

Automotive Outlook

Colombia

2013
Economic Analysis

- **We expect car sales for 2014 and 2015 to reach 302,000 and 314,000 units respectively.** Our forecast is based on the premise of a sales recovery in vehicles for private use and continuing good results in high-cost and utility vehicles.
- **The Colombian automotive market is far from reaching saturation levels.** 98 in every 1000 inhabitants has a vehicle (not counting motorcycles), a low rate when compared with the Latin American average.
- **There may be some additional reduction in vehicle prices,** principally in high-end cars, as customs tariffs go down as a result of trade agreements.
- **We are expecting stability in the share of nationally produced vehicles in total sales.** Imports of high-end vehicles will continue to be strong, but they will have less room for growth than middle-of-the-range and cheap cars.

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Closing date: 20 March 2014

1. Summary

The automotive sector, comprising the manufacture of vehicles (including, motorcycles), car parts and repair services, **makes up around 4% of the country's GDP** and accounts for nearly 25,000 jobs. The industry has eight vehicle assembly plants and nine motorcycle assembly plants.

In 2013, 293,846 vehicles were sold, a 7% YoY fall over the 2012 total, which was a smaller fall than we had estimated in our last edition of Automotive Outlook. The main variation was in goods vehicles (-40.2% YoY) and pickups (-24.3%), whereas utility vehicles (+12.1% annually) and taxis (+8.8%) grew. 38% of vehicle registrations during 2013 were in Bogotá, a similar level to the proportion in 2012 (37%). Antioquia and Valle came in second and third place, with 13.7% and 9.4% respectively. **Reduced activity in the new car sales market was replicated in the used car market.** Whereas in 2011 a total of 577,430 vehicles changed hands, in 2012 the figure went down to 519,887 and in 2013 it came in at around 490,000 units.

In 2013, the proportion of Colombian-produced cars was 32% of total sales; Mexico was confirmed as the main supplier of cars to Colombia, and KIA was the most successful brand in the country. Of the marques assembled in the country, Renault broke with its sales share-losing trend of recent years and Chevrolet was the marque which lost most market share in the medium term. **The purely Chinese marques extended their growth in the country, and now account for 4% of total sales.**

Sector exports were mainly concentrated on the company Sofasa, principally with its Duster marque, and on greater foreign penetration in the car parts sector, thanks to the signing of trade treaties. For example, since the free trade agreement (FTA) with Canada was put in place, in August 2011, the second biggest sub-sector in terms of the number of new exporting companies was spare car parts. This sector represented the biggest number of new firms exporting to the US since its respective treaty was signed.

Lower domestic momentum and the high penetration of imported vehicles resulted in the automotive industry's production index falling by 19.8% and spare part manufacturing going down by 22.8% in 2013, despite the sector's improved performance abroad. Only the motorcycle assembly industry succeeded in consolidating growth in 2013, both in terms of sales and in production. Even so, the financial health of all companies in the automotive sector is very sound.

Our estimates for car sales in 2014 and 2015 are optimistic, but realistic. We believe that 302,000 and 314,000 vehicles will be sold in 2014 and 2015 respectively. There are several factors underpinning this forecast. In the first place, Colombia's economic growth rate will accelerate in 2014 and 2015, thanks in part to improved household spending, the middle classes will continue to expand and the labour market will continue to consolidate. Second, car dealerships did not have much accumulated inventory in 2013 and began 2014 with low stock levels. Third, the Colombian automotive market is far from reaching saturation: car ownership (excluding motorcycles) per 1000 inhabitants is 98, a low number compared to the Latin American average. Fourth, the average age of vehicles in Colombia continues to be high: 14.9 years old. Fifth, interest rates will stay low and there will be ample financing for the automotive market. And, finally, **there may be further reductions in vehicle prices, reflecting lower import duties thanks to trade deals.** We forecast that during this year the share of imported vehicles could drop from its current 68% to a range between 60% and 65%.

For the automotive sector to recover, it needs public stimulus policies and business transformation. In the first case it is crucial for the country to improve infrastructure and reduce energy costs. Only then will industry be ready to compete with imports and to make the most of the free trade agreements the country has signed and will sign in the future. In the second case, companies need to have flexible specialisation and greater efficiency. In the end, it is possible that only a few production lines may remain in-house,

making the most of economies of scale in each of them. This process is already underway in some of the country's companies. **Finally, an exchange rate close to the structural (balanced) level may benefit the automotive sector.** This is a foretaste of lower growth in imports and the domestic industry's greater capacity for adaptation.

Traffic congestion has worsened in the last few decades, particularly in Latin American countries, with negative effects on the environment, the cost of transport and people's well-being. Regulatory policy measures have been introduced such as urban tolls, restricted automobile use in urban areas (ie. "Peak and Plate" system), and infrastructure improvements (although not enough of them) to solve the problem. However, despite the importance of the problem, **congestion is still not having any negative effects on the demand for vehicles in expanding countries such as Colombia.**

2. Introduction

The automotive sector comprises the manufacturing of vehicles, motorcycles and their spare parts and repair services. According to the most recent data, it makes up around 4% of the country's GDP if we include the assembly of motorcycles, which is 1.1% of GDP. The sector generates nearly 25,000 jobs, representing 3.2% of industrial employment, and accounts for a 3.5% share in manufacturing's total social security payments, a sign of its pre-eminently formal economic nature.

According to the Ministry for Trade, in Colombia there are eight vehicle assembly plants, but the largest three on the list - (Sofasa (Renault), GM Colmotores (Isuzu, Volvo and Chevrolet) and CCA (Mazda) - represent 99% of the country's production and 32% of car sales. Furthermore, there are nine motorcycle assembly plants which meet 96% of national demand. This latter activity has shown impressive growth in recent years, going from producing 53,500 units in 2001 to at least 602,000 in 2013 (there is no exact data). In contrast, automotive manufacturing in 2013 completed its second consecutive year with a reduction in activity, although it did manage to improve its export profile. For 2014 we expect a gradual recovery in automotive transactions and for the foreign market to consolidate with the help of the free trade agreements that the country has signed.

In the sections below, we will discuss the recent background of the automotive sector, in terms of both supply and demand, and will analyse export behaviour. This analysis will include a box feature on the nature of traffic congestion, its causes and the impact on car sales. Finally, we will present forecasts for the sector, reviewing demand capacity, financial support for vehicle purchase and the outlook for the automotive industry.

