

Automobile Market Outlook

Colombia

2012
Economic Analysis

- **Some 315,000 vehicles will be sold in 2013 and 325,000 in 2014.** We expect a recovery of personal automobile sales coinciding with a slight reduction in the sale of commercial vehicles.
- **Over the coming years growth of vehicle imports may continue to increase, especially in the high-value sector.** This will result from progressive introduction of tariff exemptions following the signing of commercial agreements, impacting on the reduction of motor vehicle prices.
- **BBVA Research expects low interest rates throughout 2013,** incentivizing household and business loans for vehicle purchases.
- **Colombia's vehicle stock will increase by 3.5 million vehicles between 2010 and 2020, a doubling of current levels.** Car sales in Colombia are subject to high income elasticity, a common phenomenon in growing countries.

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Closing date: December 26, 2012

1. Overview

In 2012 to date, the automotive industry has experienced a downturn compared to the highs seen in 2011. The real index of vehicle manufacturing output to October this year grew at an annual rate of just 2.4%, compared to an annual increase of 22.4% in the first nine months of 2011. This slowdown was positive, avoiding excessive increases in inventories in the sector.

Over the coming years vehicle imports may continue to grow, especially in the high-value sector. In addition, competitiveness in the industry will be critically dependent on progress with road and port infrastructure; this will affect export activity in the automotive parts industry.

After Brazil, Colombia is the second largest motorbike producer in the region, with annual output of 515,000 motorbikes. Its dominant position as a producer among Andean nations could give Colombia an advantage in the regional market.

The Colombian market currently boasts around 68 automobile brands. Most sales are of Chevrolet and Renault, mostly assembled in the country. The fastest growing brands over recent years have been KIA and Nissan. Cars from China now account for 6.6% of the total, having grown rapidly over recent years.

The positive economic development of medium-size cities is reflected in increased automotive demand. Cities other than Bogotá, Medellín, and Cali increased their share of national sales by 8.1 percentage points (pp) between 2006 and 2012.

A household survey analysis found that **vehicle-demand elasticity rises in the higher deciles**, i.e. purchases increase more than proportionally to the income of these deciles. On the contrary, **motorbike purchases increase proportionally to income up to decile 6**, when they become inferior goods (i.e. demand falls as income rises). The majority of households buying motorcycles and vehicles are headed by a man. **Motorbike purchases are concentrated among younger age groups than other vehicles** and occur before home purchases. **Formal employment status and higher education levels increase the consumption of cars and motorcycles**, with education levels having greater impact on car purchases.

Some 315,000 vehicles will be sold in 2013 and 325,000 in 2014, respectively. Our sales forecasts show a recovery in private automobile transactions, but not reaching the peaks seen in 2011. At the same time, we expect a slight fall in the cargo vehicle market, given the high level of installed capacity built up by the industry over recent years.

Colombia's vehicle stock will increase by 3.5 million vehicles between 2010 and 2020, doubling current levels, with 7.9% annual growth. As in some Asian countries, automobile sales in Colombia are subject to high income elasticity, a common phenomenon in expanding countries.

Cost's for the industry's raw materials are currently contained. The price of iron fell in 2012 and is expected to remain at around current ones. Furthermore, the recent strengthening of the peso resulted in lower logistical costs for importing parts for assembly in Colombia. **As a result, vehicle prices have remained relatively stable**, boosting the purchasing power of households. Over coming years, this low-price trend should continue with the gradual introduction of agreements with the United States, Europe, and possibly Korea.

As with vehicle sales, there was a slowdown in credit for vehicles, together with a slight deterioration in the quality of the portfolio. Over 58% of new vehicle transactions are currently financed, with average credit relatively stable over recent years at around COP 22 million. BBVA Research expects low interest rates throughout 2013. This will incentivize households and businesses to take out vehicle purchase loans.

2. Introduction

In 2012 to date, the automotive industry has been in a transition period from the highs experienced in 2011. Indeed, combined car sales between January and November fell at an annual rate of 2%, with the value of transactions to September falling by 2% in real annual terms and the manufacturing output index over the first ten months of the year only growing at an annual rate of 2.4%. These results differ from our estimates last year, when we expected the industry to expand slightly. However, they are consistent with the economy slowing more rapidly than forecast at the end of last year.

The performance of the various vehicle types has varied. Whilst the balance for commercial and cargo vehicles was positive -though moderate- during the first half of the year due to changes in tax benefits, sales of vehicles for personal use have fallen more than expected. This is partly explained by lower household confidence in the second and third quarters, and a slowdown in the pace that the unemployment rate is falling from July.

Our growth forecasts for automobile sales in 2013 and 2014 are very close to zero, with a larger contribution from vehicles for personal use compared to the current situation, and a continuation of the highs in commercial sales, in line with the growth in trade and logistical services resulting from trade agreements.

Table 1

Key indicators for the Colombian automotive market

Key indicators	
Population (million, 2012)	46.6
GDP per capita (constant USD, 2012)	7,842
Size of territory (thousands of square km)	1,141.7
Road network (thousands of km, 2011)	214.4
Vehicles per 1000 inhabitants (2011)	80.2
Age of the vehicle fleet (years, 2011)	15.2
Sales of new cars (thousands, 2012)	316.0
Average automobile price (COP million, 2012)	34.5
New vehicles financing (% of new car sales)	58.0

Source: ANDI; Bank of the Republic, DANE, DNP, Econometría Ltda, UNCRD/IDB FTS survey 2011, FENALCO, Ministry of Transport, CEPAL and BBVA Research

3. Automotive supply

In 2012, the growth rate of the automotive industry slowed

The automotive industry (production of vehicles, motorcycles and automotive parts) represents 4% of domestic industrial output, with manufacturing output worth COP 0.6 billion (0.1% of GDP), supporting 24,800 jobs, most of them in the formal sector. In 2011, the Colombian automotive industry produced 154,291 vehicles (up 20.3% year-on-year), of which over 90% were sold in the domestic market. This was the second highest production level, only behind the 181,941 vehicles assembled in 2007 (Chart 1).

