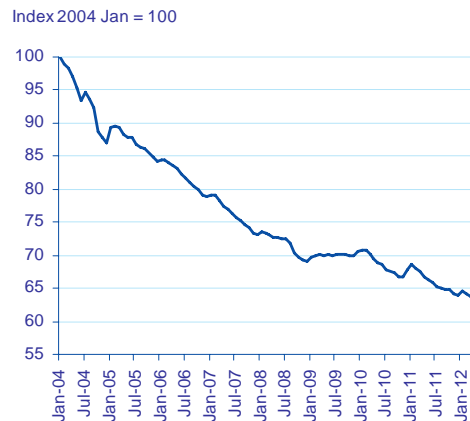
As with sales, China's auto production has expanded rapidly over the past decade, becoming an increasingly significant contributor to global output in volume terms (Chart 6). Expanding supply, lower production costs, and an increasing share of low-end automobiles in total sales have driven down average retail prices by more than 35% since 2004 (Chart 7).

Chart 6  
**China's contribution to world auto production**



Source: OICA and BBVA Research

Chart 7  
**Declining domestic prices of passenger cars**



Source: CEIC and BBVA Research

### Domestic production has been underpinned by joint ventures with foreign auto firms...

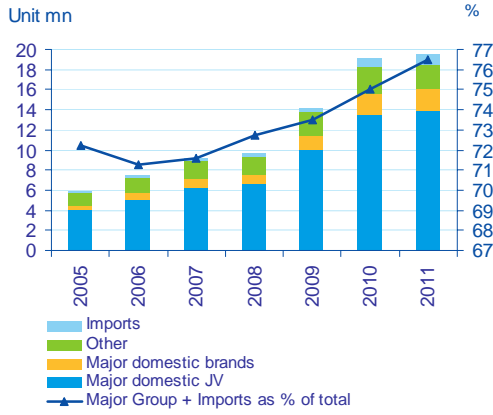
While direct exports to China have grown, the major means of access by foreign auto makers to the domestic market is still through joint ventures with domestic producers (Chart 8). In 2011, major domestic auto groups with joint ventures accounted for 75% of total domestic auto output in volume terms.<sup>1</sup>

Imported auto parts have been a key ingredient for growing auto production, although the share of imported parts has declined in total output (Chart 9). By origin of imports, Germany and Japan have been the dominant sources, accounting for around two-thirds of total imports, including whole cars and parts (Chart 10).

Domestic auto producers have focused more on the low end of the market. This is evidenced by a divergence in auto prices between China's imported and exported cars, with unit values of exported cars only one-third of those of imports' (Chart 11). Hence, even though the volume of export and imports are comparable, by value, China is a net importer (Chart 12). As of 2011, the total exports of Chinese vehicles accounted for 4.6% of total output in terms of units, lagging far behind other major Asian producers such as Japan and Korea.

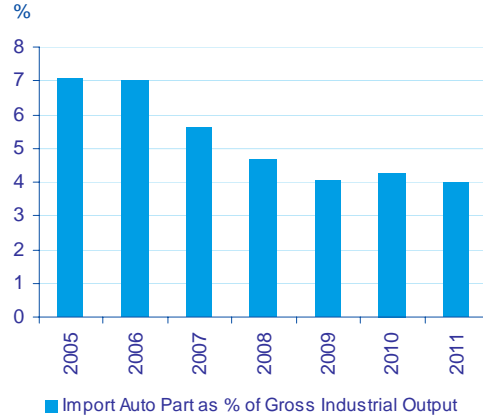
<sup>1</sup> Major domestic joint ventures include: Shanghai Auto Industry Group (Shanghai Volkswagen and Shanghai GM), China FAW Group Corporation (FAW-Volkswagen, FAW-GM, FAW-Toyota and FAW-Mazda), Dongfeng Automobile Co., Ltd (Dongfeng-Nissan and Dongfeng-Honda), Changan Automobile Group (Changan-Mazda and Changan-Ford), BAIC Group (Beijing Benz and Beijing Hyundai) and Guangzhou Auto Industry Group (GAC Toyota, GAC Honda and GAC Fiat).

Chart 8  
Major groups and JVs dominate China's auto supply



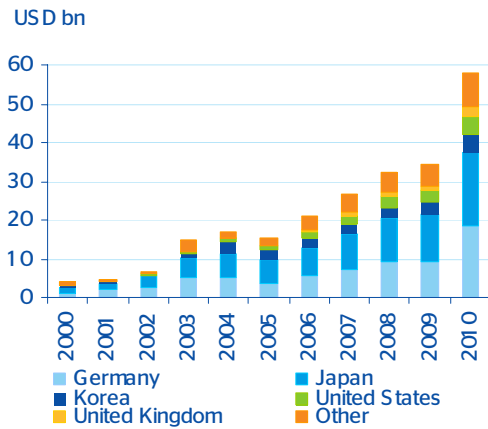
Source: CEIC and BBVA Research

Chart 9  
Imported auto parts as % of auto output in China



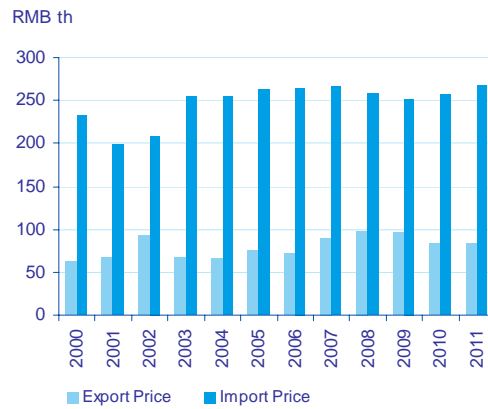
Source: CEIC and BBVA Research

Chart 10  
Imports of auto and parts by country



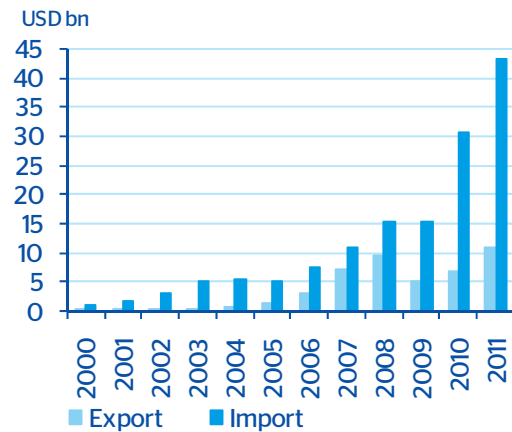
Source: CEIC and BBVA Research

Chart 11  
Motor vehicle average prices per unit by exports and imports



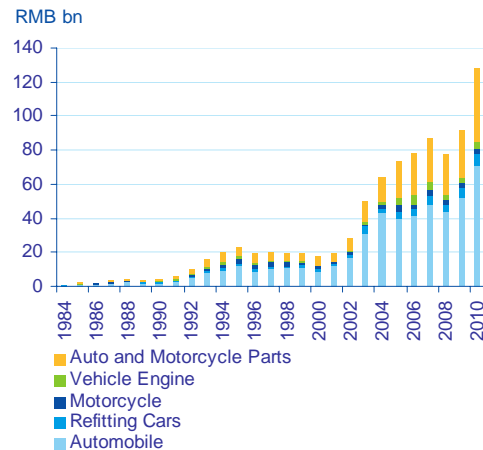
Source: CEIC and BBVA Research

Chart 12  
China's motor vehicle import & export in value



Source: CEIC and BBVA Research

Chart 13  
FAI in the auto industry



Source: Wind and BBVA Research



## Policy support to the domestic auto industry

Government policy has provided incentives for auto production. Besides serving as a large and robust contributor to local fiscal revenue through taxes, auto enterprises typically involve large investments, a significant contributor to local economic growth (Chart 13). Especially during the Post-Lehman recovery period, the auto industry has led other industries and investment, and has helped to boost the sluggish trade.