Table 2.1

Key indicators for the Colombian automotive market

Key indicators	
Population (mn inhabitants, 2013)	47.1
GDP per capita (Current USD, 2013)	7.830
Land mass ('000s of km ²)	1,141.7
Road network ('000s of km, 2012)	214.9
Nº of vehicles per 1000 inhabitants (2012)	98.0
Age of car stock (years, 2012)	14.9
New car sales ('000s of units, 2013)	293,8
Average price of car (COPmn, 2013)	33,5
New vehicles financed (% of sales of new cars)	55.0

Source: ANDI, Central Bank, DANE, DNP, Econometría Ltda, FTS UNCRD survey/BID 2011, FENALCO, Ministry for Transport, CEPAL and BBVA Research

3. The automotive sector: recent background

The downward correction of the automotive sector in the market continued in 2013

In Colombia there has been a generalised slowdown in durable goods spending since 2012. This was a result of the normalising of the growth cycle - growing since 2010 thanks to the low rates of interest available on the market - for these types of goods. Currently, for reasons similar to those of that year and thanks to greater economic activity from the second half of 2013 onwards, there has been an upsurge in private demand, specifically in the automotive sector.

In 2013, the automotive sales market in Colombia was worth COP11.3trn (1.6% of GDP). This nominal value has remained constant since 2011. However, as a percentage of GDP it has gone down from 1.8% in 2011, and this compares with its historic peak reached in 2007, when it represented 2.5% of GDP.

Vehicle sales in 2013 were 293,846 units, less than in 2011 (325,000) and 2012 (316,000). The main slackening was goods vehicles (-40.2% YoY) and pickups (-24.3%). These were the types of vehicle that had been replaced in many companies in previous years; what is more, they coincided with the greater demand from mining and energy for commercial fuel transport, which has been slowly substituted as oil pipelines have come on stream. For example, the Bicentennial Pipeline (OBC) began to pump oil in October 2013, and is expected to continue expanding its pumping capacity (Figure 3.1).

Utility vehicles (+12.1% YoY) and taxis (+8.8%) were the only types of vehicles with positive results in 2013. In the first category, consumers made the most of price reductions on utility cars due to the free trade agreement with the US, and this substituted for the prior demand for smaller vehicles. In the second case, the country continued to renew its public service transport vehicle stock, after having taken the existing vehicles out of circulation.

In 2013, 80% of car registrations were for private use and 18.7% were for public service. Of the first group, three categories took 98% of the registrations: saloon cars (63%), utility vehicles (29%) and pickups (6%). For their part, public transport vehicles were more evenly distributed between taxis (30%), lorries (16%), utility vehicles (11%), vans (10%), pickups (8%), among others. Lorries (and other goods vehicles) took first place in 2012; taxis in 2013.

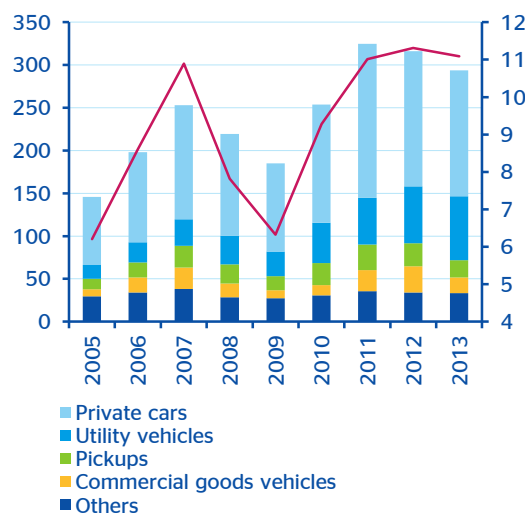
38% of the vehicles registered in 2013 were in Bogotá, a similar level to the proportion in 2012 (37%). Antioquia and Valle were in second and third places, with 13.7% and 9.4% respectively. In Bogotá and in Cali private cars made up 57% and 59% of sales, and in Antioquia, a little less, at 49%. In the latter region, registrations of lorries, trailers and tractor lorries were higher in relative terms and, as in Valle, more taxis were registered than in the capital. After these locations, in Cundinamarca, the fourth biggest region in 2013 in terms of sales (7.0% of the total), bigger vehicles were dominant. Only 13% of registrations were for privately owned cars. By contrast, public service vehicles (vans, minibuses, buses and lorries) continue to be pre-eminent in the region, which is less urbanised than the major cities.

In the remaining positions, the highest were Santander (5.3% of the total), Atlántico (5.0%), Bolívar (2.2%) and Meta (1.9%), with similar patterns to the national average in terms of privately owned vehicles (around 50%). The two Caribbean regions had a large number of taxi registrations (over 10% of the total) and in the other two regions, where oil production is predominant, there was a growing number of trucks, pickups and other freight vehicles (Figure 3.2).

This slower rate of car sales was mirrored in the used car market. Whereas in 2011 a total of 577,430 vehicles changed hands, in 2012 the number went down to 519,887 and in

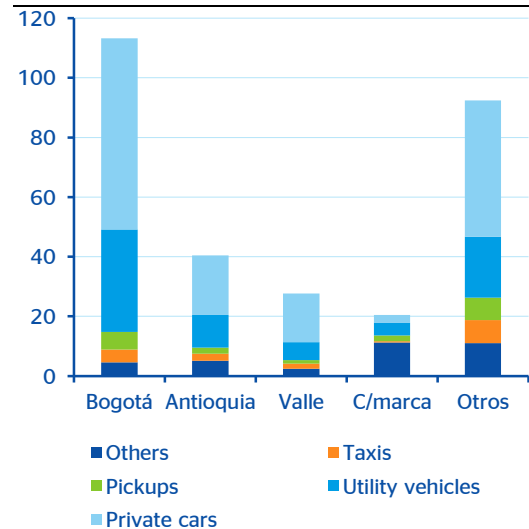
2013 it was about 490,000 units. The reduction in the price of new vehicles and the low interest rates are solid economic reasons for substituting used vehicles for news ones. In addition, in the major cities driving restrictions on private vehicles were retained in 2013 – the system known in Colombia as “Pico y Placa” (Peak and Plate) – which did not provide incentives to resell used cars, incentives which arise mainly when there are changes in the regulation affecting the vehicle number plates that can circulate on specific days of the week (See Box). Finally, automotive renewal was very intense in 2011 and part of 2012, ensuring a new stock of cars in the country and in some case with loans still being paid off using the financial system.

