

Automotive Outlook

2015

Colombia Unit

- Car sales are expected to slow down to 290,000 and 305,000 units in 2015 and 2016 respectively. This can be interpreted as a medium-term sector correction in volumes, which will be exacerbated by certain cyclical deceleration factors over the next two years.
- Locally assembled vehicles are expected to take a greater share of total sales in Colombia. The depreciation of the exchange rate may be a support for the industry domestically, and a determinant in the slowdown of imports.
- The potential for growth in the sector in the medium term remains unchanged, with a positive outlook after the cyclical deceleration. Household income, the increasing size of the middle classes, the low penetration of vehicles in the country and the advanced age of the country's car fleet, are the reasons behind these expectations.
- We forecast an increase in the price of vehicles because of the exchange rate depreciation. However, the exchange-rate pass-through to domestic prices is not complete, and will be partially offset by lower import duties, by virtue of new trade deals, on some vehicles imported from Mexico, the US and Europe.

Index

1 Editorial	3
2 Structure of the automotive sector	5
3 Recent performance of the automotive sector	9
4 Prices and financing	15
Box 1. Perspectives for fuel prices	19
5 Perspectives	22

Report closed: 20 March 2015

1 Editorial

The automotive sector, together with the motorcycle sector, represents around 4% of gross industrial production, generating 22,300 jobs in all. Sales in the vehicle sector make up 1.6% of GDP.

Demand in the car, auto parts and motorcycle sectors is mainly domestic. The automotive sector meets around 70% of this demand with imports. On the other hand, the motorcycle segment satisfies 93% of its apparent consumption with domestic production.

The production structure of the vehicle and motorcycle sectors is highly concentrated, with just a few assembly companies accounting for nearly the entire country's production. The auto parts sector is spread more thinly, over a larger number of assembly companies.

2014 was dynamic in terms of sales, with growth coming in at 11.8%, dominated by private vehicles (+11.1%) and SUV (+18.1%), which between them accounted for 10.2pp (percentage points) of total sales growth (11.8%). Freight vehicles (+15.8%) and pickups (+3.0%) reported positive growth, unlike the year before, and together accounted for 1.2pp of the increase in total sales. Taxi sales fell by 13%. The top-selling brands in 2014 were Chevrolet, with 82,951 cars sold, Renault with 51,029, Kia with 31,644¹, Ford with 21,314 and Nissan with 21,389.

External demand was less dynamic in 2014 compared to 2013, posting figures similar to the average for 2010-14 (25,600 units). This lower momentum can largely be accounted for by the ending of SOFASA's export quota to the Argentine market, a quota which was granted in 2013, as well as the reduction in exports to Mexico.

Even though imports grew between 2013 and 2014, **the proportion of domestic demand met by domestic production grew**, rising from 32.1% in 2013 to 33.6% in 2014. These percentages are nevertheless lower than in 2010 and 2011, when they posted at over 40%.

Vehicle prices remained virtually unchanged in 2014, thus expanding Colombian households' purchasing power. According to our estimates, the average cost of a car in 2014 was COP28.0mn. This requires 66% of an average Colombian household's after-tax annual income to be spent on buying an average-price vehicle.

Recent trends appear to show a gradual acceleration in the prices of private vehicles, which can be explained by depreciation. However, **the increase in the exchange rate is not expected to be fully passed through to domestic car prices.**

The credit balance for vehicle purchases was COP10.4trn at the end of 2014 (+14.7% YoY). The number of loans grew, as did the value of new originations and the average loan sum. **We expect a gradual slowdown in vehicle loans in 2015, as well as a marginal deterioration in the quality of the portfolio**, partly because of a marginal increase in interest rates in the first part of the year. **In addition, in 2015 households may lose purchasing power**, because of the rises in vehicle prices and the slowdown in the expansion of their incomes.

There are already signs of a slowdown in the automotive sector in the form of the YoY decrease in sales in the first few months of the year, shrinking imports, the reduction of household confidence and the accumulation of stocks in car dealerships.

1: In the case of both Kia and Ford, new vehicle registration figures were taken since the sales figures were not available from the trade association which gathers these statistics.

We expect vehicle sales of around 290,000 for 2015, with greater participation on the part of locally produced vehicles. In 2016 we expect a slight uptick in vehicle sales from 2015 but to a figure that is still lower than in 2014, at around 305,000 units.

Despite the cyclical deceleration of sales in the car sector, the fundamentals show the sector is vigorous and has a great deal of potential in the medium term. Solid progress in average household incomes, Colombia's current demographic bonus, the increase in the middle classes, the limited penetration of vehicles in the country, and, finally, the need to renew the car fleet, are all factors leading us to conclude that the sector is strong.

2 Automotive sector structure

Gross production in the automotive sector was COP5.5trn in 2013 (COP6.1trn in 2012), representing 2.7% of gross industrial production and 0.8% of GDP. In 2014, vehicle sales amounted to 1.6% of GDP (COP12.4trn)². In 2013 the sector provided 15,000 jobs, of which 8,000 were long-term³. The gross production in the motorcycle sector, meanwhile, were COP2.3trn in 2013 (COP1.9bn in 2012), representing 1.1% of gross industrial production and providing the economy with 7,200 jobs. **Taken as a whole, the automotive and motorcycle sector accounts for around 4% of industrial production.** The automotive sector consists of the manufacture of cars and their engines, the manufacture of bodyworks and the manufacture of auto parts. The manufacturing of cars and their engines represents 76% of the sector's total gross production, with bodyworks and auto parts taking 12%⁴. The latter two sub-sectors account for most of the sector's jobs, each with 36% of total employment compared to 28% in the automotive and engine sector.

The best-paid employees work in the car and engine sector, with an average monthly wage of between 2.1 and 3.2 times that paid in the auto parts and bodyworks sectors respectively. The average monthly wage in the motorcycle sector was COP1.1mn. In 2012 wages in the car and engine sector were 2.5 times higher than in the motorcycle sector.

Table 2.1

Key indicators for the automotive and motorcycle market

Population (millions of people, 2014)	48.0
GDP per capita (current dollars, 2014)	8,394
GDP per capita (current dollars PPP, 2014)	13,459
Territory extension (thousands of km ²)	1,141.7
Jobs created by automotive sector (Thousands of people, 2013)	15.1
Jobs created by motorcycle sector (Thousands of people, 2013)	7.2
Vehicle sales (Thousands of units, 2014)	328.5
Motorcycle sales (Thousands of units, 2014)	644.8
Vehicles sales (% of GDP, 2014)	1.6
Sales per person (units per 1.000 people, 2014)	7.0
Average age of the fleet (años, 2012)	14.9
Vehicles ownership (per 1.000 inhabitants)	100
Banking financing of vehicles (% of total, 2014)	57.3%
Automotive credit (% of GDP, 2014)	1.37%

Source: DANE, Asobancaria, Superfinanciera and BBVA Research

Balance of supply and demand in the sector

Demand in the car and auto parts sectors is principally from the domestic market. The car sector meets around 70% of Colombian demand with imports. The motorcycle sector, on the other hand, satisfies 93% of its apparent consumption with domestic production.

In Colombia demand for vehicles is generated mainly by the domestic market. In 2013 in particular, domestic sales represented 85% of total supply (294,000 units) and exports 14% (49,000 units) (Figure 2.1).

2: DANE altered the sample used to calculate vehicle sales, so the value of vehicle sales presented here is a splice, applying the expansion in the new series to the former series.

3: Annual Manufacturing Survey (EAM in the Spanish acronym), 2013. DANE

4: Shares according to the 2012 EAM survey.