Domestic assembly companies have lost market share over the last decade. While in 2001 these were the source of 66% of sales in the industry, today they only contribute 45%. However, other recently arrived companies have achieved a strong position in the market. This is the case with Metrokia and Hyundai, which increased their combined share from 9% to 18%. Furthermore, Chinese companies have grown from less than 1% of transactions in the industry to the current

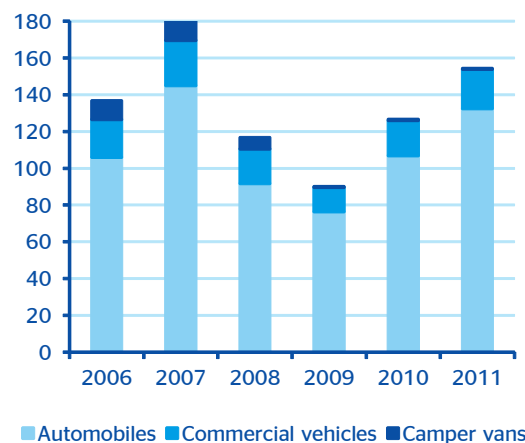
6.6% over the same period of time. This trend may continue over coming years as some Chinese brands have built a strong position in some vehicle types, such as small vans, due to their lower costs.

Automotive production in Colombia is divided between four assembly companies (Chart 2): Colmotores Motorbikes (56% share), CCA (8%), Hino (3%), and Sofasa (33%). The first two have production lines for automobiles and commercial vehicles. Hino only produces commercial vehicles, whilst Sofasa only assembles private automobiles. Domestic supply is mostly concentrated on automobiles (86%), with a lower concentration of commercial vehicles, which fell from representing 15% in 2006 to 14% in 2011.

During 2012, activity in the automotive industry slowed. The real index of manufacturing output to October this year only grew by 2.4% year-on-year, compared to an increase of 22.4% year-on-year in the first nine months of 2011. This slowdown deepened in the third quarter of 2012, although the latest indicators point to a slight recovery at year's end and for the start of 2013.

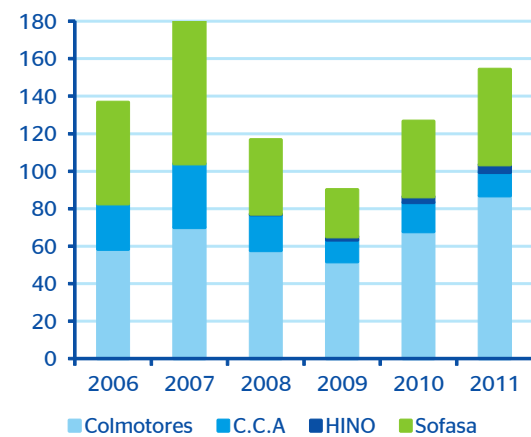
However, the automotive industry adapted to the changing trend, avoiding excessive inventory accumulation. In fact, while in 2011 the total accumulation of stock reached over 8,000 units, by October this year the industry had reduced the inventory by 1,000 units. Looking ahead, this lower stock level will make it possible to increase production given the better growth environment in Latin America -a market which accounts for over 38% of national output- and the upturn of household consumption.

Chart 1
Domestic output by vehicle type. In thousands



Source: Asopartes (Statistics Manual 32) and BBVA Research

Chart 2
Domestic output by company. In thousands



Source: Asopartes (Statistics Manual. 32) and BBVA Research

Sector companies remain robust

The automotive industry currently boasts nine active car-assembly companies (private, commercial, passenger, and cargo vehicles). Three of these (SOFASA, CCA, and GM) account for 97% of production, according to the ANDI automotive office. In 2011, the operating revenues of these three brands amounted to COP 5.7 billion (0.9%) of GDP, contributing 57% of total industry income (including automotive part manufacturing companies).

Companies in the automotive industry have large capital cushions behind their activity. In fact, in 2011, the assets-to-liabilities ratio in the industry exceeded 200%, with financial debt amounting to only 23% of capital.

Current confidence surveys show installed capacity in the automotive industry stands at 66%, slightly below the 68% recorded in 2011. Therefore, there is plenty of room for national production to grow before it reaches a maximum of 320,000 vehicles per year, the maximum when two production shifts are established.

This high production capacity will enable companies to transition towards a manufacturing model from the current assembly model over the coming years. Indeed, a USD 200 million project is underway for the Industrial Conversion of the Country. This is led by one of the companies in the sector, with the objective of manufacturing vehicle bodies as well as some parts to supply the national and regional market. This would be the third largest production plant in South America (with Argentina and Brazil), generating considerable competitiveness gains, particularly in the Andean region.

Moreover, an automotive development center has been created, with investments of USD 60 million planned over 10 years to promote innovation in the industry. The end result of these initiatives will be to increase the production capacity to close to 60,000 vehicles per year over the coming five years, in addition to the current capacity (in two shifts) of 320 thousand.

Vehicle imports come mainly from Mexico and Korea

In 2011, some 211,240 vehicles were imported, of which 58% were automobiles, 13% 4x4s, and 29% commercial vehicles. The latter -mostly pick-up, and articulated and dump trucks- have been gaining market share since 2009, when they accounted for 23% of the total, thanks to greater demand from mining and other cargo activities. On the contrary, imported 4x4s have been the least dynamic sector, with the share falling from 19% in 2010 to 13% in 2011.

Imports amounted to USD 4.4 billion, 55% of which were accounted for by four companies. The countries with the largest trade link with Colombia are Mexico (28% of the total) and Korea (23%), the countries with which Colombia is aiming to increase trade based on free-trade agreements (see box). Cars with the highest average value come from the Netherlands and India. On average, the lowest price cars come from Korea (Chart 3).

This growth in vehicle imports could continue to increase over the coming years, particularly in the high-price sector. This will result from tariff exemptions being progressively introduced following the signing of a free trade agreement with the United States and new agreements with Europe and Korea coming into effect. This vehicle category currently enjoys the highest effective protection (over 55%); this will gradually be reduced with new internal tax (VAT) regulations and import/export tariffs with countries within the agreements.