Despite the large size of its market, China's auto industry still lags behind the top global players in terms of technology and competitiveness. In this regard, the government has long promoted a so-called "market for technology" strategy, in which the formation of joint ventures benefit local automotive manufacturers through spillovers of advanced technology and management practices.

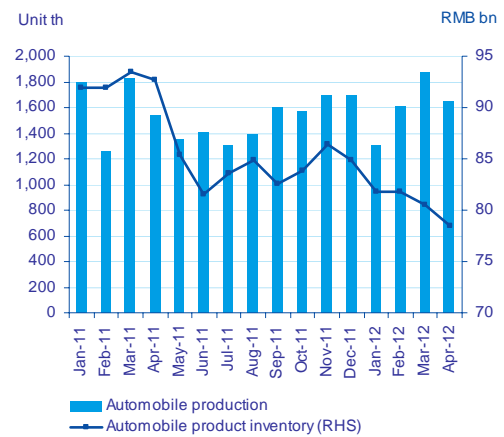
In more recent times, the government has been shifting towards support to domestic brands, as embodied in the 2009 "Restructuring and Rejuvenation Program of the Automobile Industry". Among the various measures are steps to establish an export base for autos and auto parts. Furthermore, in the 12th Five-Year Plan, mergers and restructuring in the auto industry are encouraged to upgrade and optimize the industrial structure. The government has also been a strong advocate for developing new energy/energy saving vehicles, which are expected to become the new growth momentum for the domestic auto sector in the next decade. Technology innovation and R&D expenditure for key auto parts are also designated as priorities in the plan. In 2012 the government has also begun to forbid the purchase of foreign brands for official vehicles fleets.

Chart 14  
China's listed domestic auto companies



Source: Wind and BBVA Research

Chart 15  
Auto production and inventories



Source: CEIC and BBVA Research

## Rising competition with local government support ...

Incentives by local governments to support domestic auto makers have resulted in more intense competition and shorter life cycles of new products. Unlike developed countries where auto industries are concentrated geographically (such as the US), auto producers in China are more geographically spread (Chart 14).

As noted above, China's auto industry is still lacking innovation capacity and technology development, which are obstacles for enhancing the competitiveness of local brand producers. To address this, in December 2011, the State Council announced the "Industrial Transformation and Upgrading Plan (in 2011-2015)" with the aim of increasing market concentration through M&As (under which the top 10 automakers' sales share is to increase from around 82% in 2010 to 90% by 2015). The initiative aims to prevent overcapacity in the industry, and to help promote the growth of domestic companies that can compete on a global scale.

## Policies to foster the production of energy efficient vehicles

The government is shifting its policy approach from increasing production as an end-objective, to influencing the development and production of higher energy efficient vehicles (see Box 2 below). Such policies include incentives to R&D expenditure on electric and hybrid vehicles by domestic automakers. More stringent standards for fuel efficiency standards are being implemented.

Table 2 below provides some selected international experience from developed economies in promoting energy efficient technology. These policies include subsidies and tax credits, as well as trade promotion efforts through free trade agreements.

Table 2  
**Selected international experience with policies to boost demand of electric and hybrid vehicles**

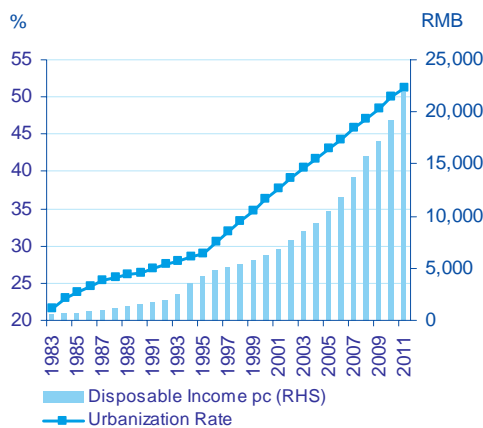
<b>Policies to boost demand of electric and hybrid vehicles</b>	
<b>United States</b>	<p>1) The federal government offers up to USD 7,500 in tax credits to consumers who buy a qualified electric vehicle. The tax credit is proposed to increase to USD 10,000 per vehicle in 2013.</p> <p>2) A subsidy program for buying and installing charging stations: the government provided a 30% tax credit reduction (up to USD 1,000 per charging station for private consumers), which has been expired in the end of 2011. The Department of Energy invested into selected companies to develop low-cost chargers for EVs in three years.</p> <p>3) Some local government waive the parking fees and toll charges for the new energy vehicles</p>
<b>Germany</b>	<p>1) Consumers of EVs are eligible to receive t a vehicle tax exemption for the next 10 years.</p> <p>2) The government committed to spend part of the EUR 500 million (USD 630 million) on the R&amp;D especially for battery technology of EVs through 2012. The main target is to conquer technology bottleneck by enhancing the battery durability and reduce the cost of the EVs to attract more consumers in the long run.</p>
<b>Korea</b>	<p>1) The Ministry of Finance has offered tax credits to purchase hybrid vehicles from 2009 to the end of 2012. The tax deduction includes personal consumption tax, education tax up to KRW 3.3 million (USD 2,800) per vehicle. The government announced in May that they will extend the tax credits program as part of efforts to reduce dependence on oil consumption.</p> <p>2) Explore overseas demand through FTAs: Korea has signed FTAs with the EU (2011) and the US (2012) within the past 12 months. The import tariff on automobiles including electric and hybrid vehicles from Korea to the both markets will be phased out over the next five years after the FTA implementation. The EU and the US have good quality of charging infrastructure for EVs. Thus the largest Korean automakers could benefit from the FTAs given their major shares and price advantages in the bilateral automobile trades. Furthermore, their competitiveness against the other competitors in Asia, such as Japanese automakers, will also be enhanced.</p>

Source: BBVA Research

### 3. Demand side: fundamentals and the role of government policies

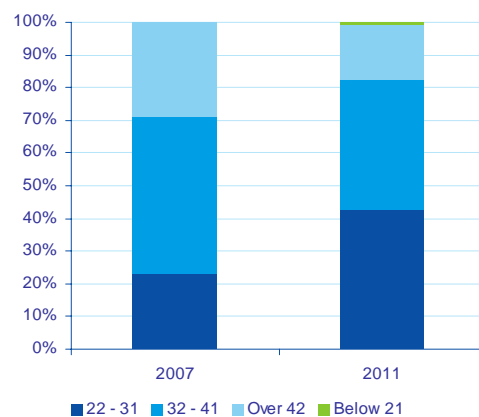
Annual auto sales in China have risen by 22% on average over the past decade. Rising income levels, urbanization, a rising share of young cohorts in buyers, and favorable government policies have contributed to this impressive growth rate (Charts 16 and 17).