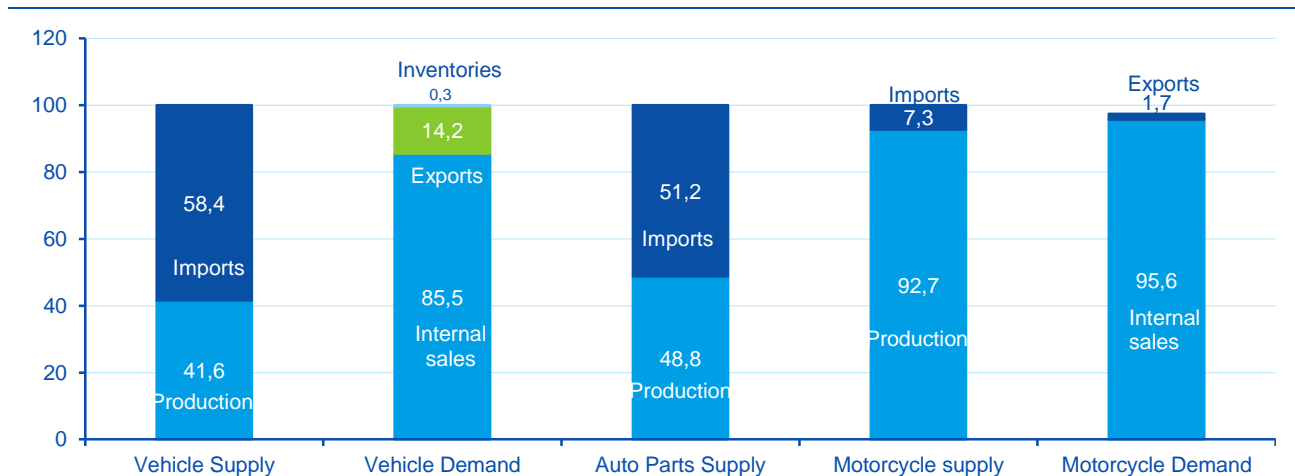
Demand is met mostly by imports. Between 2010 and 2014, imports supplied 63% of the domestic market and domestic production only 37%, on average. The total supply of cars was around 340,000 units on average (2010-14), with approximately 58% coming from imports and 42% from domestic production (Figure 2.1). In 2013 in particular, 343,000 units were offer, of which 200,000 were imported and 143,000 produced in Colombia.

In 2014, domestic production to meet domestic supply was 110,000 units, that is, 33.6% of domestic sales (328,000 units, 12% higher than the year before) and the remaining demand was met by imports, which accounted for 218,000 units.

50% of supply in the auto parts and bodywork sector depends on domestic production. The most important sub-sector in auto parts and bodyworks is “engine and lubrication”, which is mainly supplied from overseas⁵ (Figure 2.1).

Demand for motorcycles is domestic, primarily. The number of motorcycles sold abroad is very low, representing just 1.7% of the total motorcycle offering. An average of 557,000 units were offer yearly between 2010 and 2013. The sector is almost entirely supplied by domestic production, with imports making up a mere 7% of total supply (Figure 2.1). In 2013, 625,000 units were produced domestically and 49,000 units imported, bringing the total offering to 674,000 units. Apparent consumption that same year was recorded at 613,000, of which 95% were covered by domestically produced motorbikes.

Figure 2.1
Private vehicles and motorbikes, supply and demand (% of the total supply in units, 2013)



1: Source: DNP, production chains. Percentage of value.

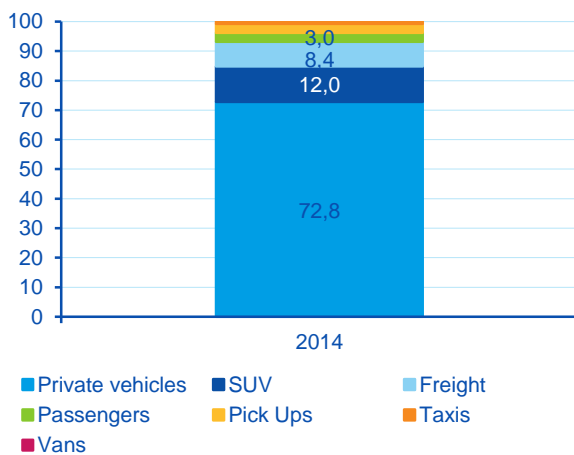
The automotive and motorcycle sectors are, judging by the number of producers, concentrated to different degrees, depending on the stage in the production chain. Vehicle and motorcycle production is highly concentrated, using only very few assembly plants. The auto parts sector, however, distributes assembly over more assembly companies. When it comes to the sub-sectors, in terms of the composition in supply between production and imports, there is a whole range of options.

The country currently has eight assembly companies, of which four very large ones (Sofasa, GM Colmotores, Hino and CCA) account for 99% of the country’s vehicle production. **Assembly companies focus their production on private vehicle lines, adapting to the demand.** Thus, 83% of vehicles exported in 2013 were private vehicles, while 72.8% of the production for the domestic market was for private vehicles. Around 80% of the vehicles produced in the country are therefore vehicles for private use.

⁵: Source: DNP, production chains. Percentage of value.

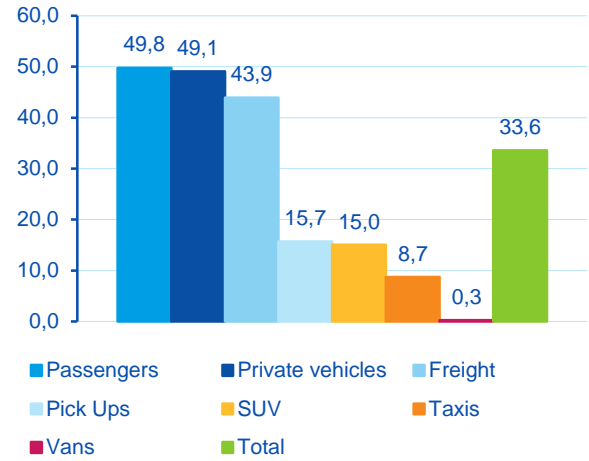
SUV and commercial vehicles make up 12% and 11.4% of all the assembled vehicles which are subsequently sold on the domestic market (Figure 2.2).

Figure 2.2
Sales of assembled cars by type (% of total value of assembled vehicle sales, 2014)



Source: Fenalco and BBVA Research

Figure 2.3
Domestic production by type of vehicle (% of total sales by type, 2014)



Source: Fenalco and BBVA Research

Domestic production accounts for 33.6% of the domestic vehicle market (Figure 2.3). Only half of the demand for private vehicles, despite being the category most assembled in the country, is met by the domestic market. Similar ratios between internal production and imports are observed in the case of commercial vehicles (for passengers and for freight). For the other categories, domestic production as a proportion of their internal demand is below the sector average. Note the case of SUV: they have a weight of 26.9% in total vehicle sales, while 85% of domestic demand is satisfied by imports (Figure 2.3).

On the other hand, auto parts and bodyworks production accounts for 0.7% of the industry's gross production⁶. The concentration in this sector appears to be lower than in the vehicle sector, with around 180 manufacturers. The products contributing most to production in the sector are "electrical equipment" (24%), "other bodywork" (20.3%) and "steering, brakes and suspension" (16.5%)⁷. The remaining links in the auto parts chain are "engine and lubrication" (12.2%), frames (9,2%), interior finishes, accessories and gaskets, air conditioning, bodyworks, steering, brakes and suspension, electronic equipment and fittings, control equipment and tools, wheels, hubcaps, tyres, transmission and gear boxes (Figure 2.4).