Colombia can expand its export capacity in the Andean region, but it continues to face major competitiveness challenges

In 2011, the country exported 13,000 vehicles, of which 69% were produced by Sofasa (Chart 4). This is a long way short of the 71,000 sold abroad in 2007, and involved the disappearance of 4x4 exports, which previously accounted for 10% of the total. We should also highlight the launch of cargo vehicle exports by Hino, although these are still small in absolute terms at three thousand units.

The Andean region (Colombia, Peru, and Chile) is a market worth USD 758 billion, with 803,000 units sold per year. Currently, Colombian exports to those countries are fewer than 10,000 units, offering a major market-penetration opportunity as none of these countries have a strong automotive manufacturing tradition. In addition, Ecuador and Venezuela, which had reached 70,000 units, today account for only 15,000 units exported, mostly going to Ecuador.

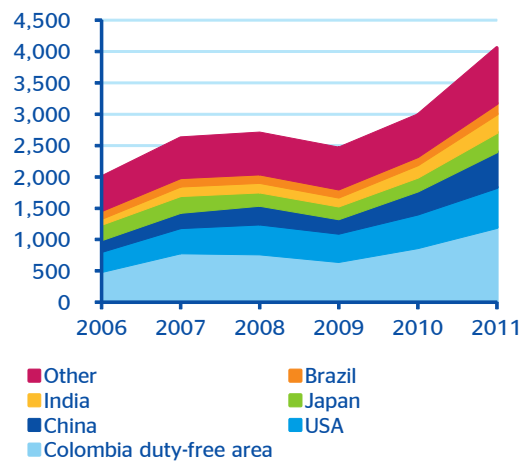
The country's competitiveness requirements have increased following signature of trade agreements with various major vehicle-producing countries. Currently there are such agreements in place with the United States and Mexico. In the former case, the timetable for full elimination of import tariffs is 10 years, allowing the domestic industry a grace period to improve its productivity. In the short term, this will affect vans and small trucks with engines of 3,000 cc or more. In the second case, zero tariffs came into effect this year.

There are more immediate opportunities in the automotive parts markets, in which Colombia is a big producer. However, in the case of automotive manufacturing, it will need to await transformation to a manufacturing model before attempting to penetrate the market.

The major challenge with respect to competition from abroad will come from the possible agreement with Korea, given that the current trade deficit in the sector with that country is substantial for vehicles directly competing with local production. This is not the case with Europe, which produces brands for another buyer profile or has direct manufacturing capacity in Colombia. However, under the most optimistic negotiation scenario, the earliest the effects of the agreement would be felt is mid-2013. Beyond that, there will be another 10 years to adapt the domestic market to the establishment of zero tariff on imports.

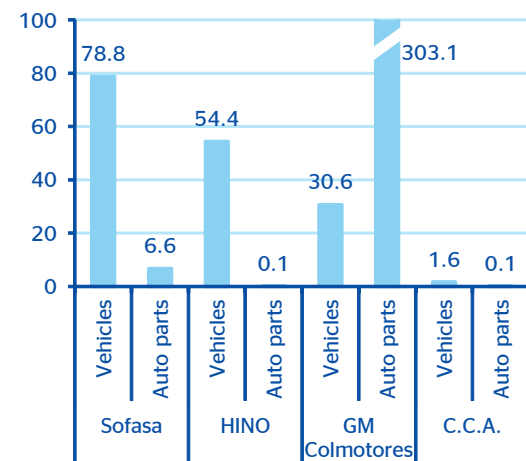
Competitiveness in the industry will be critically dependent on progress with road and port infrastructure in the country to facilitate foreign trade. Furthermore, some production facilities may need to relocate to coastal areas, as exporting from cities such as Bogotá and Medellín is more costly.

Chart 3
Vehicle imports by origin. Millions of dollars



Source: Asopartes (Statistical Manual 32) and BBVA Research

Chart 4
Exports by vehicle and automotive parts company. Millions of dollars



Source: Asopartes (Statistical Manual 32) and BBVA Research

The automotive parts industry has competitive advantages in the region

The annual production of automotive parts in Colombia is equivalent to USD 1.068 billion of which 47% is exported (USD 499 millions), mainly to Venezuela, Ecuador, the United States, Germany, and South Africa, reflecting the strong export potential of the industry. Recent studies on the effects of the free trade agreements with the Euro area (among them, a European Parliament investigation) have demonstrated that automotive parts would experience the fastest growth among manufactured exports to Europe once the agreement became effective. Calculations show that exports from the automotive parts sector could increase by up to 25.5%.

So far in 2012, export activity in the industry has been conditioned by the global economic slowdown. For instance, during the first nine months of the year exports fell 18.8% year-on-year, although there was evidence of a positive change toward the end of the year, albeit with single-digit growth figures.

In the local market, half of domestic automotive part sales are to a single assembly company. A change in the supply policy of this company, should it opt for imports, could significantly reduce the industry's sales.

Imports amounted to USD 4.059 billion, concentrated in the areas of tires (12%), chassis (2%), and filters (2%). Source countries are the United States (16% of the total), China (14%), Japan (8%), and India (7%).

The main challenges for the automotive parts industry are to improve manufacturing quality and implement larger scale production to differentiate itself and confront the low prices of imported Asian parts. For example, confidence surveys in the industry indicate that entrepreneurs consider

Colombia to have strengths in some imported parts such as wheel bolts and rims and exterior vehicle parts that can be leveraged in the context of competition from abroad.

Furthermore, they recognize the following as ways of increasing productivity: investment in equipment and technology (67% of answers), human capacity building (60%), diversification and improvement of product quality (45%), an increased focus on sales and marketing (41%), and forays into special technologies (36%). According to the Latin American metal and mechanical survey, the Colombian industry is positively differentiated in the region given its historic consolidation and greater technological advancement.

These advances must take place before the signing of other commercial agreements, such as that with Korea, which has strong export potential for medium-level technology products. With respect to bilateral trade, vehicles and automotive parts represent on average 40% of Colombia's total purchases, with the relationship the other way being minimal.