Chart 16  
**Disposable income and urbanization rates have been steadily rising**



Source: CEIC and BBVA Research

Chart 17  
**Composition of car purchaser in age group**

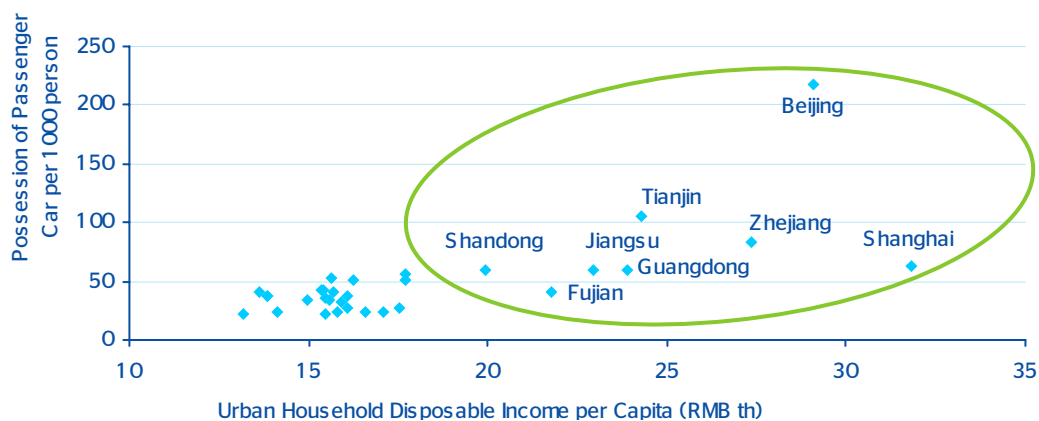


Source: Media reports citing JD power survey

### Income, urbanization, and demographic transition are fundamental drivers ...

China's GDP per capita has increased by over four times in the past decade, while average prices of passenger cars have fallen over the same period. Moreover, rapid urbanization is also contributing to demand for vehicles. Within China, provinces with higher disposable incomes and urbanization rates tend to have larger car markets (Charts 18 and 19). Despite China's aging population, the composition of auto buyers is becoming younger (see Chart 17, which illustrates that the share of car buyers who were born during 1980-1990 almost doubled in the past 4 years).

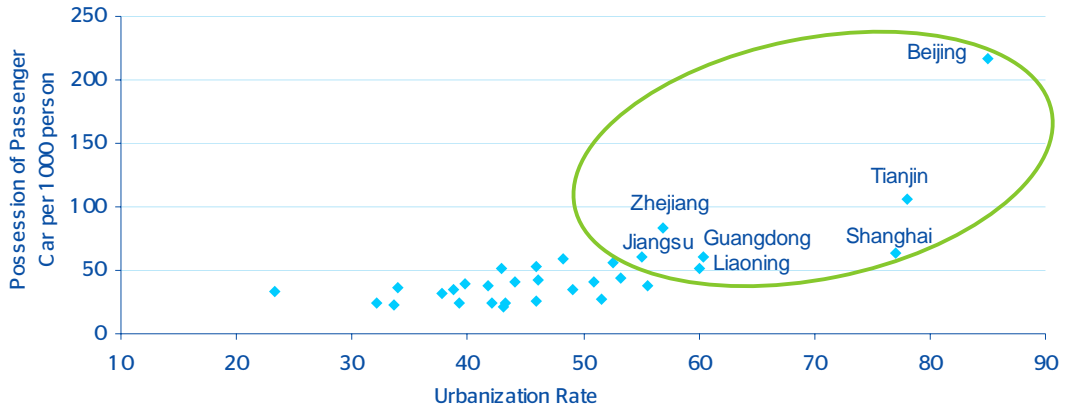
Chart 18  
**Possession of passenger cars (2010) vs. Disposable income (2010) at provincial level**



Source: Ministry of Transport, CEIC and BBVA Research

Chart 19

Possession of passenger cars (2010) vs. Urbanization rate (2009) at provincial level



Source: Ministry of Transport, CEIC and BBVA Research

### The role of policies in determining auto demand

As noted in the previous section, auto demand has been heavily influenced by policy, which explains for much of the volatility around underlying trends in fundamentals such as income growth and urbanization. Particularly relevant in this regard is the stance of macro policies. For instance, during periods of economic overheating, monetary policy tightening has resulted in reduced auto demand, especially by restraining credit. Changes in policy also help explain the surge in growth of auto sales in 2009-10, when fiscal incentives such as consumption subsidies were implemented to buffer the economy against the impact of the global financial crisis (see Box 2 for details). After plummeting in 2011, auto sales growth in 2012 has been moderate, but has started to pick up slightly in year-on-year terms (Chart 20). One factor for the pickup in sales may be discounts provided by dealers to clear an accumulation of inventories (see Chart 15 above).

## Box 2: Recent policies to influence auto demand

Policies to boost auto demand were a key component of the China's post-Lehman stimulus package, as follows:

The purchase tax on light passenger cars (displacement volume less than 1.6 liters) was reduced by 50%; a one-time subsidy program (5 billion RMB) was implemented for rural residents on the purchase of light vehicles or mini passenger cars (displacement volume below 1.3 Liters); and in late 2009, an additional auto trade-in subsidy program was announced to accelerate the replacement of outdated vehicles with high emissions.

These stimulus policies covered both urban and rural markets and benefited first-time buyers and existing owners, propelling rapid growth of auto sales, especially passenger cars in 2009 and 2010. Soaring auto production and sales contributed to the overall economic recovery.

However, to prevent overheating, the authorities began tightening monetary policy in October 2010. Meanwhile, two years' of explosive auto sales led to increasing traffic congestion. Concerns over congestion conditions and air pollution grew in large- and medium-sized cities. The central government decided to allow all the auto consumption stimulus policies to expire by the end of 2010. Several local governments such as Beijing in December 2010, also launched administrative restrictions to control new car registration.<sup>2</sup> These policy changes for the auto industry, together with the tightening macroeconomic conditions, dampened consumer confidence and weighed on sales performance.