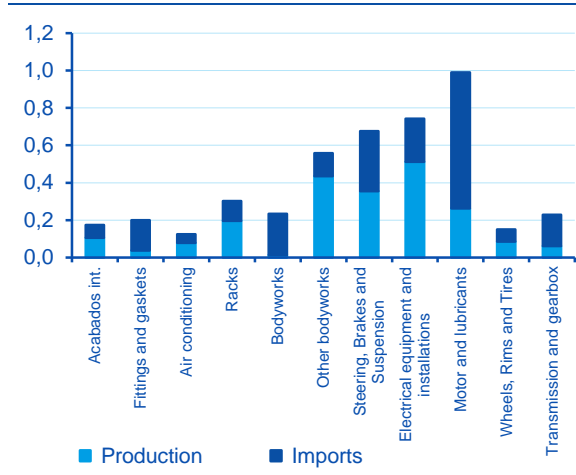
51% of the sector offering is imported, as mentioned above. The "engine and lubrication" and "steering, brakes and suspension" sub-sectors, within the auto parts sector, which are among the biggest in the sector, are supplied to a large extent by imports, at 73% and 47.4% respectively (Figure 2.4). **The countries from which most auto parts are imported are China (16%), United States (15%), India (9%) and Japan (8%).**

The country is currently home to 19 motorcycle assembly companies, with the largest five accounting for nearly all production (Figure 2.5). These assembly companies are: Auteco, which produces 38.6% of the entire motorcycle production; Incolmotos, with 19.2%; Fanalca with 16.5%; Corbeta with 16.2%, and Suzuki, with 9.5%. Motorcycle imports, as mentioned above, have a fairly small share of the offering.

6: Production of auto parts and bodywork over the same year (2012-EAM) amounted to COP1.4trn, which represents 0.7% of the industry's gross production.

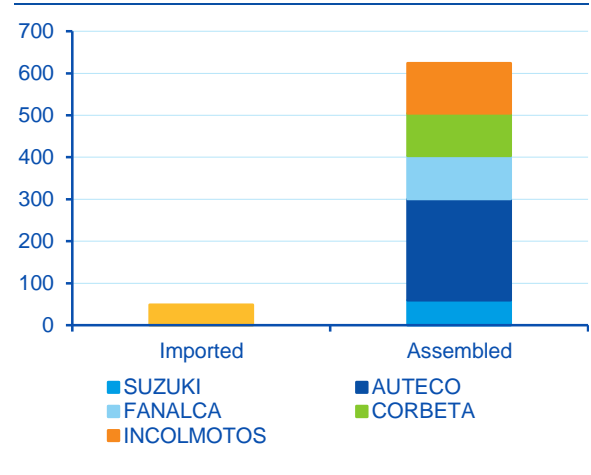
7: Production chain data from the DNP. '000s of Colombian pesos. The average exchange rate was used to convert import figures into local currency.

Figure 2.4
Auto parts by sub-sector (COP trn, 2012)



Source: DNP and BBVA Research

Figure 2.5
Motorcycle supply, imports or by assembly plant ('000s of units)



Source: Acolfa and BBVA Research

3 Recent performance of the vehicles sector

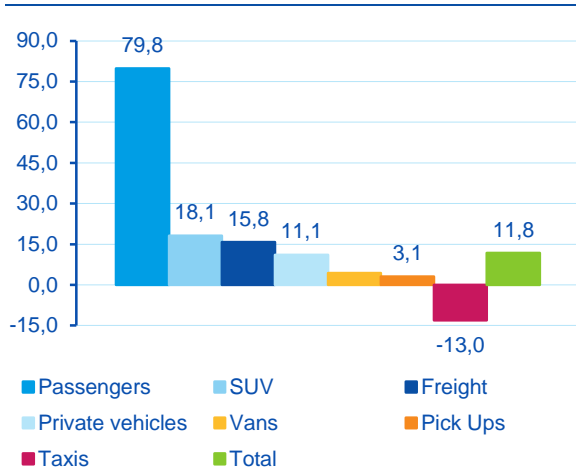
The positive cycle in private consumption boosted car sales

2014 was dynamic in terms of domestic demand for vehicles, with an 11.8% increase in sales, rising from 294,000 units sold in 2013 to 328,500 in 2014. Higher economic growth has been driving private demand, particularly in the automotive sector, since the first quarter of 2013. This performance comes in the context of an ascending cycle in durable goods which also began in 2013, thanks to improvements in the labour market and the increase in household incomes, in a low-interest rate environment. Meanwhile, **exports returned to their average levels in 2014** (27,000 units in 2014 vs. an average of 25,600 units in 2010-14), **after a spectacular 2013 in which sales doubled their average of recent years.**

Private vehicles made a solid contribution to momentum in 2014, but show signs of slowing down at the start of 2015

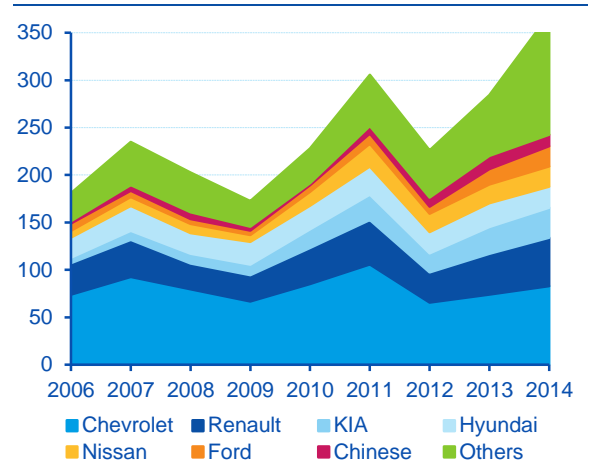
Growth in domestic demand was marked by private vehicles (+11.1%) and SUV (+18.1%), which together accounted for 10.2pp of total sales growth (11.8%). Freight vehicles (+15.8%) and pickups (+3.0%) showed positive growth, unlike the year before, accounting between them for 1.2pp of growth in total sales (Figure 3.1). Taxi sales shrank by 13%. **The best-selling brands in 2014 were Chevrolet, with 82,501 cars sold, Renault with 51,027, KIA with 31,644⁸, Hyundai with 21,777, Ford with 21,416 and Nissan with 21,145** (Figure 3.2). Of the 10 top brands, the biggest growth in sales between 2013 and 2014 came from Suzuki (up 59%), Ford (32%), Renault (19%), Mazda (18%) and Volkswagen (17%).

Figure 3.1. Sales by type of vehicle and sector total (% growth 2013-14, YoY)



Source: Fenalco and BBVA Research

Figure 3.2. Vehicle sales by brand ('000s of units)



Source: Fenalco and BBVA Research

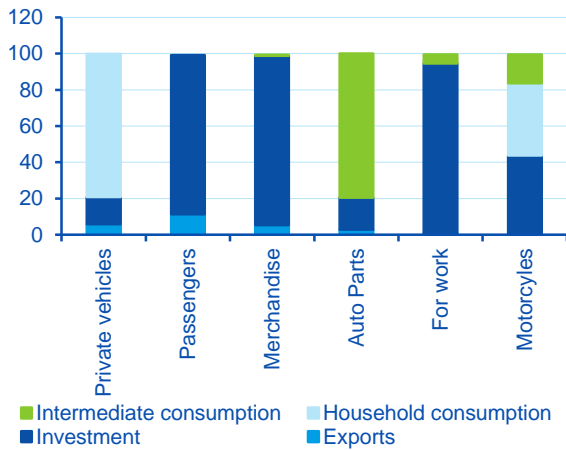
The dynamic of the demand for cars and motorcycles can be seen from the supply-use matrix of the national accounts. The matrix divides the sub-sectors in: private vehicles; commercial passenger vehicles, transport of merchandise, auto parts, working vehicles (vehicles for special uses; on-road traction units; breakdown lorries; bodyworks, trailers and containers) and motorcycles (Figure 3.3).