Government policy must focus on reigning in contraband and the stolen parts market. According to industry association calculations, contraband automotive parts are worth close to USD 2 billion and the used parts business (not necessarily stolen) is worth close to USD 500 million.

Domestic motorcycle production plays a leading role

Colombia is in second place for motorbike production in the region, after Brazil, with annual output of 515,000 motorbikes. Unlike automobiles, imported motorbikes are far from having a dominant market position, with a market share not exceeding 3% of total sales. In 2011, nine companies produced motorbikes, with 89% of national production coming from the four leading companies.

The leading motorbike production and assembly region is Antioquia, which is where the best-selling brands are to be found (Auteco, AKT Motos, and Yamaha), followed by cities including Cali and Pereira. Of these areas, the largest exporters are Antioquia and Pereira, where Suzuki operates.

Prospects for the industry will improve if it manages to develop its international activity. Its dominant position as a producer among Andean nations could give Colombia an advantage in the regional market, which is growing. However, the impact of rising income in the region on the motorcycle market will be limited, given that an expanding middle class is more closely linked to demand for cars than for motorcycles (see Table 1).

4. Automotive demand

Slowing vehicle sales coincide with a general moderation of household consumption

Household consumption started to slow from the end of 2011, affecting durable goods the most. These had supported the expansion of consumption in excess of GDP growth since the recovery of 2010.

Automobile sales grew by 28% in 2011, but were one of the most dynamic components where activity subsequently slowed. Throughout 2012, to November, automobile sales fell 2%, with the sales volume remaining very close to the historic peak reached in 2011 thanks to the positive contribution of commercial vehicles, which rose to 36% in 2012 from 29% a year earlier. In total the size of the local market is COP 11 billion (2% of GDP).

Positive evolution of demand for commercial vehicles

Sales of commercial vehicles such as vans, utility vehicles, and cargo and passenger vehicles were connected to the dynamism of the mining industry, with high demand for transport equipment for domestic and foreign trade (Chart 5). In addition, vehicle sales were boosted by growth in industries associated with hydrocarbons, providing logistics and transport services as well as mass-transport infrastructure projects in capital cities. Likewise, under the free trade agreement with the US, 4x4s larger than 3,000 cc, tractors, trolleys, vehicles for more than 16 people, dump trucks, exploration and drilling trucks, as well as sweeping and x-ray vehicles are no longer subject to import tariffs when they come from the US. As a whole, commercial vehicles grew 23% year-on-year.

Looking forward, the positive signs we are seeing with regard to internal transport indicate that commercial automotive activity will continue on its positive path. In fact, 2013 should bring a recovery in the road-transported cargo sector, as a result of increased oil and coal production, a moderate recovery in manufacturing, and increased foreign trade. Whilst total trade in 2012 (exports and imports) will amount to around USD 115 billion (4% year-on-year growth), in 2013 it could reach USD 129 billion (13% year-on-year). This is boosting the arrival of new foreign companies specializing in transport services. Therefore, while in 2009 five foreign companies were involved in road transport in the country, there are now ten.

The dynamism of private automobiles moderated in 2012

Sales of taxis, pickups, and private automobiles suffered the largest falls in 2012, of 16%, 14%, and 13% respectively. This is linked to the transition period in the consumption of durable goods following their high renewal tax in 2011, along with some political measures. For instance, restrictions on cars in highly populated urban areas have resulted in a higher volume of used car transactions. This market is currently three times the size of the new vehicle market.

Other negative factors included uncertainty linked to the free trade agreement with the United States and tax reform. With regard to the former, expectations of immediate price reductions -incorrect as tariffs are to be phased out over periods not less than 10 years- for private cars, led to many households postponing the decision to buy. In the latter, the possible elimination of the higher VAT rates applicable to high value cars in the tax reform, contributed to expectations of lower future prices. However, a tax was approved on the purchase of these cars to offset the VAT reduction, meaning there would be no significant impact on market prices.

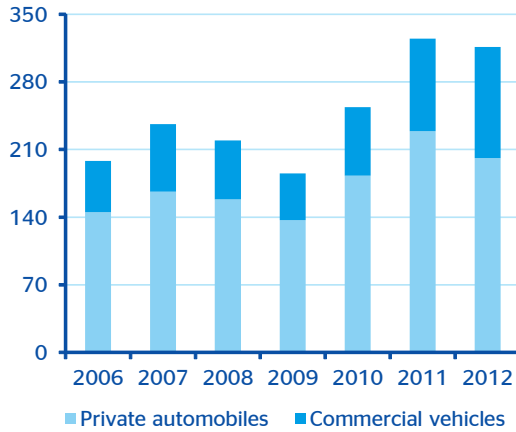
Looking ahead, two factors could incentivize demand: A reduction in Banco de la República (the central bank, see financing section) interest rates and increased confidence among households. With regard to the latter, we have seen a sustained recovery since the start of the fourth quarter of 2012. This could be sustained until next year given the positive expectations of households about the current and future performance of the Colombian economy. However, the same consumer confidence surveys also reveal general unease about the labor market, an important risk factor in forecasts of vehicle sales in 2013 and 2014.

Brands produced in Colombia enjoy a large share of the local market

The Colombian market currently boasts around 68 car brands. The biggest seller is Chevrolet, assembled mostly in the country (75%), Mexico (14%), and China (6%). Renault follows next, where national assembly companies are more significant, with an 88% share. Hyundai is in the third place, with all of its vehicles imported. The fastest growing brands over recent years have been KIA and Nissan. Eight years ago, these two brands accounted for less than 10% of the market. Today, however, they account for 16% of local sales (Chart 6).