Figure 3.1
Sales of vehicles: '000s of units and COP trn



Source: Econometría LTDA, DANE and BBVA Research

Figure 3.2
Registrations by region and vehicle type in 2013 ('000s of units)



Source: Econometría LTDA and BBVA Research

Export activity increases in the Colombian automotive industry

Imports retain their importance in the country's automotive supply, although the loss of share of domestically assembled vehicles was halted. During 2013 the number of cars produced in Colombia as a percentage of total sales was 32%, the same as in 2012, but less than in 2011, when it was 40.5%. Compared to 2012, only assembly of commercial freight and passenger vehicles gained share in total domestic sales, thanks to better positioning on the part of high-end car manufacturers in the last few years.

Mexico was confirmed in 2012 as the main automotive supplier to Colombia, and was the source of 28% of total imports. South Korea's importance as a recipient of the country's purchases, on the contrary, continued to dwindle (21% of the total), confirming a downward trend which began in 2010 (26%), after a record share in 2009 (29%). Finally, China's progress has stuck at 10% of the total, the sum of its own marques and those of international franchises manufactured in China, reflecting the fact that from now onwards deeper penetration by vehicles from that country will take longer, after having increased its share swiftly in previous years. India, Ecuador and Japan each account for 6% of car imports, all with a downward bias since 2010. Finally, 5% of imports come from Argentina, and here the trend has been to the upside since 2010 (Figure 3.3).

The breakdown by the main marques of the country's supply of vehicles has changed again. KIA continues to show the most momentum in the country and is still gaining share of the market, up to 9.6% from its 2012 level of 8.5%. The steady increase over the last few years

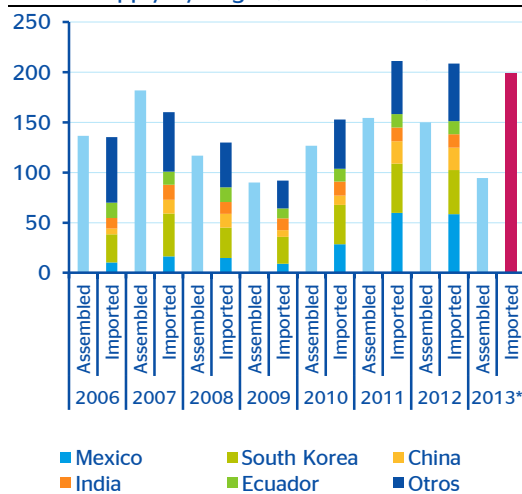
has allowed KIA to grow its share of the national market from the 2.9% that it held in 2006. Ford has also won market share, up to 5.5% now from 3.5% in 2012.

Renault broke with its trend of reducing market share, and went from 13.9% in 2012 to 14.6% in 2013. Although it has still not recovered its almost 19% share back in 2006, it appears to be recovering from its record minimum share of 12% - when sales slumped for a few months in 2009 and 2012. Meanwhile, Mazda's and Toyota's performances matched those of average car sales and they kept their market shares stable at 3.3% and 4.4% respectively.

Chevrolet was the biggest market share loser in the medium term. Between 2006 and 2013 its share went down from 37.3% to 25.2%, where it seems to have stabilised, according to the most recent data. Hyundai has held its share at around 9% since 2011 and Nissan has lost part of the increase it had won up to 2012, when for some months it had climbed to 8.6% of sales. It is currently at stable levels of 6.7%, which is double its 2006 market share.

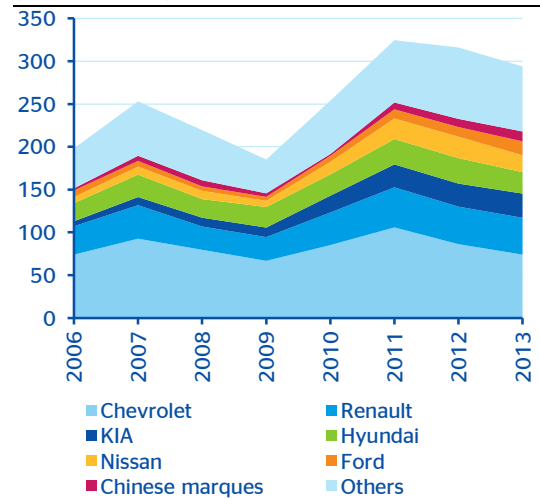
Finally, the exclusively Chinese marques (not counting vehicles imported from China under the marques of other countries) extended their growth in Colombia, and now make up 4% of total sales. Unlike total sales, which fell 7.0% YoY, sales of Chinese marques (Cinascar Group, DFM/DFSK, Great Wall, Hafei, and others) grew around 15% in 2013. The marques with the greatest penetration are those owned by the Cinascar Group, a company which represented 1.8% of total sales in 2013 (Figure 3.4).

Figure 3.3
Vehicle supply by origin ('000s of units)



* For 2013 data was taken by country of origin.
Source: Acolfa (Statistic Manual No. 33), Econometria LTDA and BBVA Research

Figure 3.4
Breakdown by marques of sales in Colombia ('000s of units)



Source: Econometria LTDA and BBVA Research

In 2013, the country's exports were mainly focused on Sofasa, since Colmotores and CCA reduced production by 2.3% and 0.4% respectively. In 2013, Sofasa assembled 74,664 units (+6% YoY) and exported 34,622 vehicles (+ 17.6% YoY). Part of the company's success was due to the high concentration of production in a few lines: Duster (37,544 units, 50% of the total), Sandero and Stepway (19,658), Logan (13,471) and Clio Campus (3,991). The principal foreign destinations were Mexico (43.4% of the total), Argentina (32.8%), Ecuador (7.2%), Peru (7.2%) and Chile (6.7%). The Duster marque accounted for 81% of foreign sales. In total, the country exported USD862mn worth of road vehicles, 49% up on the 2012 figure. Of this figure, USD94mn was for spare parts (from customs duties item 87) and USD8mn for bodywork (from item 87).

Part of the progress made in exports is down to the signing of trade agreements. Specifically, since the free trade agreement - FTA - with Canada came into force in August

2011, nearly 300 new non-mining companies have begun exporting their products there. The subsector registering the highest number of new companies was fresh flowers, followed by spare parts for cars and clothing. Spare parts have also had an increased presence in the US market since May 2011. In fact, it was one of the products that, with the FTA in place, began to be sold for the first time in 44 cities across 23 states in that country. This sector brought together the biggest number of export firms under the FTA (641), bringing about the export of nine new product lines, such as specially toughened security glass, some suspension components and fanbelts.

The most important spare part exports are: lead batteries to Venezuela, Chile and Peru; tyres to Brazil, Mexico and Ecuador; security glass to Venezuela, the US, Mexico, Ecuador and Germany; and wheels and their components to Ecuador. In total, Ecuador is the principal and most dynamic destination for all exported parts (28% of the total), followed by Venezuela (19%), Brazil (14%) and United States (8%). Venezuela recovered part of its lost share, Brazil's importance for Colombia continues to fall, while the United States is becoming an increasingly important market.