The end use for private vehicles is primarily the household's consumption, with just a small proportion designed for exports. This purpose, of end use, together with a car's durability, puts private

8: In the case of Kia, new car registration figures were used, since sales figures from Fenalco-Econometría Ltda, ANDI, were not available.

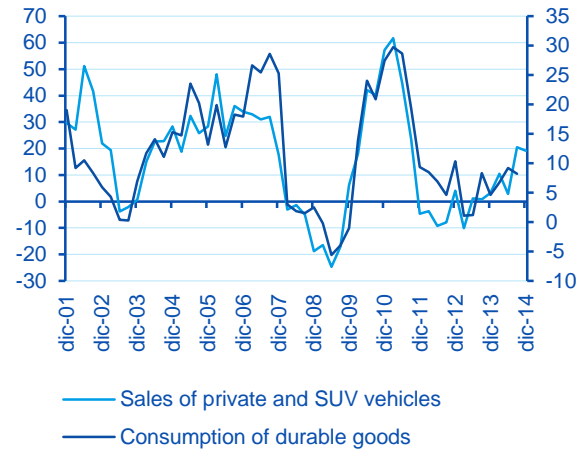
vehicles into the category of consumer durables. There is a clear and positive correlation between sales of private vehicles, and even when including SUV, and the consumption of durable goods (Figure 3.4).

Figure 3.3
Products by type of demand (% of total demand in the sub-sector, 2012)



Source: DANE *(CIIU 6 digits) and BBVA Research

Figure 3.4
Sales of private vehicles and SUVs, and consumer durables (% YoY growth)



Source: Fenalco, DANE and BBVA Research,

Sales of both private and SUV as well as the consumption of durables goods have reported positive YoY growth since 2009; these slow down from 2010 to 2013, reaching their lowest point in the first and second quarters of 2013 in sales of private vehicles and consumption of durables respectively.

Subsequently, these growth rates expand in the third quarter of 2014 in the case of sales, and in the second quarter in the case of consumption of durables, resulting in the solid car sale results that were posted for 2014. From this moment onwards, although staying high, durable goods consumption appears to have moved into its deceleration phase (the latest figure available is for 3Q14). In car sales, the slowdown which began in the third quarter of 2014 became more pronounced in the first few months of 2015 (Figure 3.4).

In January and February this year the sales of private vehicles and SUV, after seasonal adjustments, slowed by -3.2% and -3.1% from the previous month (Figure 3.5). In December 2014 there was zero growth in the sales of private and SUVs from November (with seasonally corrected series). Durable goods appear to be moving into the cyclical slowdown phase, which magnifies the GDP cycle.

Furthermore, **this cycle may be exacerbated by the higher exchange rate since the second half of 2014 and its negative effect on imports.** Indeed, imports fell by an annual 1.6% in January in terms of purchases from abroad of cars, and could shrink more in the coming months.

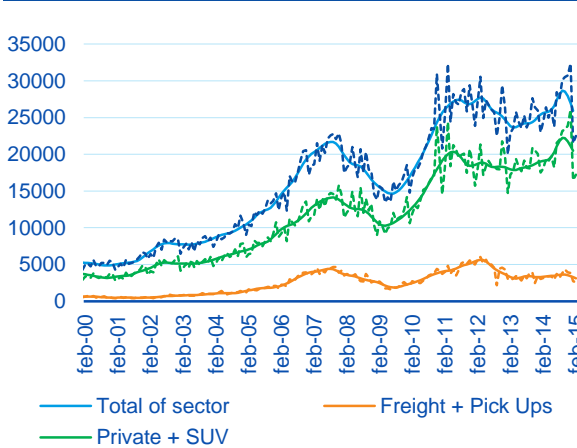
Figure 3.3 illustrates how vehicles for work, for public transport and merchandise transport are investment goods. Passenger transport vehicles make up 6.6% of vehicle sales, freight 6.4% and pickups another 6.4%, a total of 19.4% between them (Figure 3.6).

Moving on to the auto parts sector, this is mainly used for intermediate consumption, which is to be expected given their importance as an input in the production of vehicles, whether the latter are purposed for end use or investment, or else the parts are for the maintenance and repair of used vehicles. In the case of the latter, we can see, for example, that within the structure of road transport costs, the “parts, maintenance services and repairs” segment represent, 7.5%, of the total.

Finally, the information in the supply-use matrix enables us to see the mixed use of motorcycles, whether as an end-consumer product in households or as an investment in other sectors. This

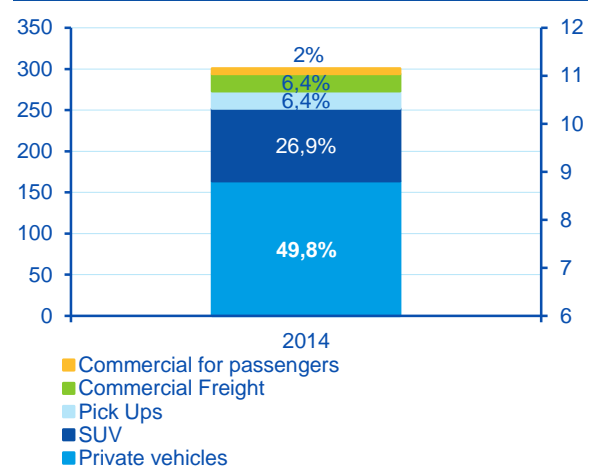
appears to show that motorcycles are not only used for private ends, but just as much as an instrument for work in the productive sector.

Figure 3.5
Total vehicle sales and by type ('000s of units, observed and seasonally adjusted)



Source: Fenalco and BBVA Research

Figure 3.6
Sale of vehicles by type ('000s of units and % of total sales)



Source: DANE (BOU 6 digits), Fenalco and BBVA Research

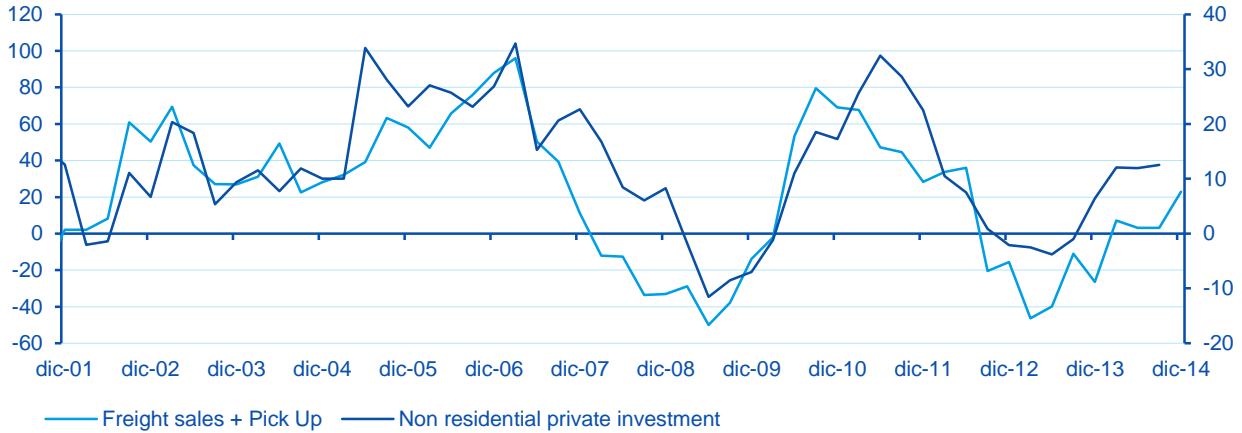
Solid performance in 2014 of vehicles for investment, although their share decreases. Signs of a slowdown in 2015