As a result, the policy-driven auto market boom came to an end since 2011, as total auto sales growth climbed by only 2.5%, even below the pre-crisis growth level (Chart 3). Passenger cars, which accounted for 78.2% of total sales volumes, decelerated to 5.2% yoy from its 2009 peak of 52.9% yoy. Passenger cars with displacement volumes below 1.6 liters, which benefited most from the stimulus package, only contributed 2.8 pp to the total (passenger cars) sales growth, down from 44 pp (2009) and 22 pp (2010) (Chart 21). The performance of commercial cars, in which nearly 70% consist of total are trucks, was even worse (-6.3% yoy). Domestic brands, which benefited the most from the stimulus package, suffered more during the downward trend compared to foreign brands.

According to the China Association of Automobile Manufacturers (CAAM), both the sales growth and the proportion for the Chinese brands passenger cars declined in 2011 (Chart 22).

The policy stance has gradually shifted towards a more balanced growth model with environmental sustainability in the future, as China increases its reliance on crude oil imports, which accounted over 57% of total oil consumption in 2011. In the "Restructuring and Rejuvenation Program of the Automobile Industry" in 2009, the central government set up a special fund (10 billion RMB) to support domestic brand manufacturers in technology innovation and development of new-energy automobiles & auto parts. In addition, a pilot program with central government subsidies to promote energy-saving and new-energy vehicles for public transportation in 13 large and medium cities (including Beijing, Shanghai and Shenzhen) was launched in 2009. For the private sector, the Ministry of Finance launched a consumer subsidy program for selected electric vehicles (up to 60 thousand RMB per unit) and plug-in hybrid electric vehicles (up to 50 thousand RMB per unit). In the same year, another consumer subsidy program was implemented, covering energy saving vehicles made in China with displacement volume below 1.6 liters.

At the beginning of 2012, the Ministry of Finance exempted electric and fuel cell cars from the sales tax. More recently, the "energy saving and new energy auto industry development plan (2012-2020)", with a mid-term target on the industrialization of electric and hybrid vehicles and guideline for the structural transformation to purely electric vehicles, was approved by the State Council, details of which are discussed in the following policy outlook section.

According to the China Association of Automobile Manufacturers (CAAM), which recently started to release quarterly data on new energy vehicles, Q1 2012 production and sales of the electric and hybrid vehicles grew faster from last year (Chart 23).

More recently, in response to slowing economic activity, the central government has launched a new round of stimulus policies for the auto industry, although the scale is well below the package implemented during 2009-10. The latest round includes RMB 6 bn in subsidies for consumption of vehicles below 1.6 liters and another annual fund of RMB 1-2 bn on the R&D activities for energy-saving vehicles. Some local governments have also released a new round of subsidy programs for rural residents. (For details of China's auto stimulus packages from 2009 to May 2012, see Table 3 below.)

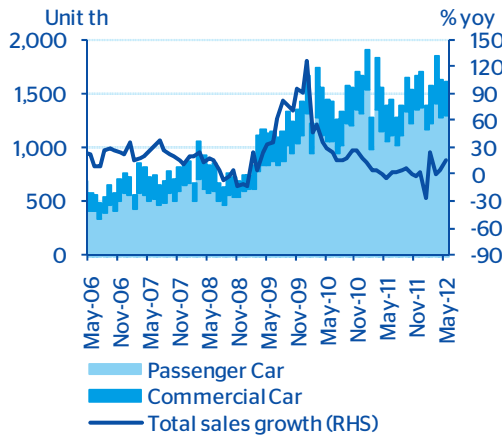
<sup>2</sup> The new traffic policy was announced in Beijing to impose a limit of 240 thousand new license plates in 2011.

Table 3  
**Detailed review of China's automobile consumption policy after the global financial crisis**

	Time	Regulator	Detail	Impact
Phase I (2009 Jan - 2010 Dec) Pure stimulus contributing for economic recovery	2009 Jan	State Council	The "Restructuring and Rejuvenation Program of the Automobile Industry": 1) The purchase tax on passenger cars with displacement volume below 1.6 Liters was allowed a reduction to 5%. Later the tax was adjusted up to 7.5% since 2010 Jan and expired in the end of 2010. 2) A one-time subsidy program (RMB 5 billion) was implemented for rural residents on direct purchase or replacement of specific used vehicles for new light vehicles or mini passenger cars with displacement volume below 1.3 Liters. The program extended since 2010 Jan and expired in the end of 2010.	1) Boosted the auto consumption immediately 2) China has become the largest auto market in the world after achieving explosive growth during 2009 and 2010. 3) Increase the reliance on the crude oil imports 4) Accumulated pressures on the urban environment and road densities.
	2009 Jun	MOF, MOC, NDRC, etc.	Notice on subsidy program for auto replacement: An auto trade-in subsidy program (RMB 3,000-6,000 per vehicle) was announced by the government to accelerate the replacement of outdated vehicles with high emissions, later the subsidy was raised (up to RMB 18,000 per vehicle) since 2010 Jan and expired in the end of 2010.	
Phase II (2011 Jan - Present) Shift to a more sustainable growth model	2010 May	MOF, MOST, MIIT, NDRC	Notice on pilot subsidy program for private purchase of new energy vehicles: The pilot program is launched in selected cities with up to RMB 50,000 for plug-in hybrid electric vehicles (PHEVs) and RMB 60,000 for electric vehicles (EVs) from central government, with extra subsidy from the local government.	1) Positive signs from the policy maker to "kick-off" the strategic subsidy program for the new energy vehicles 2) Long discussion on specific development direction, which dampen the consumer confidence and make private consumers choose to wait 3) Lag of the key technology innovation, mature infrastructure and essential customer service systems lead to limited impact of the subsidy programs.
	2010 Jun	MOF, NDRC, MIIT	A one-time subsidy program (RMB 3,000 per vehicle) was launched for specific energy-saving vehicles with displacement volume below 1.6 Liters meet certain standards for maximum fuel consumption. The program was extended since 2011 Oct with higher standards.	
	2012 Mar	MOF, SAT, MIIT	Notice on the new sales taxes policy for energy-saving and new energy vehicles: The energy-saving and new energy vehicles on a catalog list released in March and June are allowed to be exempted from the sales taxes since 2012.	
	2012 Apr	State Council, MIIT etc.	The "Energy saving and new energy auto industry development plan (2012-2020)" was approved, aiming to provide more policy support on the private consumption of new energy vehicles.	1) Confirm the long-term development blueprint for the auto industry, focusing on EVs with PHEVs as bridging sector 2) Further measures are needed to support the plan (discuss in the "policy outlook").
	2012 May	State Council, MOF  Local government	"China's 12th FYP on basic public service system" has been approved to allocate RMB 6 billion to subsidize consumption of vehicles with displacement volume below 1.6 Liters. Another annual fund of RMB 1-2 billion will be allocated to support R&D and production of energy-saving vehicles.  Chongqin announced to launch new round of subsidy program (up to RMB 3,000 per vehicle) for purchase of new light vehicles or mini passenger cars with displacement volume below 1.6 Liters by rural residents.	Expect to boost the sales of the qualified vehicles, mostly the energy saving vehicles, not as much as the previous stimulus package expired in 2011.  If the central government subsidize more rural purchasers and expand another round of auto trade-in program (a new one with up to RMB 18,000 per vehicle mainly for commercial vehicles was announced by MOF in June) on nationwide basis, will help to stimulate auto consumption.