However, better external performance was not enough to offset the low share of nationally assembled cars in the domestic vehicle supply. The automotive industry's production index, extracted from the monthly manufacturing sample, fell 19.8% in 2013 and was the most negative sub-sector contribution in the balance of the entire industry. Spare part manufacture also fell 22.8%, but its impact on the manufacturing sector as a whole was smaller because of its relatively small size (Figure 3.5). The ratio between the two sectors (vehicles and spare parts) is important because on average a vehicle produced in Colombia uses COP7.7mn worth of nationally produced spare parts. In the case of Hino Motors, this sum is as much as COP15.7mn because of the higher cost of the cars produced.

The domestic spare part market is centred on hub-caps (38% of the market total), engine components and parts (12%), steering and transmission systems (7%), ball bearings and bearings (7%) and bodywork accessories (7%). Close to 66% of the domestic supply of automotive parts is imported. The countries taking the biggest share of these purchases are China (16% of the total), which went to first place, ousting the United States (14%), followed by Japan (9%), India (8%), Brazil (5%) and South Korea (3%).

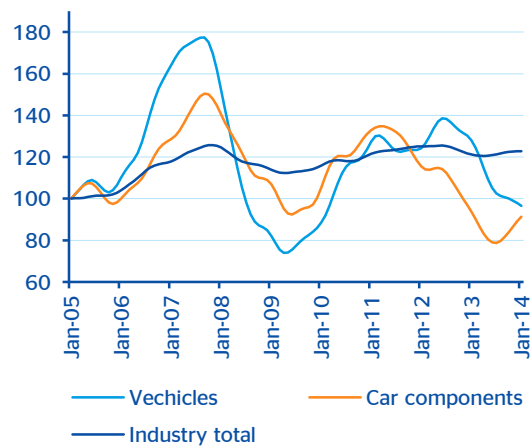
Only the motorcycle assembly industry succeeded in consolidating growth in 2013 (Figure 3.6), in both sales and production. On 2012's figures, 21% of households possess a motorcycle. After Brazil and Argentina, Colombia is the third-largest producer of motorcycles in Latin America, thanks to a 10% rise in 2013 when other industries were contracting. Last year motorcycle production was at least 602,000 units (this figure does not include exports) and, of total sales in Colombia, only 4% came from abroad. The leading brand by sales was Auteco with 38% of the market, followed by Incolmotos Yamaha (20%), Fanalca Honda (16%), AKT (16%) and Suzuki (8%).

For all the assembly companies, their main market niche is motorcycles of less than 180 c.c. and people earning less than twice the minimum wage, even without a credit history, which represent around 80% of the country's motorcycle sales. The demand for motorcycles comes mainly from rural areas or small towns, in response to the high costs of public transport in Colombia. The sector has also been strengthened with exports to Ecuador, Guatemala, Costa Rica, Chile, Panama and Mexico, according to motor industry reports. Finally, imports continue to be mainly from China (43% of the total), Indonesia (21%), India (15%) and Thailand (12%).

The last point is that the companies in the automotive sector (along the entire chain) are in good financial health. According to financial reports from the Superintendencia de Sociedades, Colombia's regulatory body, there are 147 companies in the automotive sector, with total sales in 2012 of COP8.6trn. The sector is moderately concentrated (with a Herfindahl-Hirschman index of 1.962). 7% of companies represent 80% of sales and 16% of them account for 90%. The sales vs. assets ratio is 171% while the sales vs. equity ratio is 344%. In

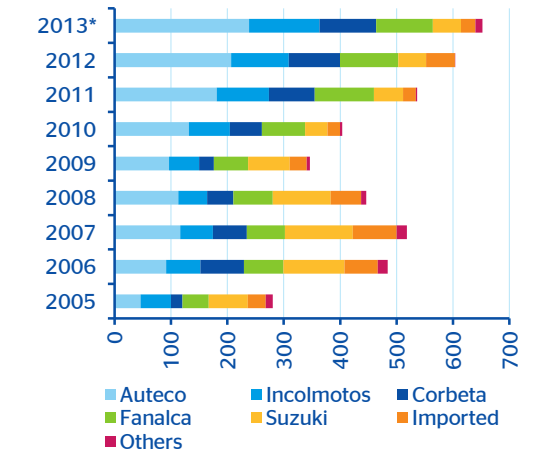
addition, short-term liquidity is assured, since current account liabilities only make up 77% of current account assets and total liabilities are 30% of sales.

Figure 3.5
Real production: industry total, vehicles and spare parts. Seasonally adjusted index, 2005=100



Source: DANE and BBVA Research

Figure 3.6
Sales of motorcycles in Colombia by brand manufactured in Colombia and imports ('000s of units)



* For 2013 vehicle registration information was used.
Source: Acolfa (Statistical Manual No. 33), ANDI and BBVA Research

Box. Traffic congestion in cities: a spotlight on its negative impacts, policy measures and effects on demand for cars¹

Introduction

Congestion occurs when a vehicle introduced in a flow of traffic increases the journey time of others (Thomson & Bull, 2002). This phenomenon has been more common in recent decades, and in Latin America in particular since the beginning of the nineties. An average Latin American currently spends between three and four hours in transit every day, according to a World Bank study².

In recent years there has been a staggering increase in the number of cars in Latin American countries (Figure 9), a result of the growing middle class and the cuts in taxes - customs duties mainly. Traffic flow has intensified, too, because in several developing countries cars are used intensively for journeys to the city centre.

Negative impacts on congestion and public policies to deal with it

Congestion generates negative externalities such as increased pollution, understood as CO₂ emissions (which grew by 30.7% in Colombia between 2000 and 2010, according to World Bank Development Indicator figures), higher vehicle maintenance costs and the increase in transport costs and its duration. In Bogotá, according to figures from the city council, vehicles travelled at an average of 23.7 km/h in 2010, more slowly than in 2002 (30.7 km/h) and than in similar cities in other countries (24 km/h in Sao Paulo, 38 Km/h in New York and 36 Km/h in Paris). Congestion also spoils the quality of urban life, with higher noise levels on main roads, irritability caused by loss of time and the stress of driving in a denser traffic flow.

Despite these negative effects, according to Thomson & Bull (2002) there is an optimal level of congestion, given that the costs necessary to eliminate it may be higher, such as those produced by diverting users to other roads, those associated with eliminating journeys or the investment necessary to increase road capacity. Even so, with the aim of minimising the consequences of congestion, they recommend creating an institution in Latin American countries to tackle managing urban transport in an integrated manner.