Commercial freight vehicles and pickups are, as we mentioned earlier, investment goods. Sales of this type of vehicle are highly correlated with non-residential private-sector investment, with a correlation index of 0.73 between 2001 and 2014, and of 0.82 between the end of 2010 and 2014 (Figure 3.7). Growth in both non-residential investment and in freight and pickup vehicle sales were at their minimum in the second half of 2013 of -46.3% (1Q13) in the case of vehicles and of -3.8% (2Q13) in the case of non-residential investment. From that moment onwards, the curve started to rise, continuing to do so until the end of 2014.

In 2014, commercial freight vehicles and pickups made a positive contribution of 1.2pp to total vehicle sales growth. The amounts sold in both sectors are very similar, with each having a share in total sales of around 6.4% (Figure 3.6). In 2014, sales of commercial freight vehicles grew by 15.8%, which is partly explained by a base effect, in the light of the -40.2% fall the year before (Figure 3.1). The growth in pickup sales, although lower than that in freight vehicles, was positive, at 3%, unlike the two preceding years, when there were sharp falls. Turning to **new registrations of these investment vehicles, we see a significant increase in trucks (+7.1%) and dump trucks (+22.2%) in 2014.** Registrations of pickups, on the other hand, declined (-5.2%).

Figure 3.7

Sales of freight vehicles and pickups and non-residential private investment (quarters, YoY growth, %)



Source: Fenalco, DANE and BBVA Research

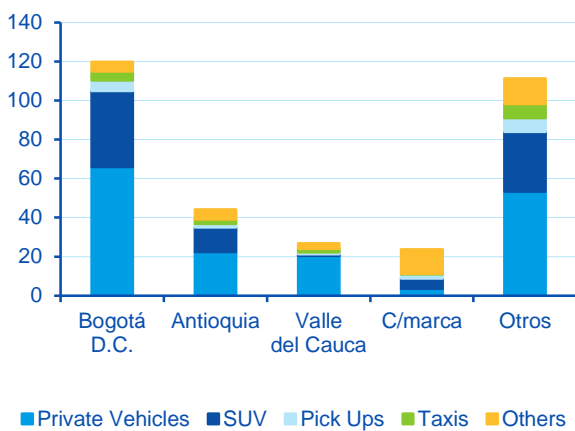
The January and February 2015 figures for commercial vehicles appear to be showing an even more pronounced slowdown than those for private vehicles, with a reduction of -4.5% between December 2014 and January 2015, and of -4.2% between January and February 2015 (seasonally adjusted series, see Figure 3.5).

Greater momentum in sales in the smaller departments

In 2014, Bogotá accounted for the most vehicle sales, with 119,900 new vehicle registrations (36.8% of the total). Antioquia (13.5%) came next, followed by Valle del Cauca (8.2%) and Cundinamarca (7.3%) (Figure 3.8). In departments with lower sales volumes, relative dynamic was better than those with higher sales. Nariño and Caldas accounted for 3% of the country’s total sales, and reported growth rates of 25.1% and 23.4% respectively (Figure 3.9). On the other hand, sales in Bogotá grew by 5.9% and were negative in Antioquia (-9.1%), between 2013 and 2014. These results lead us to extrapolate that it is in the regions with lower sales where there is more growth potential.

Figure 3.8

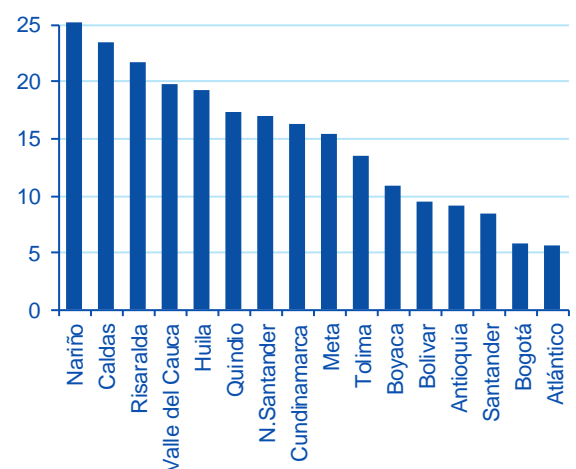
Vehicle registrations by cities and by type in 2014 ('000s of units)



Source: Fenalco and BBVA Research

Figure 3.9

Registrations by departments (% growth, 2013-14)



Source: Fenalco and BBVA Research

By vehicle type, in 2014 the majority of private vehicles were registered in Valle del Cauca (76%), Bogotá (55%) and Antioquia (50%), and the majority of SUV in Bogotá (44% of the total registered) and in Antioquia (14%). Bogotá accounted for 54.6% of the buses sold in 2014 and 28.2% of the taxis (Figure 3.8).

Exports closer to their average for the last few years

The automotive sector's exports represented 0.9% of the entire economy's exports in 2014 (vs. 1.4% in 2013), coming in sixth position in the classification by tariff items at four digits. In 2014, 27,000 units were exported, more than the average between 2010 and 2014 (25,600 units and USD534.3mn FOB). The sub-sector of automotive vehicles and their engines represented 82.5% of total sector exports, auto parts 14.9%, and bodyworks the remaining 2.6%.

In 2014 external sales fell by 36.8%, with vehicles being hardest hit (-40.7%), followed by auto parts (15.3%). On the other hand, exports of bodyworks expanded considerably, by 77%. However, these were still very low compared to the rest of the sector's exports, with the result that they did not offset the falls in other categories.

Lower exports in the automotive sector in 2014 can be explained by the fact that SOFASA's export quota to Argentina, granted in 2013⁹, came to an end, and by the reduction in exports to Mexico, in particular. According to the Ministry of Trade: "From January to December 2014, the destinations which had an impact on exports were: Argentina (-100%), Mexico (-30.8%), Chile (-28.2%), Guatemala (-27.5%), Costa Rica (-17.3%), Panama (-78.2%), Venezuela (-96.2%), Bolivia (-85.2%) and the Dominican Republic (-70.8%), among others."

In 2014, the main export markets for the automotive sector and auto parts were Ecuador (41.2%), Mexico (32.5%), Peru (8.5%), United States (3.5%) and Venezuela (3.1%). It is interesting to note the recomposition of Colombia's export markets by destination since the diplomatic crisis with Venezuela, a country which in 2007 was receiving 83% of the sector's exports. The most important trading partner is currently Ecuador.