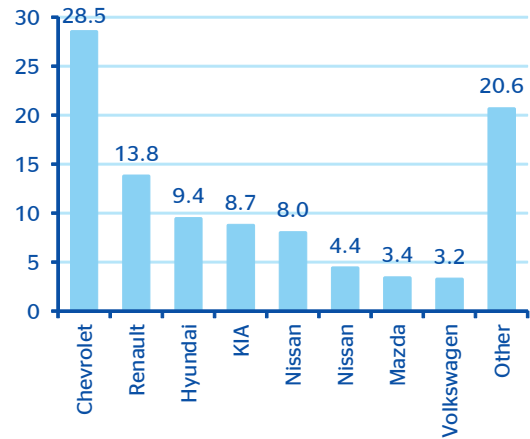
Automobile imports from China now represent 6.6% of the total. However, these imports include a traditional maker from another country but assembled in Asia. These purchases aside, China's market share would be 4.9%, a significant increase on its almost non-existent share at the start of the century.

Chart 5
Internal vehicle sales
by destination. In thousands



Source: Econometría Ltda. and BBVA Research

Chart 6
Car sales by make. As a percentage



Source: Econometría Ltda and BBVA Research

The positive economic development of medium-sized cities is reflected in greater automotive demand

Bogotá (46%), Medellín (13.1%) and Cali (9.4%) account for 68.5% of the national market. However, the market share of these cities has been falling, in favor of medium-sized cities. Specifically, the other major cities increased their share of national sales by 8.1 percentage points (pp) between 2006 and 2012: Bucaramanga (+2.2 pp since 2006), Barranquilla (+1.6 pp) and Villavicencio (+1.0 pp) stand out, accounting for 14.6% of the total current national market (Chart 9).

Improvements to public transport in most Colombian cities, with the introduction of mass transit systems, may stimulate vehicle purchases if, and only if, they result in significant reductions in urban congestion. In this respect, a recent mobility study found average speeds in Bogota and Medellín of 23.7 km/h and 22.65 km/h respectively, slower than other high population density cities such as Los Angeles (47 km/h), New York (38 km/h), and Kuala Lumpur (28 km/h). However, these speeds exceed those in other cities in emerging countries, such as Bombay (22 km/h), Shanghai (20 km/h), and Cairo (20 km/h).

Box 1. Profile of motorbike and car owning households in Colombia

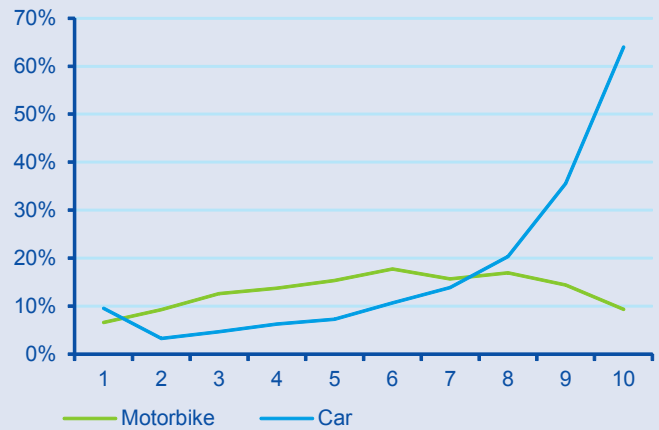
Descriptive analysis of the micro data in the 2010 Gran Encuesta Integrada de Hogares (GEIH: Integrated General Survey on Households) for the three largest cities reveals certain patterns for car and motorbike ownership by households. The analysis unit is the household, as the survey does not provide a breakdown at the individual level.

This micro data confirm some intuitive notions we might have with respect to consumption of these goods, such as a positive relationship between income and vehicle purchases. The original finding here is that this relationship is accentuated in the higher income deciles, presumably reaching income elasticity higher than 1 for car ownership in these deciles (Chart 7). This characteristic -elasticity greater than 1- defines luxury goods consumed at higher income levels. In fact, the data indicate that the percentage of households with cars increases by 28.4 pp between income decile 9 and 10, while between decile 1 and 2 this marginal change is actually negative.

For their part, motorcycles seem to behave as a normal good until a certain level of income (decile 6), which is to say there is a positive relation between income and ownership. Beyond this, it behaves as an inferior good, with a negative correlation between income and ownership. This is the characteristic of some goods that are substituted by other goods above a certain income threshold. In other words, in the case of motorcycles, higher income shifts buyer preferences to other types of transport that are more comfortable (Chart 7).

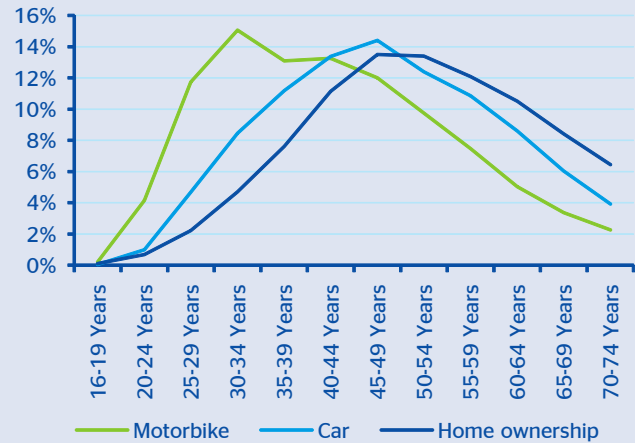
Furthermore, it was found that the majority of households (80%) with a motorbike or car are headed by a man. Meanwhile, the age distribution of ownership of these two products reveals a higher concentration of motorcycles among the younger age groups. Indeed, motorcycle consumption starts from the 20 to 24 year-old age range and peaks between 25 and 39. In the case of cars, consumption occurs somewhat later, beginning between 25 and 29 and peaking between 40 and 54. For comparison purposes, it is interesting to note that the peak in the purchase of homes occurs at a later age, between 45 and 54 years (Chart 8).

Chart 7
Ownership of cars and motorcycles by income decile. As a percentage



* Each value refers to the percentage of households owning at least one car in the first case, or at least one motorcycle, in the second, out of the total households in the decile.
Source: DANE and BBVA Research

Chart 8
Distribution of households with motorcycles and cars by age range. Percentage of total households owning the good



Source: DANE and BBVA Research

If car-owning households are analyzed by the educational level of the head of the household, we find that those who purchase most automobiles are those who are most highly educated, which may be linked to this group's higher income level. In fact, heads of households with higher education account for almost 60% of total car ownership. In turn, among heads of households with higher education, a high percentage of 41% has cars, with those having only attained secondary education lagging behind at 12.2%. Of the total of households with a motorbike, approximately 50% has secondary education. However, motorcycle ownership seems to be more similar among educational levels, with the secondary education level highest at 15.4%, compared to 6.9% for primary education.