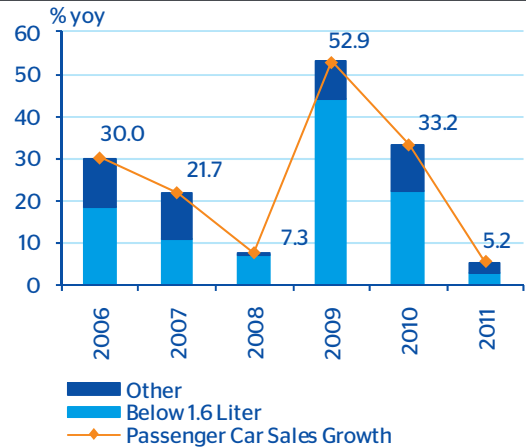
Source: BBVA Research

Chart 20  
Auto sales picked up in May 2012



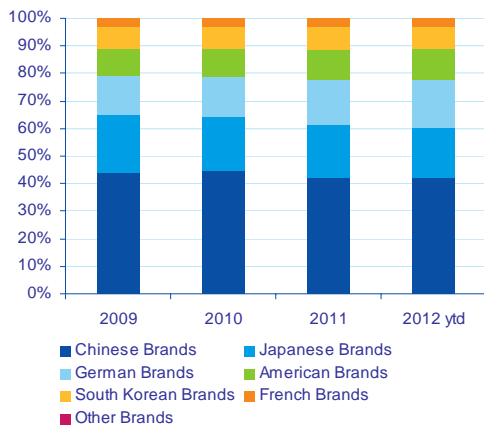
Source: Wind and BBVA Research

Chart 21  
Contribution to sales split by displacement volume



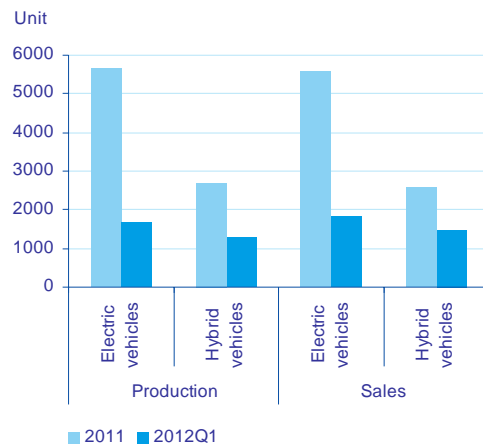
Source: Wind and BBVA Research

Chart 22  
Sales by brands (passenger car)



Source: Wind and BBVA Research

Chart 23  
Sales of new energy automobiles accelerated



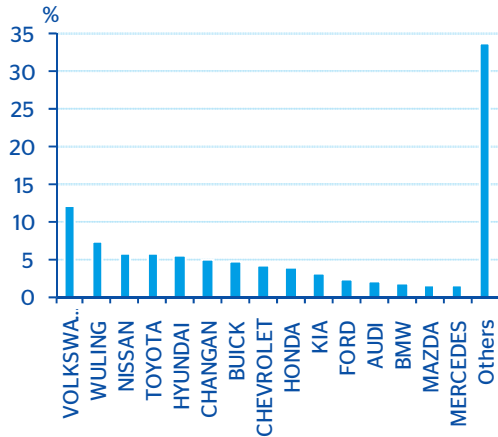
Source: CAAM and BBVA Research

## Consumer preference remains stable ...

Sales of local domestic brands account for around 40% of China's auto market (Chart 22). German and Japanese auto producers dominate foreign brands in the Chinese market, with a combined market share of around 35%, of which the brands of Volkswagen, Nissan, Toyota, Honda, accounting for 30% of the total market (Chart 24). Korean and American brands accounted for around 20% of the total market.

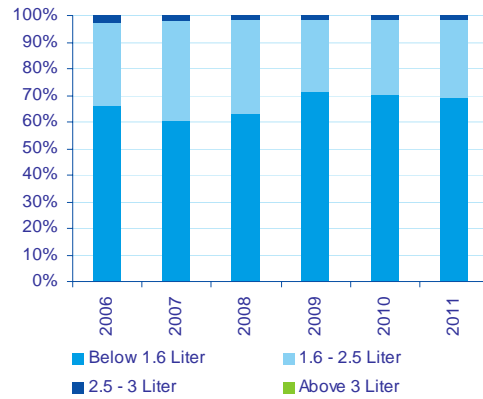
China's domestic sales are dominated by low-end cars, with vehicles with displacement volume below 1.6 liters accounting for almost 70% of the units sold in recent years. This said, demand for luxury cars has also begun to show signs of accelerating growth.

Chart 24  
New registration of passenger cars by brands (2011)



Source: CEIC and BBVA Research

Chart 25  
Sales of passenger cars by liter



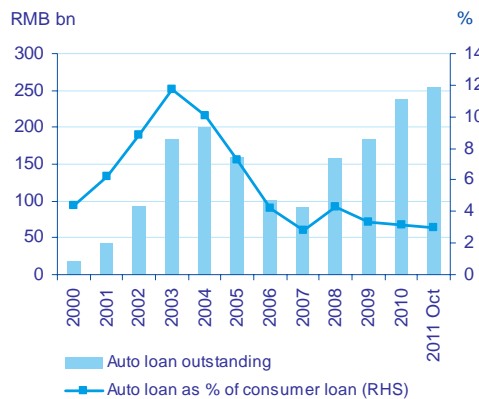
Source: CEIC and BBVA Research

## 4. Auto financing

### Banks led the initial growth of the auto finance market ...

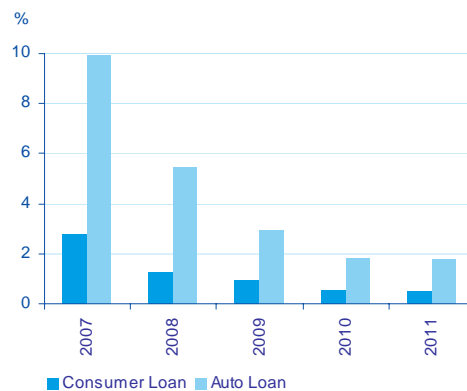
The beginnings of China's auto finance market date to 1998 when the PBoC first allowed China's big four banks to provide auto loans under a pilot program, which was later extended to domestic commercial banks. In 2003, the China Banking Regulatory Commission (CBRC) announced new measures to approve the establishment of auto finance companies, in line with China's commitments under its accession to the WTO to allow the entry of non-bank financial institutions. The GMAC-SAIC Automotive Finance Co., Ltd became China's first auto finance company (AFC). During the same period (2000-2004), the auto finance industry saw its first round of rapid growth, and the stock of auto loans rose in 2004 to over 10% of total outstanding consumer loans (Chart 26).