Reasonably dynamic domestic production and imports

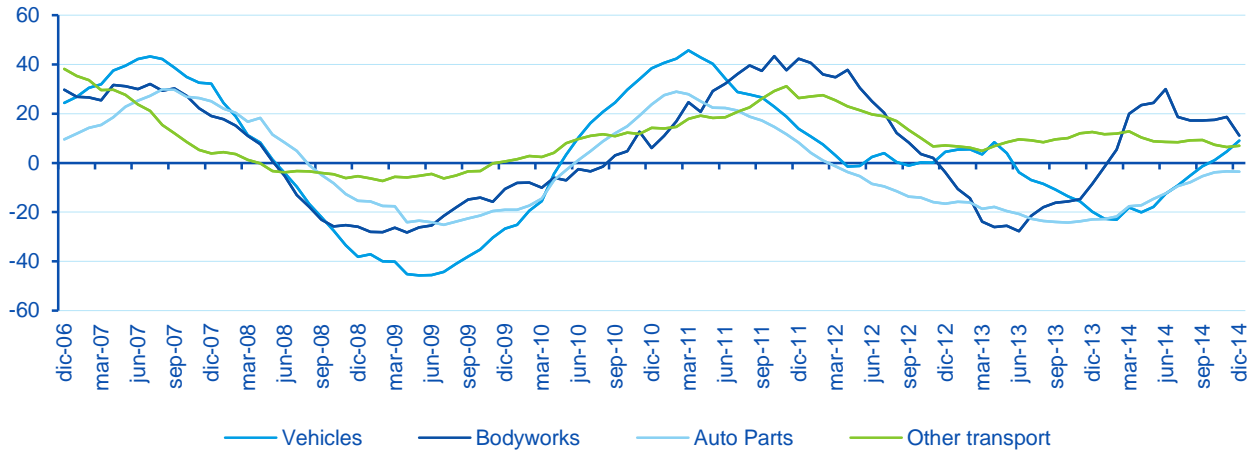
A look at the Monthly Manufacturing Sample shows that the "manufacture of automotive vehicles and their engines" grew significantly, by 9.0% in 2014, revealing a healthy momentum (Figure 3.10). The other sub-sectors show positive growth, with the exception of car parts which, although declining, is doing so less than in the past.

Production of automotive vehicles and their engines decreased sharply between 2007 and 2009 as a result of the financial crisis and the decrease in exports to Venezuela. From mid-2009 onwards, they began to recover, as part of the greater demand for durable goods (up 30% in March 2011 YoY) and by the increase in exports (between 2009 and 2012, USD exports FOB grew by 120%). The waning in the production cycle began in 2011, bottoming out in 2013. In 2014, production changes its trend, with 9% growth, which was one of the best performing industrial sectors that year (Figure 3.10).

9: Ministry of Trade. Industry report January-December 2014.

Figure 3.10

Real production: vehicles, auto parts, car bodyworks and other transport (% growth YoY)*



* The other transport sector includes motorcycles
Source: DANE and BBVA Research,

Sector imports were worth USD5.9bn FOB in 2014, representing 9.2% of Colombian total imports. **From 2013 to 2014 sector imports expanded by 16.3%**, led by the vehicle sector (which grew by 18%). Similarly, the auto parts sector was very active in 2014, with imports growing at a rate of 15%. Imports of bodyworks, meanwhile, shrank by 16%. The main countries of origin for imported vehicles were Mexico (27%), South Korea (22%), China (12%) and Japan (7%). The expansion of imports can be accounted for by an increase in the number of vehicles imported, which grew across the sector by 16%. Of that 16% growth, 14.7pp came from the vehicle sector and 2pp from the auto parts sector. Bodyworks, for their part, subtracted -0.8pp from the growth of imports.

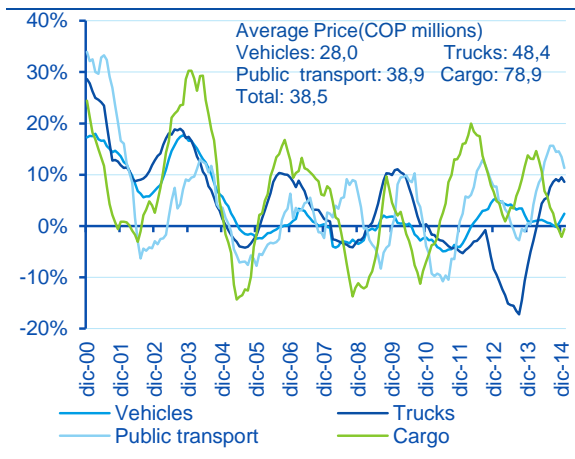
4 Prices and financing

Stable vehicle prices, for how long?

The average price of private vehicles bought in Colombia in 2014 remained relatively stable at 2014. The average price was COP28.0mn, compared with that of COP27.8mn in 2013. Even if we correct for the variation in inflation in 2014 (3.7%), these prices implied an annual reduction in real terms. Meanwhile, the average purchasing price of four wheel vehicles and trucks has tended to rise since the second quarter of 2014, unlike what happened in 2013, when there was a reduction of over 13% in average prices. Similarly, the trend in the prices of public transport vehicles, which had been falling since the end of 2013, changed, and this is currently the segment with the biggest YoY price increases. Finally, freight vehicles fell in price at the end of 2014, at variance with a consecutive three-year trend of price rises (Figure 4.1).

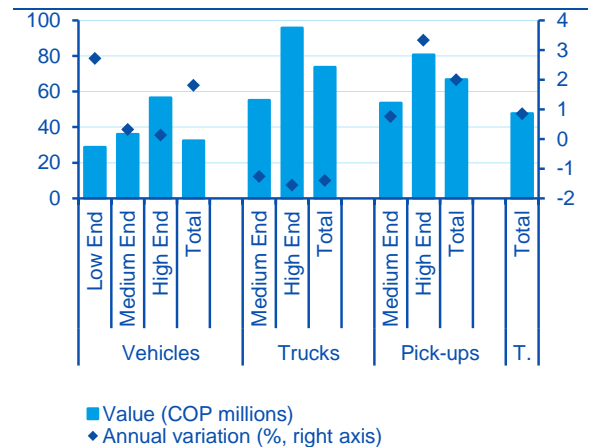
However, there is a problem with these measurements, as much as they do not control for the features or quality of vehicles. That is, a reduction in the average purchase of vehicles can have one of two explanations: a lower price for the same vehicle or a change in household habits towards buying a cheaper car. Therefore, we carried out another exercise in order to verify the prices of vehicles, taking the same production lines by brand at each low-end, or high-end or medium-end. Figure 4.2 illustrates our findings. In all, vehicle prices rose by only 0.8% in 2014, confirming the information given by the first set of measurements.

Figure 4.1
Average price of vehicles bought in Colombia (var., YoY)



Source: DANE and BBVA Research.

Figure 4.2
Average price of the same line of vehicles in 2014 and annual variation



Source: Econometría Ltda., Revista Motor and BBVA Research

Recent trends appear to reveal a gradual acceleration in private vehicle prices, which may spread to all automotive lines. It is highly probable that the progressive increase in prices is due to the depreciation in the exchange rate, which began in the second half of 2014 and caused a 7% increase in the average exchange rate compared to that of 2013. Nevertheless, the price increase has not been equivalent with devaluation. With data to January, prices rose by 2.4% YoY. Vehicle inflation, which posted at an annual 2.2% for 2014, reached 6.7% YoY in February 2015.

The low pass-through of the exchange rate onto prices is due, among other reasons, to the share that national assembly still has on domestic sales (even though auto parts are required from abroad), the

existence of stocks **and the inability of importers to transfer all the depreciation onto the domestic price** (Figure 4.3).