Another interesting fact is that it seems that the consumption of motorcycles as well as cars is linked to the formal employment situation of the household. Approximately 80% of households with a motorcycle or vehicle have a head of household who is employed and a percentage close to 50% of these received a salary, whether from the government or the private sector. Also, households with motorcycles or cars have pension plan coverage ratios that are higher than for all households, i.e. 43.1% and 45.4% respectively compared to 32.4% of the totality of households (Table 1).

In conclusion, vehicles appear to be normal goods with elasticity greater than 1 in the higher deciles, while motorcycles are normal until a certain level of income above which they become inferior goods. At that time, the latter

are substituted, presumably for other, more comfortable, forms of transport. The majority of households buying motorcycles and vehicles are headed by a man. The purchase of motorbikes is concentrated among younger age groups than that of other vehicles and the latter, in turn, occurs earlier than the purchase of a home. Formal employment and higher education make consumption of cars and motorcycles more likely, with the second of these factors being more pronounced with respect to cars.

Table 2

Distribution of heads of households with motorcycle and car by occupational position and social security contribution status. Percentage of total households

Professional status	Motorbike	Automobile
Self-employed	35.0%	33.2%
Domestic employee	0.9%	0.2%
Government employee	7.4%	10.2%
Private employee	47.2%	36.4%
Day worker or laborer	0.1%	0.0%
Employer	8.7%	18.9%
Other	0.7%	1.0%
Social security status	Motorbike	Car
Contributor	43.1%	45.4%
Non-contributor	56.9%	54.6%

Source: DANE and BBVA Research

Favorable outlook for vehicle sales

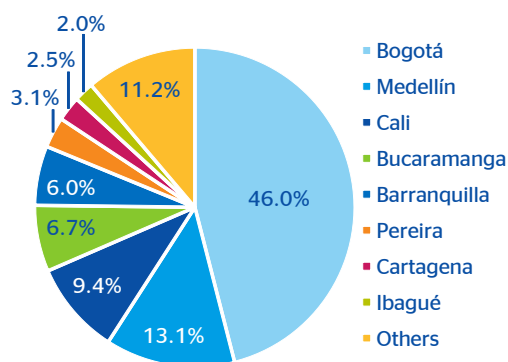
Colombia enjoys a lot of room for maneuver to penetrate the automotive sector. The vehicle stock in Colombia is around 3.7 million units (6.8 million including motorcycles), a ratio of 80 units for each thousand inhabitants (148 including motorcycles). This is lower than other emerging economies such as Chile (131 without motorcycles) and Argentina (201), as well as the average of the LatAm 7 group (168). In addition, it is very low compared to G7 countries, which have an average of 500 units per 1,000 inhabitants (Chart 10).

In 2011, the age of the vehicle stock in Colombia was still high: 15.2 years (15.6 in 2010), creating an incentive for renovation. This is more urgent with cargo (average age 17.6 years) and passenger vehicles (average age 17.5 years). Cars have the lowest average age, at 14.4 years, and amount to 62% of vehicles, well in excess of 4x4s and vans, each with 13% of the total. These last two enjoy positive medium-term prospects, to the extent that they are most favored by the tariff reductions in the free trade agreement with the United States.

However, their expansion will be limited by the country's infrastructure shortcomings, both at the urban and inter-regional levels. In the first case, slow speeds are a counter-incentive to the use of private cars and promote the use of public transport, which is currently consolidating its position. In the second case, high costs are lowering the profitability of cargo transport and, consequently, investment.

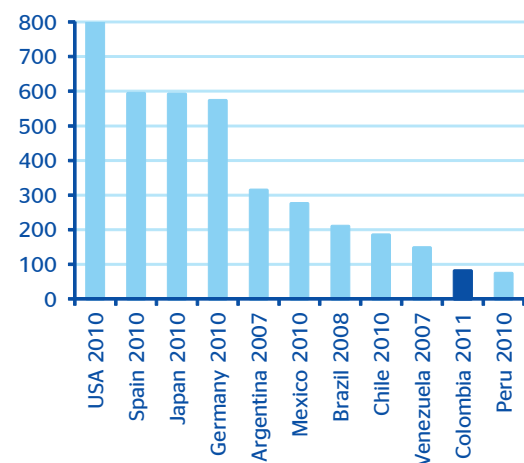
Our 2013 and 2014 automobile sales forecasts include a recovery in private car transactions, but without reaching the peaks recorded in 2011. At the same time, we expect a slight contraction in the cargo vehicle market, given the high level of installed capacity achieved by the industry in recent years. This sector will receive greater support from the decrease of tariffs under the free trade agreement with the United States for larger engine vehicles. We therefore estimate that some 315,000 vehicles will be sold in 2013 and 325,000 in 2014, with a recovery in the share of private cars from 50% in 2012 to 55% in 2014. In the medium term, beyond 2015, automotive demand will continue to consolidate (see Table 2).

Chart 9
Car sales by city. As a percentage



Source: Econometría Ltda and BBVA Research

Chart 10
Automotive fleet. Units per 1,000 inhabitants



Source: Transport Ministry, World Bank, and BBVA Research

Box 2. Colombia vehicle stock to double in 10 years

The rapid growth in the vehicle fleet is not a purely Colombian phenomenon, but is also evident in other emerging markets with high population densities and steady economic growth. Over the last decade, the vehicle stock of the EAGLE countries increased 2.5 times, while in Colombia it increased 1.6 times. In Asian countries, the fleet increased by 3.3 times due to strong growth in China, India and Indonesia. At the same time, vehicle demand in developed countries lost steam, leading to a significant fall in demand, due to the international financial crisis that began at the end of the last decade.