For his part, Pardo (2001) analyses supply-side solutions, such as building more roads, improving public transport and creating lanes exclusively for high-occupancy vehicles³. However, he warns that extending infrastructure as a solution could turn the problem into a vicious circle, since the government would be incentivising car use and the suburban lifestyle.

There are also demand-side strategies which could be adopted under the free market banner, assigning monetary values to different travelling behaviours. A charge could be made for using congested roads, allowing the driver to choose freely whether the cost of paying for that particular route is offset by the marginal benefit gained. This method, despite being the most efficient economically, is backward and inequitable in high-income countries since it mainly restricts drivers with low incomes. On the other hand, the government could prohibit or mandate certain behaviours by regulating them. An example of this kind of regulation is to decree that cars whose licence plates end in a particular figure cannot drive a specific day of the week or face a fine.

In the case of Colombia the "Pico y Placa" system ("Peak and Plate") was introduced, designed to apportion road space. It was introduced in Bogotá in 1998 to restrict traffic at certain times of the day. The measure has been modified several times to date, ratcheting up to a restriction of seven hours for five digits which change every day. The main aim of this proposal is to de-incentivise the use of private cars, but in order for this to work a good mass transit system is needed and a change of transport habits to non-motorised means of transport. However, in most cities in the country little or no progress is being made towards an integrated public transport system, and there are public safety problems which are significant barriers to non-motorised mobility.

Furthermore, the "Pico y Placa" system brought with it problems of inefficiency in the incentives it created. The demand for transport is not shifting from the private car to public service; instead the demand is for more vehicles to evade the restrictions.

1: This box was written by Sara Milena Gamboa, a student on a short-term work experience in BBVA Research.

2: Based on: World Bank. "Los latinoamericanos pierden hasta cuatro horas diarias en embotellamientos". (published in Spanish). January 2014. <http://www.bancomundial.org/es/news/feature/2014/01/24/los-latinoamericanos-pierden-hasta-cuatro-horas-diaras-en-embotellamientos> [Consulted: Friday, 7 March 2014].

3: "High occupancy means three or more people in Washington, and two or more in southern California" (Downs 1992).

Similarly, in some of the country's city centres the number of people living in the suburbs has gone up, with increasing effects on car use and urban congestion. Examples of this are the demographic increase in Chía, to the north of Bogotá, of Sabaneta and Envigado in the south of Medellín, Floridablanca to the south of Bucaramanga, Dapa to the north of Cali and Soledad to the south of Barranquilla. A joint study by the national planning department (DNP) and the World Bank on the country's "city system" showed increasing numbers of daily trips from the smaller cities to the hubs (urban agglomeration) to get to work, in a context of poor connectivity between the two and a disjointed system. According to the results of the study, household expenditure on transport is equivalent to education, health and public services. The study recommends increasing connectivity between cities, access to ports, building ring roads around major cities and improving interurban connectivity in the built-up areas to avoid traffic jams. Therefore, they conclude, better inter- and intra-urban connections are essential in reducing congestion, and here better public transport systems are the spearhead.

Congestion and vehicle demand

The relationship between traffic congestion and demand for vehicles has a double causality. On the one hand, facilities for buying vehicles have encouraged increased logjams; on the other, the discomfort caused by the situation has a negative influence on the individual purchase of vehicles when the situation is out of control. Nevertheless, of all the determinants for vehicle demand, 80% of them are based on income and price (Rhys, 1972).

Among those thinking that congestion can reduce demand are the authors of a study conducted by IHS Automotive y Futuribles, which concludes that the demand for vehicles globally is bound up with a change in consumer behaviour in terms of his or her way of getting around. This phenomenon has several explanations: the different lifestyle of younger generations, more aligned with environmental needs and the current resource crisis; mobility difficulties when using a private car (lack of security, congestion, lack of sustainability); the aging population, meaning that they drive less; increased urban density and restrictions imposed by those who design transport policies (congestion charges). These factors will end up by de-incentivising private car use and will cause demand to migrate to new forms of urban transport.

However, the negative relationship between congestion and automotive demand is not clear in countries at an early stage of development. Here, researchers found a strong positive correlation

between per capita income and the motorisation rate (cars per thousand inhabitants) in countries' initial growth phases (per capita GDP similar to USD PPP 5,000), but when the wealth level reaches an advanced phase (per capita GDP of over USD PPP 35,000) this correlation begins to reverse. The idea behind this relationship is that the ratio of cars to people is very low for very low per capita income levels; then it takes off at mid-low income levels and grows very swiftly until it reaches certain levels of saturation when income is high (See [Situación Automotriz de Colombia 2012](#), page 14).

Therefore, the congestion effect on car sales will be less in countries like Colombia and others in Latin America, whose economies are at an initial phase of growth (in Colombia, per capita GDP in 2014 is USD PPP 11,600) and have a young population mass. That is, there are many years and a lot of economic progress to go before we see congestion concerns restraining vehicle demand, but we need to bear in mind the long-term effects in current urban planning.

Conclusions

Traffic congestion is a problem with many facets, so that recommending solutions in isolation frequently ends up making the situation worse. The above demands a new approach when setting public policies that have an impact on all aspects of the transport system: use of non-motorised vehicles, improving the integrated public transport system and aligning incentives to reduce private vehicle use for journeys to work or the city centre. That is how regulatory policies ought to work together, with the quality of urban transport systems maximising its productivity, without forgetting the need for a civic culture that adapts to transit regulations.

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4. Perspectives for the automotive sector

A better macro-economic environment

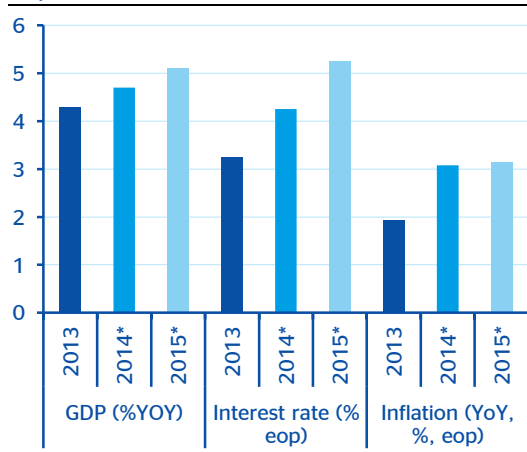
The Colombian economy will increase its growth rate in 2014 and 2015. This improved performance is partly accounted for by the positive balance of household consumption, on both durable and non-durable goods. This segment will be supported by a healthier labour market, with unemployment levels at record lows and higher growth in the formal economy, a recovery in household confidence and unchanged low interest and inflation rates, even when the economic recovery really starts kicking in (Figure 4.1).