Chart 26  
Outstanding auto loans



Source: China Automotive Industry Yearbook, CEIC and BBVA Research

Chart 27  
NPL ratios have declined



Source: CEIC and BBVA Research



Growth of the auto finance market slowed significantly during 2004-2007, however, as the PBoC and CBRC tightened restrictions on auto loan approvals in response to rapidly rising non-performing loans (NPLs), which by 2007 had risen to 9.9% compared to just 2.8% for overall consumer loans (excluding auto finance companies, for which NPL data are unavailable). More recently, the NPL ratio for auto loans has fallen considerably, to less than 2%, and closer to the ratio for consumer loans (Chart 27).

Regulations turned supportive again in 2008 when the CBRC broadened the business scope for AFCs by allowing financial leasing for the first time and easing supervision policies. In 2009, the CBRC further allowed AFCs to issue financial bonds, thereby creating a new funding source. Total auto loans reached RMB 254 billion by October 2011.

Corresponding to this trend, our CEIBS-sponsored field surveys of dealers<sup>3</sup> show that up to 22% of car purchasers used some form of finance products in 2011 (Chart 28). There is, however, considerable variation in finance usage rates across cities and dealers; for example, only 10% of purchasers reported using financing in Beijing, compared to 20% in Shanghai. Within Beijing, anecdotal evidence suggests that these ratios range from as low as 1-2% up to 20-30% depending on the individual dealership. In any case, the development of auto finance in China is still in an early stage: by way of comparison, 85% of US car purchasers use automotive finance.

### Preference for auto financing varies by age and car types ...

Our CEIBS-sponsored survey of auto dealers referred to above reveals two important aspects of the auto finance market. One involves the age structure of purchasers, with younger buyers showing a preference for auto finance. In particular, individuals under 40 years of age account for 80% of purchasers using auto financing (Chart 29). Moreover, the survey results also suggest that about 30% of buyers between the age of 20-40 chose to use some form of auto finance products, compared to only around 10% of purchasers over the age of 40 (Chart 30), the penetration ratio of auto finance is around 30%; in contrast, for buyers over the age of 40, the penetration ratio is around 10%. The other important aspect relates to the correlation between premium car purchases and auto finance, which is useful in projecting the future growth of auto finance (see Section 5 below). In particular, the survey results suggest that for every one percentage increase in the market share of premium cars, auto finance penetration rates increase by around 0.1 percentage point.

Table 4  
**Auto finance companies in China**

Approved Date	Company Name	Registered capital (RMB mn)	Registered Province	Funder Type
2004 Aug	GMAC-SAIC Automotive Finance Company Limited	500	Shanghai	Sino-foreign joint venture
2004 Aug	Volkswagen Finance (China) Co., Ltd.	500	Beijing	Wholly foreign-funded enterprise
2004 Dec	Toyota Motor Finance (China) Co., Ltd.	500	Beijing	Wholly foreign-funded enterprise
2005 May	Ford Automotive Finance (China) Limited	500	Shanghai	Wholly foreign-funded enterprise
2005 Aug	DaimlerChrysler Auto Finance (China) Limited	500	Beijing	Wholly foreign-funded enterprise
2006 May	Dongfeng Peugeot Citroen Auto Finance Company Ltd.	500	Beijing	Sino-foreign joint venture
2006 Jun	Volvo Automotive Finance (China) Limited	500	Beijing	Wholly foreign-funded enterprise
2007 Oct	Dongfeng Nissan Auto Finance Co.,Ltd.	500	Shanghai	Sino-foreign joint venture
2007 Dec	Fiat Automotive Finance Co.,Ltd.	500	Shanghai	Wholly foreign-funded enterprise
2009 Mar	Chery Motor Finance Service Co.,Ltd.	500	Anhui	Sino-funded joint venture
2010 May	GAC-SOFINCO Automobile Finance Co.,Ltd.	500	Guangdong	Sino-foreign joint venture
2010 Sep	BMW Automotive Finance (China) Co., Ltd.	500	Beijing	Sino-foreign joint venture
2010 Oct	Sany Auto Finance Co.,Ltd	800	Hunan	Wholly sino-funded enterprise
2011 Dec	FAW Auto Finance Company Limited	1000	Jilin	Wholly sino-funded enterprise

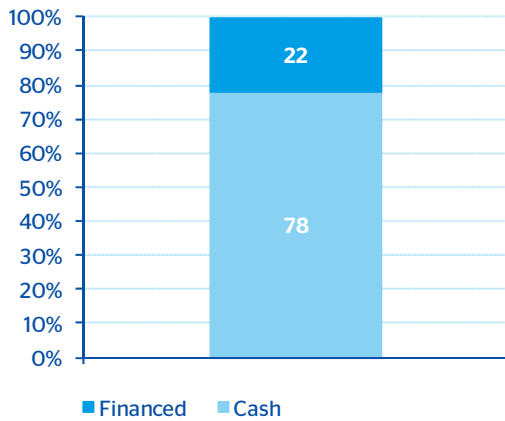
Source: CBRC and BBVA Research

<sup>3</sup> The field survey was conducted under a China Europe International Business School (CEIBS) student project in mid-2011 and covered a total of 15 dealers in Shanghai, Beijing, Jinan, Guangzhou. Brands covered in the survey included BMW, Audi, Buick, Mazda, Chery, Hyundai, Nissan, Volkswagen, Skoda, Mercedes, Mazda, Geely, VW Qiongzhou Jinan, and Honda.

## AFCs rising in auto financing market ...

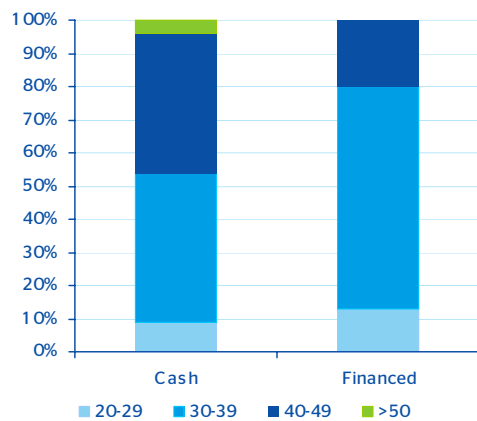
There are currently 14 AFCs, with the latest addition in December 2011 (Table 4). However, commercial banks, especially the big four state-owned banks, still dominate the auto finance market with nearly 80% market share (Chart 31). A significant advantage that banks have over AFCs has derived from financial regulations on fund raising channels, which have led to higher costs of funds for AFCs. In addition, AFCs have faced maturity mismatches by having to borrow at short maturities from banks to finance long-term auto loans. Compared with banks, AFCs have also suffered from a disadvantage in accessing information on borrowers given the lack of a well functioning credit information system. Over time, we would expect AFCs' role to increase as their funding costs decline and maturity structure lengthens as they are allowed to issue bonds (for further discussion on the outlook for AFC financing see Section 5.3 below).