Against this background, BBVA Research recently estimated the growth potential of the automotive sector in the world. For that purpose, a long-term model was projected to assess changes in the number of vehicles per thousand inhabitants, in accordance with income per capita, degree of urbanization, population density, financial depth and the quality of road infrastructures. The core model makes use of a non-linear relationship called the Gompertz curve, which associates car ownership levels with income per capita. The idea in this relationship is that the car per inhabitant ratio is very low for very low levels of income per capita; however, it takes off at medium-low income levels, and grows very rapidly so as to reach certain saturation levels at high income levels.

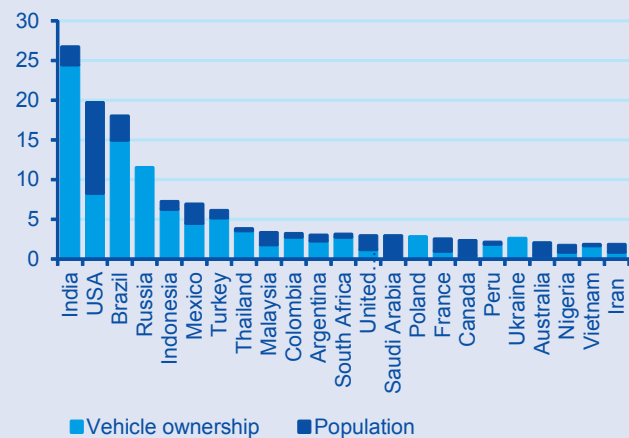
Under this model, strong and sustained growth will fuel vehicle demand in emerging markets. In Latin America, Turkey and the rest of Asia, demographics will also be a very important factor. Thus, the Chinese vehicle stock is expected to increase fourfold over the present decade to become the world's largest. Brazil is expected to reach the size of Japan, while Russia and India edge closer to that level, leaving the rest of the G6 countries (G7 minus USA) behind. Developed countries, on the other hand, stand close to saturation levels both in terms of income per capita and also demographically, except for the United States. Sales in these countries will depend on depreciation and technological advances.

The results indicate that Colombia has ample room to increase its vehicle stock. In fact, according to the study, car sales in Colombia, as in some Asian countries, are subject to high income variations, a common phenomenon in countries going through an expansion phase (see Table 1 for elasticity in Colombia by income level). Conversely, Poland and Korea are the most mature markets among emerging economies, with elasticities of car ownership close to the standards in developed economies.

This study forecasts that Colombia will increase its vehicle fleet by 3.5 million vehicles between 2010 and 2020, a doubling of the current stock (Chart 11) with an annual growth rate of 7.9%. This would be very close to average forecasts for emerging economies, where the stock will again more than double in this decade, with the number of units reaching over 450 million, easily exceeding the total for G7 countries. Among all the emerging economies in the sample (a total of 71), the annual growth rate for automobiles in Colombia (7.9%) will only be below that in China, India, Mongolia, Peru, Namibia, Vietnam, Tanzania, and Sri Lanka (8.3%), although in terms of accumulated value it will exceed all but the first two of these. The main expansion factor for the automotive market in Colombia -explaining 87% of the forecast until 2020- are the low starting point with regard to the ratio of automobiles to inhabitants, which in 2020 would reach 128 automobiles per 1,000 inhabitants, still a long way from the saturation rate estimated to be 500. On the other hand, larger, advanced economies such as the USA, Canada and Australia will be supported by population growth, given their greater vehicle penetration at present.

Among G7 countries, the United States will be the only economy to show a recovery after the crisis. This will mean that G7 economies will lose market share to under 40% in 2020 and that emerging economies will exceed this figure, eventually reaching 50%. China explains two thirds of this change.¹

Chart 11
Increase of the vehicle stock in 10 years. In million units



Source: BBVA Research

1: To obtain further detail on these overall estimates, please consult the BBVA Research economic outlook edition titled "The key emerging markets for the automobile sector", available at: http://www.bbvarsearch.com/KETD/fbin/mult/121010_EAGLEs_Auto_Projections_ES_tcm346-359405.pdf?ts=26112012

5. Costs and prices in the automotive industry

Low production costs in the motor vehicle industry

The motor vehicle and engine producer price index remained stable throughout the year. The determining factors for this included the price of iron, for which the average price fell by 92% in 2012. In addition, in the short term, based on one- and two-year futures trades and as a result of increased inventories at Chinese steelworks, iron prices will remain at around the current level.

Furthermore, the recent strengthening of the peso resulted in lower logistical costs for importing parts for assembly in Colombia. The parts that suffered the largest decreases in producer-price inflation were rims (3.7% year-on-year in October 2012 compared to 11.1 % year-on-year a year ago), chassis (0.7% against 5.3%) and brakes, transmissions, etc (-0.9% compared to 2,1%). Furthermore, the vehicle type suffering the greatest deceleration in cost inflation was dump trucks (-4.8% compared to 2.3%) and vehicles for public and cargo transport (-2.9% vs. 1.2%), partly due to initial reductions in import tariffs under the free trade agreement with the United States. This trend could persist throughout the life of the agreement and gradually extend to other types of vehicles, as specific tariff reductions come into effect.

Stable prices make higher range cars more accessible

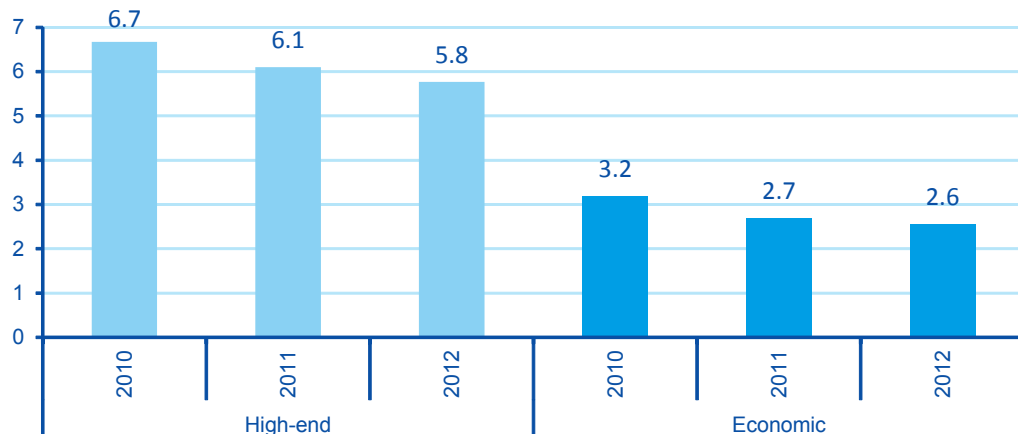
Vehicle prices have remained relatively stable over recent years. In particular, during 2012, average vehicle prices rose by 1%, below the inflation rate, which stood at slightly below 2.4%. This was influenced by the fall in price of medium range vans (between 30 and 60 million pesos). The average price of this segment fell 11.8%, partly due to lower tariffs following the free trade agreement with the United States at a time of strengthening of the peso.