Automotive sector-specific indicators were positive too. In January, there were 20,115 new vehicle registrations, 2.9% higher than January 2013. 19,991 cars (+4.9%) were sold wholesale and retail sales represented 22,993 units (+15.0%). In February, retail sales were 24,371 units (+6.5% YoY) and dealerships bought 24,566 units wholesale. In the first two months of the year, Japanese imports were the most dynamic, with a YoY rise of 71.8% and the Volkswagen marque grew the most of the top ten sellers. The segment with the most growth was commercial passenger vehicles, thanks to higher demand from Bogota's integrated public transport system, the SITP. The Mercedes Benz and Thomas marques (assembled in Colombia) are the best performers in this segment.

The second-biggest growth rate was in the light truck sector (+9.9% YoY), where the Chinese marques Hafei and Foton play a big part, and utility vehicles (+8.2% YoY), principally Ford, Toyota and Nissan. There is an increase in private cars (+6.4% YoY) which, as we saw above, was one of the worst performing areas in 2013. By contrast, the fall in sales of heavy lorries continued (-27.1% YoY), one of the hardest-hit segments in 2013. The reason is that road transport of oil has been largely replaced by pipelines and that old vehicle scrapping regulations are not always well enforced at the municipal level.

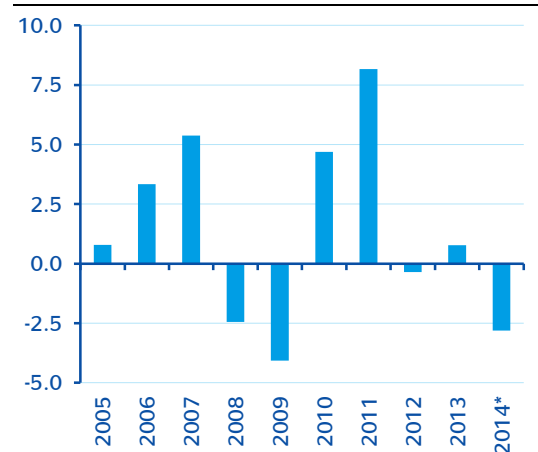
Overall, performance at the beginning of 2014 meant that car dealerships ran down their inventories by 2,807 units, which should be considered together with the relative balance during 2013, when distributors only accumulated inventories of 776 units in the entire year. So, the path is clear for greater demand on manufacturing companies or imports, given the pressure that demand is starting to exert on car dealerships' existing stock levels (Figure 4.2).

Figure 4.1
Key macro-economic indicators, 2013-15



*Forecasts. The interest rate corresponds to the Bank of the Republic's intervention rate.
Source: DANE, Central Bank and BBVA Research

Figure 4.2
Inventory growth in the automotive sector
'000s of units



*Data to February.
Source: Econometría LTDA and BBVA Research

A market a long way from saturation level

There are more than 4.6 million vehicles on Colombia's roads - nearly 9.5 million if we include motorcycles. Recently, there has been a significant boost in this number from its previous level of 3.7 million (or 6.8 million including motorcycles) in 2011. The reasons behind this increase are that national database information is being interpreted better, thanks to the implementation of reporting requirements in the National Single Transit Registry (RUNT), and the increase in automotive sales. In this way, car ownership (not including motorcycles) went from 80.2 per 1,000 inhabitants in 2011 to around 98 currently. In any event, this level is still low when compared with other countries in the region with a similar level of development, or with developed countries which are at (or very close to) saturation levels.

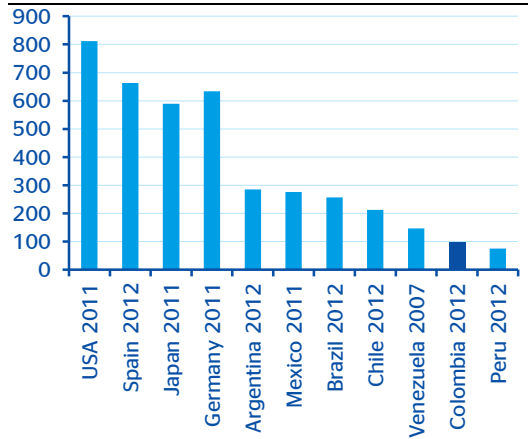
The US leads the ranking of vehicle penetration with 812 cars for every 1,000 inhabitants, a figure similar to Monaco and Luxembourg, countries which have been stable in this indicator recently, consistent with their prior development level. It is also lower than countries with less intense urban planning in car use, such as Denmark (549), the Netherlands (523) and Sweden (522). Colombia's vehicle penetration is even lower than the (simple) average of a sample of Latin American countries, which works out at 200 vehicles per 1,000 inhabitants (Figure 4.3).

Research conducted for Automotive Outlook 2012 demonstrated that Colombia has ample margin for increasing its automotive stock. According to the study, automotive sales in Colombia, together with some Asian countries, have high income elasticity, which is common in countries going through an expansion phase. By comparison, Poland and Korea are the most mature of the emerging markets, with elasticity in car ownership close to the standards of developed countries.

In the analysis, the projection was that Colombia will increase its vehicle stock by 3.5 million vehicles between 2010 and 2020 and that it will grow at an annual average rate of 7.9%. This rate, among all the emerging countries in the sample (71 in all), is below only China, India, Mongolia, Peru, Namibia, Vietnam, Tanzania and Sri Lanka (8.3%), although as an aggregate sum it beats all of these apart from China and India. The main expansion factor in Colombia's automotive market, explaining 87% of the forecast up to 2020, will be its low starting point in terms of the car/inhabitant ratio, which will reach 128 cars per 1,000 inhabitants only by 2020, still very far from the estimated saturation rate of 500. By contrast, advanced and larger economies such as the United States, Canada and Australia will have major support in the form of population growth, given their current greater penetration of vehicles.