This last point is explained by the price elasticity of demand, which is greater than one (as an absolute value) in the case of vehicles and, in general, for all durable goods. This means that **price increases (of 1%) make reductions on demand more than proportional to the price reduction (on the elasticity value, greater than 1% in this case), affecting car dealerships' total revenues**. Thus, part of the depreciation will be absorbed by distributors by lower margins on imported vehicles. Furthermore, only in expansive phases of car sales (in 2006 and 2011, for example), did business people succeed in transferring a high percentage of the depreciation onto higher final prices, and even then only after a lag. On the contrary, in cycles of deceleration, the adjustment is lagged and lower (Figure 4.3)

According to a study by Econometría Ltda., carried out for the ANDI in 2001 and cited by Fedesarrollo, the price elasticities of demand came in at -2 for low-end, at -3.1 for medium-end ones and at -1.9 for pickups. **Only in the case of taxis (-1) and SUV (-0.8), can distributors raise the prices in a high proportion** thanks to the low elasticity¹⁰. More recently, the Central Bank study (Carranza & González, 2014), also showed that, in a model which excluded the income variable, the price elasticity of demand as an absolute value is higher than one. Their reading of this is that **prices will not rise in the same proportion of the depreciation because the demand for vehicles in the country would end up being reducing too much**.¹¹

Along the same lines, according to Rincón, Caicedo & Rodríguez (2005), **the pass-through rate of devaluation onto vehicle prices is between 0% and 41% in the short term**, considering a confidence interval of one standard deviation. Further, the highest pass-through values tend to be associated with episodes of high volatility and exchange rate devaluation, such as that in 1999 and, beyond the scope of the study sample, in 2009.¹²

So it is that in a situation such as we have now, in which devaluation is not due to excessive international volatility, but rather to the global strength of the dollar and the fall in oil price, it should not rise beyond the upper limit of 41%. In other words, **the expectation of the average devaluation in 2015, which is around 25%, would involve an increase in vehicle prices of 10% at the most**. Nevertheless, these increases could be different depending on the type of vehicle, probably being highest in SUV and taxis, and lower in the case of the medium and high-end vehicles.

The price increases in imported cars will be kept down thanks to the gradual reduction in import duties on goods from the United States and Europe, as laid out in the respective trade agreements. In the case of the United States, since 2011 import duties on cars have been falling by 3.5pp a year, and those on four wheels vehicles of less than 3 litres by 7.0pp, both from the 35% applied before the free trade agreement. Note also that special vehicles and four wheels vehicles over 3 litres had their duties lowered immediately, exhausting their subsequent positive effects on prices. On vehicles from Europe, meanwhile, the progressive reduction of 5pp a year began in 2013, and will be introduced gradually over seven years, until the total of 35% is reached. **Nevertheless, the compensation that these reductions in import duties have the capacity to make on prices is small, given that only 4.7% of car imports come from the US, and 4.6% from Europe**.

When we compare the average price of vehicles with household disposable income, we can work out a purchasing power index. This measures the number of years of household income required to buy a car as if

10: León, N. (2008). Impact of a single sales tax band for automotive vehicles. Final report.

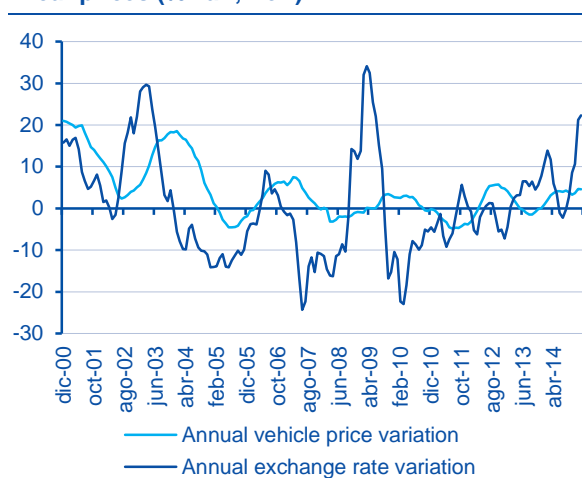
11: Carranza, J. & González, A. (2014). Estimate of the demand for new vehicles in Colombian households from 2001 to 2011. *Borradores de Economía*. No. 824.

12: Rincón, H., Caicedo, E. & Rodríguez, N. (2005). Exchange rate pass-through effects: a disaggregate analysis of Colombian imports of manufactured goods. *Borradores de Economía*. No. 330. March.

there were no other annual expenditure apart from taxes. Figure 4.4 shows the results of the calculation since 2002. **As of today, a household would need to use 66% of its entire year's income to buy a car**, less than the 68% needed with the prices and incomes from 2013, but more than needed between 2006 and 2012: during some of these years less than 60% was needed.

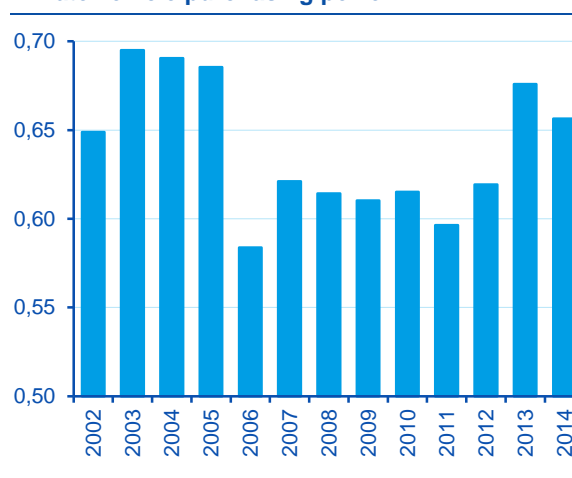
Finally, **the lower current price of fuels in Colombia could bring a marginal relief in the costs of running a car**. As such, when deciding to buy a car, a person will not only consider its sale price, but also its running costs, and may pay a little more upfront if it is known that subsequent costs are lower than current petrol prices (see Box: Outlook for fuel prices).

Figure 4.3
Exchange rate depreciation vs. USD and variation in car prices (% var., YoY)



Source: DANE, Banco de la República and BBVA Research

Figure 4.4
Private vehicle purchasing power



* Annual income after tax (disposable annual income) that an average household needs to buy a vehicle of medium price
Source: BBVA Research

Loans for vehicles could decelerate during 2015

The balance of credit for buying vehicles came to COP10.4trn by the end of 2014. This represents an increase of 14.7% since December 2013 an acceleration over the dynamic of a year ago (+5.9% YoY). The number of loans also rose considerably, from 180,600 in 2013 to 211,500 in 2014, raising the total value of annual originations from COP4.6trn to COP5.8trn over these two years (Figure 4.5).

The average amount of outstanding credit for car loans also increased, from COP26.1mn to COP27.1mn, between 2013 and 2014 (Figure 4.5). Given that the average vehicle price remained virtually unaltered over the same two-year period, we can infer from this larger amount that the percentage of the value of the vehicle financed by the bank has risen. Similarly, the percentage of new car transactions which is financed with credit from institutions supervised by the financial authority *Superintendencia Financiera* increased from 54.7% in 2013, to 57.3% in 2014. Finally, **it is most interesting to note that the vehicle portfolio quality indicator, even though continuing to be one of the highest quality loan types in the financial system, is at low levels compared to the recent past:** 5.2% of portfolio balances are non-performing assets, the lowest level since mid-2012.