These low price increases bolstered the acquisitive power of households. While in 2010 a person would need 3.2 years of salary to buy an economical range vehicle, this has fallen to 2.6 years today. And, while acquiring an average luxury range car required 6.7 annual salaries in 2010, the current figure is 5.8 (Chart 12). This reduction of prices has also made it possible for the middle-to-lower income quintiles to afford to purchase a vehicle.

Over the coming years, this downward price trend should continue with the gradual introduction of the agreements with the United States, Europe, and possibly Korea. However, further reductions in the price of larger-engine vehicles will be difficult, as the majority took place with the start of the trade agreement.

Chart 12

Annual salaries necessary for the purchase of a vehicle. Number of years based on average income



Source: DANE, Econometría Ltda, and BBVA Research

6. Financing of the automotive industry

Colombia boasts 31 banks and 22 financing companies, almost all of them with special credit facilities for automobile purchases. In addition, financing may be acquired through savings plans directly available from the manufacturers.

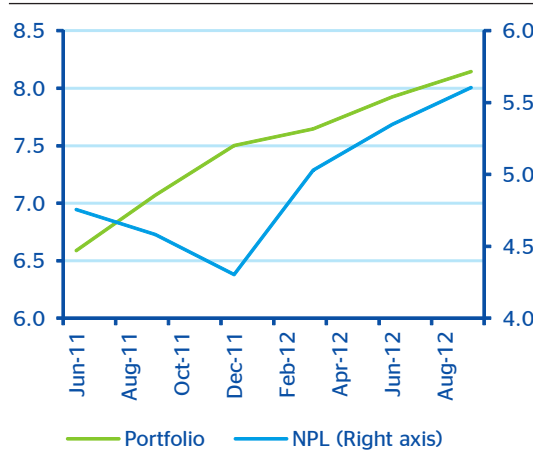
In 2012, to September, vehicle credit increased by 15.2% year-on-year, reaching COP 8.1 billion, representing 12% of the total consumption portfolio. This change represented a cooling of growth compared to 2011, when it was 27.3%. The quality of the vehicles portfolio, as with other personal credit categories, has deteriorated since the second half of 2011 (Chart 13). This is due to greater access to financing compared to what had been available up to that date, immediately prior to increased interest rates in response to the partial withdrawal of the monetary stimulus. In addition, during this year, the economy slowed towards more sustainable medium-term rates, thus resulting in lower rate of formal job creation.

Over the first nine months of the year, 152,000 vehicles were financed, 58% of all new vehicles transactions, very similar to the 60% the previous year. However, this percentage may be higher as corporate vehicle purchases are not separated out from the overall commercial portfolio in Colombian statistics.

Average credit is currently worth COP 22 million. This value has remained relatively stable over recent years, in line with the stability of vehicle prices. However, during 2012, the average amount paid increased by 4.8%, exceeding the 1% change in prices and testimony to improved access to higher value cars.

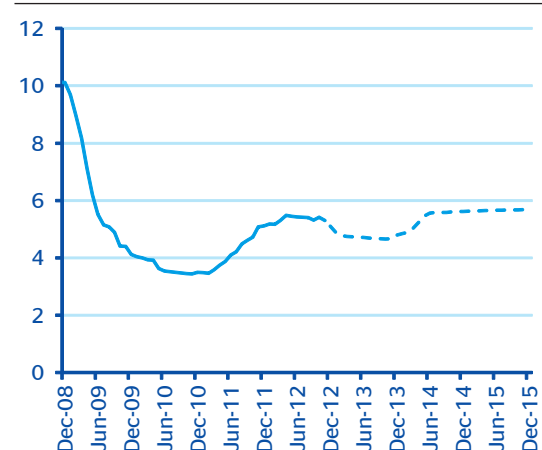
Looking forward, BBVA Research is expecting low interest rates to last throughout 2013, providing a significant boost for the automotive industry (Chart 14). This monetary initiative will have effects on consumption of durable goods, which should be finalizing its stabilization stage and starting a new expansionary phase from the first semester of 2013.

Chart 13
Balance and quality of vehicle credit portfolio. In billions of pesos and % of total



Source: Superfinanciera and BBVA Research

Chart 14
Weighted average deposit rate (DTF). As a percentage



Source: BanRep and BBVA Research

7. Conclusions

The automotive sector is currently going through a stabilization phase following the peaks in 2011. This is due to lower domestic demand and low export growth for the industry. This slowing of growth coincided with reduced activity in all household consumption categories, being deepest in the case of durable goods.

This moderation in growth is cyclical: i.e. the Colombian economy has ample space for further vehicle penetration. Low vehicle-ownership rates and sales as a percentage of inhabitants, and the sustained increase in the buying power of both private citizens and companies, indicate the sector's potential. International comparisons also point to a doubling of the automotive stock in Colombia over the next ten years from the current low car ownership rate.

This positive outlook is based on interest rates remaining low over the coming years, with monetary neutrality being achieved through a lower rate. A further boost should be provided by sustained economic recovery from 2014, eventually reaching the economy's potential growth rate, which would then be above 5%.

This positive outlook for demand will impact on the productive sector, with an increase in the scale of assembly over coming years. However, automotive industry companies need to achieve significant productivity improvements in order to position themselves in the region.

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