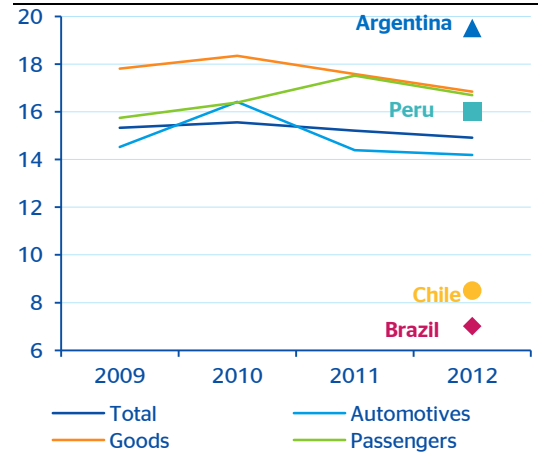
On the other hand, the age of Colombia's cars is still high. Last year the average age reduced only marginally, from 15.2 to 14.9 years old (Figure 4.4). The most intense reduction, although small in number, was in goods and passenger transport vehicles. While the average age of cars was 14.2 years, not far off the 14.4 they were averaging the year before, passenger vehicles went from 17.5 to 16.7 years old, and goods vehicles from 17.6 to 16.8. In the two latter categories, passenger vehicles are more likely to continue their rate of replacement, since it is more difficult in the case of freight lorries due to the bottlenecks in scrapping and lower demand from the fuel transport side. In fact, many of those vehicles which were used for transporting fuels are being adapted to dry transport, satisfying part of industrial, exporters' and other sectors' demand. In total, the age of Colombia's car stock compares negatively with that of Brazil - seven years - and Chile - eight and a half years -, but it has better indicators than Peru (16 years) and Argentina (19.5 years).

Figure 4.3
Vehicle penetration in selected countries:
vehicles per 1000 inhabitants



Source: Ministry for Transport. World Bank, Lubrita and BBVA Research

Figure 4.4
Age of vehicle stock in Colombia by type and comparison with other countries for the total.
Number of years



Source: BBVA Research calculations

Interest rates will stay low and there will be ample financing for the automotive market

The Bank of the Republic will gradually change its monetary policy profile over the course of 2014 and 2015 until it reaches a neutral position (one which has neither positive nor negative influence on economic activity). Our recent models (See [Economic Watch 2014](#)) estimate that the real interest rate that is activity-neutral has gone down progressively throughout the modelling period. This verified our hypothesis prior to this paper: once the world's extraordinary liquidity has come to an end, interest rates will come in below those which applied in previous economic booms. Therefore, new interest rate levels will be below the prohibitive levels for credit, heralding a situation in which greater economic dynamism and improved household income (implicit reasons for the withdrawal of monetary stimulus) will be capable of offsetting the lower excess liquidity in Colombia and the world.

The financial system's credit for buying vehicles continued to grow, although at lower rates than in earlier years. At the end of 2013 total balance of credit was COP9.0trn, a variation of 5.9% YoY, less than half of its expansion in 2012 (13.9%). When it came to GDP, its share remained constant at 1.3%, a level which still looks very low. Indeed, of total car sales in 2013, only 55% were financed through a banking loan, down from the 59% which were financed thus in 2012 (this estimate uses the assumption that 11% of vehicle loans are for used cars).

However, the average sum borrowed for each vehicle loan went up significantly from COP23.1mn in 2012 to COP26.1mn in 2013. According to this, demand for credit is concentrated on the high end of vehicle price ranges, even though the average price of cars has been going down constantly in all price ranges (see next section).

Further price falls in vehicles will depend exclusively on the free trade agreements

Prices in recent years have gone down significantly for two reasons: appreciation of the peso (in a context of greater imported supply) and customs tariff reductions thanks to free trade agreements. According to our analysis of new car supply, low-end cars went down in price by 4% (at current prices) during 2013 and have an accumulated fall of 7% since 2010 (also in current prices). This means a real reduction in price (after allowing for inflation) of 12.3% and

15.3% respectively. Middle of the range new cars, in the same reference periods, went down by 2.9% and 13% in current terms and by 11.2% and 21.3% in real terms.

Price reductions were much more visible in the case of high-end new cars, since some free trade agreements had an immediate impact. The prices of these vehicles fell by a nominal 17.2% (real 25.5%) since 2010, after the FTA with the United States entered into force in 2011.

The reduction in the price of new cars was also transferred to the marketing of used cars. The prices of low-, medium- and high-end vehicles have gone down by 12.8%, 1.9% and 20% (in current terms) respectively since 2010. This is in spite of greater demand for used vehicles, which the "Peak and Plate" restrictions have triggered in some cities (See Box above).

Looking ahead, additional price reductions will depend almost exclusively on customs tariff reductions signed up to through free trade deals. In the first place, the importing of cars other than goods and utility models from the US is currently going through a tariff reduction phase. A 10-year period was agreed on when the FTA came into force in 2011. This allowed the impact of tariff reduction on prices to be gradual. The vehicles first affected, in a phase-out that ends in 2016, will be saloon cars of more than 3000c.c, excluding camper vans, and motorcycles of more than 500c.c.

The most recent free trade agreement to come into force was signed with the European Union. The deal stipulated that within seven years the 35% customs duty applicable on vehicles manufactured in Europe and imported into Colombia will have been phased out. Motorcycles will also enjoy a gradual tariff reduction: they attract a 35% tariff which will be phased out over five years to 2018. The tariff on saloon cars and lorries under 20 tonnes, currently at 35%, is being phased out over seven years to 2020. Finally, tractors have had an immediate 15% tariff cut.

As of 1 January 2011, the quota disappeared on importing cars from Mexico; they will enjoy a zero rate of duty provided they are made in that country. In the case of Mercosur (where Brazil and Argentina are strong producers), cars and commercial vehicles for freight transport were included in the progressive tariff reduction baskets, starting with a reduction of 6.7% in the base tariff of 35% in 2005, and reaching 100% by 2018, when the tariff will be zero.

Likewise, in the treaty being negotiated with Korea, there will be a 10-year period, double Korea's initial proposal of five years. Thus, the dismantling of tariffs will be at a graduated rate of 3.5pp a year, starting from the current 35%.

Other sources for reducing prices are not so clear. In the first place, in Colombia we are expecting an average devaluation of 5.6% in 2014 and relative stability in the exchange rate from then onwards, which reduces this accounting channel for price reduction on imported vehicles. In the second place, the general level of prices ought to speed up toward the middle point of the Bank of the Republic's target range (3.0% YoY) over the course of this year, and if this happens there will be an increase in the price of the inputs and capital goods needed by the automotive industry. In effect, according to the automotive sector's producer price index, the average cost of inputs (total supply) used by industry, which went down in 2012 by 0.8% YoY, went up in 2013 by 2.0% YoY and accelerated to 3.5% in February 2014. The pressure to the upside comes mainly from imported supply of inputs, whose cost grew at an annual rate of 6.1% in February 2014 and fell 2.6% YoY in 2012. Third, the increase in taxes on camper vans and pickups which occurred at the beginning of 2013, because of the consumption tax on top of the VAT on these vehicles, will no longer have an effect on the valuation of cars in 2014 and beyond.