Chart 28  
**Purchaser's cash vs. auto finance usage ratio (based on dealer interviews)**



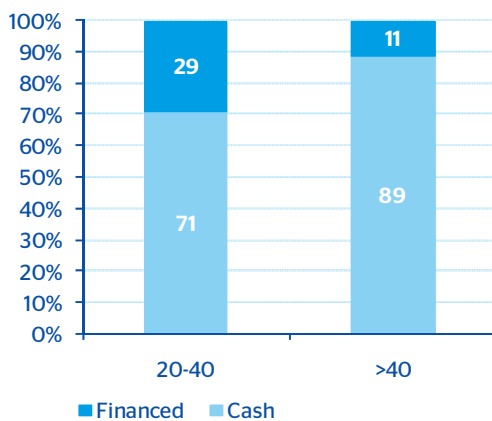
Source: CEIBS-BBVA survey

Chart 29  
**Age distribution of cash and financed purchases**



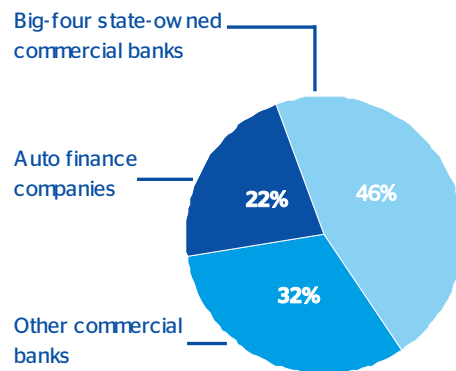
Source: CEIBS-BBVA survey

Chart 30  
**Breakdown by age group of finance and cash usage for auto purchases**



Source: CEIBS-BBVA survey

Chart 31  
**Market share of automotive finance (2010)**



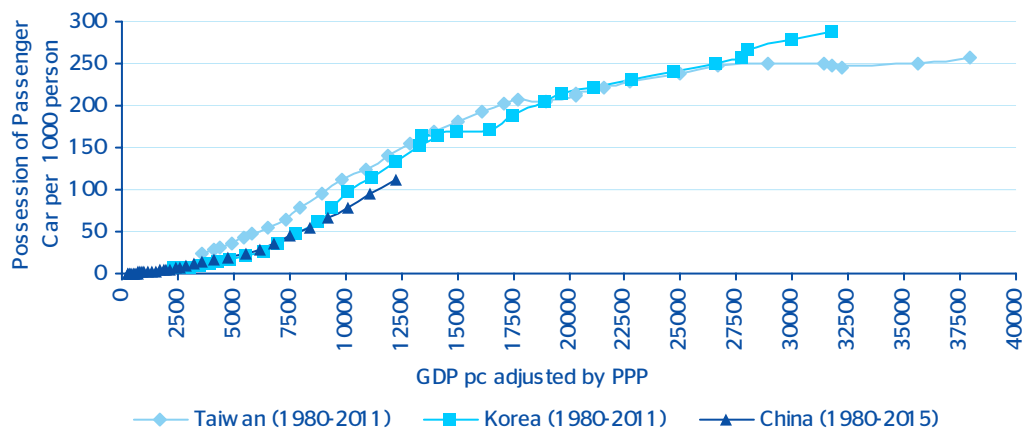
Source: China Automotive Industry Yearbook

## 5. Auto market outlook, 2012-2015

Notwithstanding the recent slowdown, we believe that strong growth of the auto market in China will resume in the coming years. Our expectations are based on a continuation of rising incomes, urbanization, and supportive government policies. To quantify the impact of these variables and facilitate our projections, we develop an empirical framework (see Box 3 for details). Our outlook for robust auto market growth is consistent with the experience of Taiwan and Korea in this regard (Chart 32).

In addition, we anticipate that the growth of the auto finance market will outpace the growth of auto sales. Recent policies announced by the State Council (“Industrial Transformation and Upgrading Plan in 2011-2015”), are indicative of the government’s support in encouraging the growth of the auto finance market, as part of the ongoing efforts to expand consumer finance.

Chart 32  
International comparison of the GDP and ownership rate growth



Source: IMF, CEIC and BBVA Research estimates

### 5.1 Automotive market outlook

#### Income and urbanization are expected to continue...

As described in our recent quarterly *China Outlook*, we expect income to continue on a rapid growth trend. A key objective of the 12th Five-year development plan is to achieve income growth rates above real GDP through 2015. Urbanization trends are also expected to continue. As the five year plan stresses, urbanization rates should increase to 51.5% by the end of 2015 from 47.5% in 2010, implying an annual 0.8 pp gain.

#### Ongoing transition towards a mature market ...

Even without income growth and urbanization, auto demand is likely to increase as the market transitions from an immature market toward a more mature one. According to the experience of other economies, such as Taiwan and South Korea, it typically takes 20-30 years for the market to reach a saturation point.

#### Supportive policies ...

Aside from the aforementioned fundamental factors, government policies are also likely to be a key determinant of the auto market. As discussed above, a good example of this is the post-Lehman stimulus package, which included subsidies for auto purchases. Moreover, import policies such as tariff rate cuts, will also affect the auto market. Furthermore, the coming “Energy saving and new energy auto industry development plan (2012-2020)” will provide additional support, which might include government fiscal expenditure and preferential tax reform to facilitate the structural transformation of China’s automotive industry.



**Box 3: Empirical framework**

Our empirical approach consists of two steps. In the first step, we estimate the following cross-sectional OLS model to infer the effects of two factors -- income growth and urbanization -- on the auto (passenger car) ownership:

$$Ln(Auto_i) = c + \alpha \times Ln(Income_i) + \beta \times Urbanization_i + \epsilon_i$$

Here *Auto<sub>i</sub>* is the auto possession per thousand people for province *i*; *Income<sub>i</sub>* is the annual disposable income per capita (urban household) for province *i*; *Urbanization* is the urbanization rate of province *i*. The data are obtained from the statistics published by the Ministry of Transport and NBS through CEIC data service. For our reported results, we estimate the model using data in 2010, the most recent data available (for urbanization rate 2009 is the most recent data), covering 31 provinces and cities. As an outlier, Beijing is excluded from the regressions. The estimates are summarized in column B of Table 5, implying that increasing disposable income by 1% would increase the auto possession for passenger car per thousand person by 0.66% on average. Moreover, increasing urbanization by 1 percentage point would increase auto ownership by 0.01%, on average. The estimates are statically significant.