The government's industrial policy endeavours to support the automotive sector

The Government announced that as of 15 April 2014 it would eliminate tariffs on the import of raw materials and inputs for the automotive sector, on condition that they are not produced in Colombia. This decision was part of the *Programme for the Promotion of the Automotive Industry*, which considers this sector as key in the country's development. The argument in favour of this incentive was the importance which the development of the automotive industry usually has in technological progress, human capital formation and entrepreneurial learning, which are often transferred in turn to other manufacturing sectors of an economy.

The Government has moved away from protectionism, which had been at the heart of decisions in the past. This time, it has opted to reduce some sector costs, although it has kept tariffs higher for car spare parts and inputs with a presence in the country. And the decision was, at least, the right one. But it did not go far enough, if we analyse the need for greater competitiveness demanded by the current climate. The trade deals with the US, Europe and Mexico are now fully in force, just to mention the nations with the strongest automotive industries. Furthermore, the free trade agreement with South Korea is currently under negotiation. Therefore, the strategy has to be one of a more widespread reduction of the production costs and promotion of industrial efficiency. This is why the trade deals that have been signed, and those that are underway, give a 10-year timespan (seven in the case of Europe) for the complete dismantling of customs tariffs. During this period, companies will have to redesign their structures and the government will have to make its domestic development policy resilient.

Thus, if the route taken by the Government shows an absence of protectionism (at least this is our reading of an active foreign policy and the reduction of tariffs on raw materials that are not produced in Colombia), it is essential to improve infrastructure and reduce the country's energy costs, as well as private-sector investment in research and development. It is very difficult to achieve access to new export destinations, without bilateral tariffs, with an inefficient domestic industry with high transport costs and energy obstacles. This lesson was understood 30 years ago in Turkey's automotive industry, for example; domestic production must be capable of competing and winning new foreign markets.

Although there has been recent progress in infrastructure, this is still insufficient. In 2010 there were 5,225 kilometres of toll-paying trunk roads, of which 743 were dual carriageways. The average speed for a freight lorry on the National trunk road system was between 30 and 40 km/h. Since then, 554 kilometres of dual carriageway have been built, 6.1 kilometres of tunnels and the Fourth Generation of Tolls (4G) has been proposed. If this final initiative, or at least half of its ambitious agenda, does not materialise in the next four years, the country's competitiveness will lose out. The 4G strategy includes over 8,000 kilometres of motorways, over 1,270 kilometres of dual carriageway and 159 tunnels (96 of them over 2 kilometres long) which total 150 kilometres. The current average speed on the roads is the same as in 2010, and perhaps even trending downwards (to 27 km/h according to the industry association) because of the country's greater level of commercial activity. This is why the challenge is to secure a reduction in industrial costs.

The automotive industry in Colombia: the route map is flexible specialisation and efficiency

The worldwide automotive industry has recently started to specialise in vehicle design and marketing activities, leaving the tasks of manufacturing, as well as system design and assembly, to the car parts companies. Furthermore, it has sought to position itself geographically in areas with larger population growth potential and growing middle classes, trying to create a relationship there with regional car parts producers, provided that this does not impede the continuation of economies of scale at a global level.

To this end, in some case the sizes of plants have been reduced from an average of between 300,000 and 700,000 annual units to an average of 100,000, with greater specialisation in fewer types of vehicle. Nevertheless, they retain a flexible design, which enables them to change models on the production chain quickly, depending on market demand, introducing shared parts to the models produced.

The policy in Colombia should not be very different, and recent experience seems to show that this strategy is already underway. Last year, the Sofasa plant concentrated most of its resources on producing the Duster model, which would be sold both on the domestic market and in neighbouring countries. As we saw in the figures above, this decision led the assembly plant to increase its exports significantly and to win share in the local market. The GM Colmotores factory has modified its production chain in such a way that it can produce SailCo and Cobalt, principally, on a large scale, combined with the marques of other car makers: Isuzu and Volvo. In other words, it has chosen a flexible specialisation strategy. Finally, CCA, the smallest of the factories in Colombia, is currently evaluating whether to continue. Given its low share in the country's sales, it has not been able to achieve good economies of scale in production. As such, it seems that only a strategy similar to that employed by GM Colmotores, where it decides to assemble other marque's cars, can guarantee greater plant efficiency.

In the end, after the movements towards specialisation and efficiency, there may be only a few production lines left in the companies, making the most of economies of scale in each of them. This would make them better prepared to benefit from trade agreements signed by the country and to compete with the new supply of imported vehicles.

In car parts, the strategy need not be very different. The same distributors are demanding specialisation. In the past, they sold all the marques they could. Recently the higher residential price has required them to include the handling of inventories in the cost function. Thus, the distributors now focus on a few marques, in which they specialise. The road to specialisation on the part of the car components firms has also made progress. Productivity in this sector has been historically high and, despite growing from a tariff-protected start in some cases, they can also compete in foreign markets, as we have seen from their success in North America after treaties were signed with those countries.

5. Conclusions

The automotive sector has two distinguishing features. On the one hand, there is an enormous challenge in improving the industrial base. It is a challenge in infrastructure, efficiency and flexible specialisation in the country's industry. The process will be demanding in the context of a policy of openness the country has been pursuing for the last few years, but companies in the sector have already introduced improvements. Furthermore, Colombia is planning the most ambitious infrastructure programme in its history, with stronger, reformed institutions. On the other hand, there is a lot of room for growth for vehicle sales. The burgeoning middle classes, better behaviour in the labour market and low vehicle penetration will keep vehicle sales permanently on the up.

Our estimates are optimistic, but realistic. We believe that 302,000 and 314,000 vehicles will be sold respectively in 2014 and 2015. This means that these two years will not mark a new sales record, since 2011 will retain that distinction with 325,000 transactions. But it also means that the market has the capacity to absorb permanently (at least in the short and medium term) figures of more than 300,000 in annual sales, which is a significantly high figure in historic terms and will begin to move the country toward average Latin American rates of vehicle penetration.

Finally, the financial sector will continue expanding its involvement in car financing. The country is becoming banked more quickly than expected, and already 70% of adults have a savings account. Similarly, there are "new" types of financing (leasing, for example) and greater flexibility at the time of taking out banking loans with collateral according to the most recent financial regulations. In addition, Colombian interest rates, although they will rise because of the tapering of quantitative easing, will remain lower than the levels of six years ago, before the 2008-09 international crisis.

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