For robustness checks, we also estimate the model using data in earlier years (columns C and D of Table 5). The estimates are qualitatively the same with data in different years, but are more significant for recent years, probably because income growth and urbanization gradually factor into the demand behavior of consumers as the market matures.

In the second step of the analysis, we decompose the growth of auto possession by the contribution of four factors: income growth, urbanization, transition towards a mature auto market, and government policies. Specifically, the contribution by income growth and urbanization can be straightforwardly calculated with the coefficients estimated in the first step (multiplying these coefficients by the actual income growth and the change of urbanization each year). We assume that the residual growth rates (auto possession growth rates subtracted by the imputed effects of income and urbanization) consist of the effect of transition towards mature market and the effect of policy and other shocks (such as the Lehman Crisis). In order to decompose the two, we simply average the residual growth rates across the years and use it to indicate the effect of transition towards the mature market (we exclude 2009 and 2010 in this calculation because these two years are heavily influenced by the Post-Lehman stimulus policies). The residuals after taking away this transition is thus the effect of policy and other shocks. We then make judgment to decide how much of the residuals reflect the policy effect.

Lastly, after obtaining forecasts auto possession, we further estimate the growth of sales. We do so by calculating the first-difference of possession (unit) each year. Note though, this first difference does not directly correspond to the sales because there could also be the demolition of old cars. Nevertheless, we realize that the growth rate of the first-difference of auto possession (passenger car) is highly correlated with auto (passenger car) sales growth rate. We thus regress the latter on the former and use the resulting coefficient to estimate the sales growth rate

Table 5  
**Regression results**

Dependent Variable: Log of Passenger Car Possession Rate (per thousand person)			
Independent Variables	2010	2009	2005
Log of Disposable Income pc (Urban)	0.663081 (1.783) *	0.680559 (1.732) *	0.298607 (0.752)
Urbanization Rate	0.012379 (1.942) *	0.013293 (1.962) *	0.026472 (4.239) ***
Number of Observations	30	30	30
R <sup>2</sup>	0.55	0.53	0.66

Note: \*\*\*, \*\*, and \* denotes significance level at the 1%, 5%, and 10% level, respectively.  
Source: BBVA Research

### 5.3 Auto finance market forecast

The outlook for the auto finance industry hinges critically on two factors: (i) the outlook for the auto market itself (as provided above); and (ii) the trend of the finance penetration ratio.

#### Auto finance market projected to grow rapidly over the medium term

As discussed above, the finance penetration ratio is affected by several factors, including the age structure of buyers and the share of luxury cars as a percentage of auto sales. Our projections are based on the following baseline assumptions: (i) auto market growth (defined as passenger car sales) of 14.7% annually on average from 2011 through 2015; (ii) finance penetration ratio increases by 2.5% per year, which is a conservative estimate based only on an assumed increase in the share of young purchasers in line with trends.

Based on this set of assumptions, we project the auto finance market to grow by an average of around 17% annually through 2015, derived from the sum of the auto sales growth rate and the growth of the penetration ratio. Importantly, this projection omits a number of factors that could contribute to the growth of auto finance market, such as improvements in financial services and policy support for the growth of consumer finance in general. Hence, our projections are conservative and should probably be treated as lower-bound estimates.

#### AFC vs. bank financing ...

Given our projections for the overall auto finance market, we further estimate demand for AFC and bank finance based on relative market shares. Using our survey results of retailers and expectations of future policy developments, we expect the share of AFCs to increase by 15 ppts by the end of 2015 to 37%. The authorities are also planning to open domestic financial markets to foreign investors, including allowing foreign AFCs to issue financial bonds in China. If implemented, AFCs could reduce their funding costs by shifting from bank loans to bond financing, thereby reducing their borrowing costs and making them more competitive in the auto financing market. Moreover, direct bond issuance can help AFCs to extend the average maturity of their liabilities, and create a better maturity match between their assets and liabilities. And finally, the informational disadvantage of the AFCs is also expected to diminish over time as the national credit system, first developed in 2005, continues to develop and improve.

### 5.4 Risks

Risks to the outlook for the auto market over the medium term stem from rising energy costs, environmental concerns and a slowdown in infrastructure investment. The potential expansion of administrative restrictions to control new car registration in larger cities could also have a negative impact on the market outlook.

#### Oil prices may increase...

Our outlook above does not directly incorporate the effect of rising oil prices, the effect of which, should be minor in the near term, but could be significant in the longer term. A key issue here is the energy price pass-through mechanism. Under the current price policy in China, if oil prices in the world market exceed USD130 per barrel, pass-through to domestic market are likely to be limited through subsidies according to the NDRC. Therefore, higher international prices may not transfer fully to the domestic gasoline prices, depending on future changes of the price pass-through mechanism.

#### Policies may turn against auto consumption on environmental concerns...

Due to rising environmental concerns (traffic congestion in major cities and the worsening of air quality), China's auto policy could turn from a positive to a negative force. The latest "Limits of fuel consumption for passenger cars (3<sup>rd</sup> stage)" came into effect since 2012, the first draft of which was adopted in 2005 under concerns of China's dependence on oil importation. In its 3<sup>rd</sup> stage, higher standards for fleet fuel consumption will be implemented, implying that the government aims to boost the auto market with balance of both structural upgrades and environmental sustainability. As urbanization continues and environmental standards further strengthen in the future, pressure on auto market is expected become an important determinant of the growth momentum. It is unclear now, though, that how rapid this process will develop.

## 5.5 Policy outlook

China's auto policy has started to shift from one of purely promoting production and consumption to industrial restructuring to encourage a more environment-friendly growth model, as officially stated as the "energy saving and emissions reduction" goals in the 12th Five-Year Plan, identifying new energy vehicles as one of China's seven strategic emerging industries in the 12th FYP.

Specific guidance for the long-term development for the auto industry is provided in the long-awaited "Energy saving and new energy auto industry development plan (2012-2020)", approved in April by the State Council after two years of consultation and revision. The initial draft, publicized in mid 2010, focused mainly on electric vehicles (EVs), while the finalized version further includes the plug-in hybrid electric vehicles (PHEVs) as a bridging sector for the auto industrial restructuring. According to the plan, both EVs and PHEVs are the major strategic sectors for industrial upgrading and structural transformation of the auto industry. A continuous development of the electric vehicle technology will help to reduce pressures from reliance on traditional fuel consumption and related environmental concerns. It will also improve the industrial structure to avoid risks of overcapacity and generate new growth momentum in the next decade.

The development plan also includes targets for the production and sales of both electric and hybrid vehicles through 2020. Specifically, the aim is to achieve a cumulative production and sales of 0.5 million units electric and hybrid vehicles by 2015, and exceed 5 million units throughout 2020.

Achieving the development plan still has a long way to go. The current market for the electric and hybrid vehicles in China is still small. In the meantime, to enhance their confidence in sharing technology with domestic partners, the government will need to address foreign auto manufacturers' requests for assurances on the preservation of intellectual property rights.



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