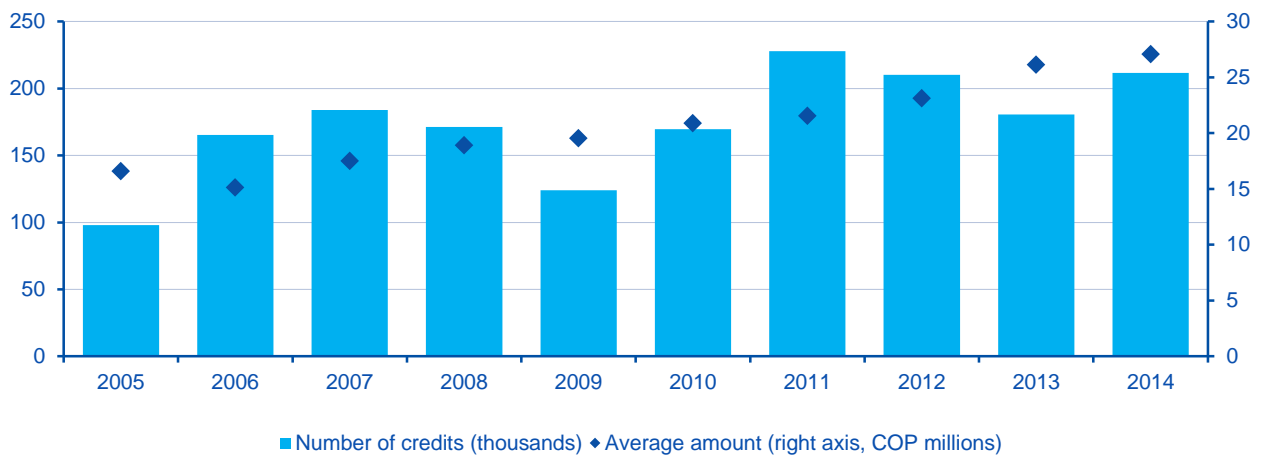
Meanwhile, **the reduction in interest rates has been causing monthly quotas for vehicle loans to fall.** Whereas in 2013 the average quota was COP610,000, in 2014 this fell to COP535,000. In fact, interest rates on consumer loans decreased from an average rate of 18.0% in 2013, to 17.3% in 2014, with rates for car loans behaving similarly.

Modest rises are expected in interest rates for vehicles in the first half of 2015, due to the pass-through of the increases in the intervention rate of the central bank that were made in 2014. From then on, interest rates are set to stay at record lows, unaffected by the central bank’s decisions in the future. This will be the case because of the closeness of the current intervention rate to its neutral (or equilibrium) value. Thus, increases in the central bank rate in the medium term, if they occur, will be limited, as will their pass-through onto market rates. **In consequence, we expect a slowdown in vehicle loans in 2015, which will not necessarily be repeated in the coming years.** On the other hand, **the portfolio’s quality index may deteriorate somewhat, due to the lower growth in total balance and less formal job creation.**

The biggest challenge, as in other types of loans, is to extend the coverage of vehicle loans to other sectors of the population. In 2014, only 9% of adult Colombians had a vehicle loan (according to *Iefic* data published by the central bank in its financial stability report in September 2014). This percentage was slightly lower than in 2013 (9.4%), but remained above the 2012 figure (8.0%).

If this type of loan is to be extended to more people, **the banking sector needs to be ready for a different type of demand from these new customers.** Most of them will have been unbanked up until the moment they start completing the paperwork and will take out smaller loans than those to which the sector is accustomed. In fact, according to the central bank, new customers, who took out a vehicle loan for the first time in 2014, borrowed on average COP13.4mn, less than the average overall of COP27.1mn, according to our calculations.

Figure 4.5
Number of new loans taken out a year to buy a vehicle, and average loan amount



Fuente: Superfinanciera y BBVA Research

Box 1. Perspectives for fuel prices

Up to the end of 1998, the prices set for fuel and diesel were related to inflation-control policies. At the end of the nineties, and using the opportunity provided by the fall in oil prices, the control mechanism was radically altered, with the announcement by the government that the producer price (in this case the revenues received by Ecopetrol) had to track more closely the changes in the international price of fuel and diesel, as well as the exchange rate. Similarly, the margins for retail distributors and the sale price to the end consumer were decontrolled. This created a price structure which, with some minor changes, still exists today. The components of fuel prices are shown below, taking as an example the price set for Bogotá.

According to data as of January 2015, the price of a benchmark gallon in Bogotá was COP8,402. Of this value, 57% goes to the producer; 26% are taxes, broken down as: 12% as a national tax and 14% as a petrol surcharge; 11% are the distribution costs relating to retail and wholesale margins; and the final 6% covers the costs associated with transporting and handling the fuel.

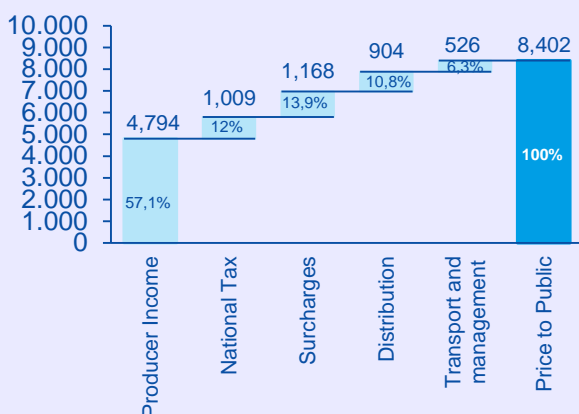
government sets a base price which is used to calculate the surcharge (equivalent to 25%) and this has remained stable since 2010. These two taxes are set tariffs applied to every gallon sold.

The wholesalers' distribution margin is also a fixed tariff, although it is updated every June, based on the CPI variation in the preceding 12 months. Retailers' margins, meanwhile, are revised on an ad-hoc basis; in fact this margin had remained unchanged from 2012 until January 2015, when the Ministry for Mining and Energy raised it from COP578 to COP602.

The biggest item in the transport and handling component is the tariff for product pipeline transport, which accounts for 63% of the total for this item in the Bogotá reference price. Its value corresponds to the cost of transporting the fuel through the country's various product pipelines, so the tariffs vary by region. This cost is revised every February by a discretionary percentage.

Before describing how the revenue to the producer is updated, Box B.1 shows the structure of the diesel price in Colombia. Its components are identical to those of fuel, with one exception: its price structure does not factor in the cost of loss through evaporation. Note, too, that the revenue to the diesel producer is higher than the equivalent for fuel, because of the international benchmark prices which are used to calculate it.

Figure B.1.1
Breakdown of the reference price of a gallon of standard petrol. Price in Bogotá as of January 2015



Source: Ministerio de Minas y Energía and BBVA Research

The national tax is a set tariff which is revised every February, with a sum being added to cover the previous year's inflation. There is no stipulated review period for the fuel surcharge; the

Table B.1.1

Breakdown of the benchmark price of a gallon of standard petrol and diesel. Prices in Bogotá as of January 2015

Concept	Fuel	Participation in total (%)	Diesel	Participacion in total (%)
Productor income	\$ 4,794.0	57.1	\$ 5,447.8	66.8
+ National tax	\$ 1,008.8	12.0	\$ 1,008.8	12.4
+ Fuel dye tariff	\$ 6.8	0.1	\$ 6.8	0.1
+ Pipeline transport tariff	\$ 329.9	3.9	\$ 337.1	4.1
+ Alcohol transport tariff	\$ 38.3	0.5	\$ 24.6	0.3
+ Continuity plan margin	\$ 71.5	0.9	\$ 71.5	0.9
Maximum sale price of wholesale distributor	\$ 6,249.4	74.4	\$ 6,896.7	84.6
+ Wholesale distributor margin	\$ 326.4	3.9	\$ 326.4	4.0
+ Surcharge	\$ 1,168.1	13.9	\$ 301.5	3.7
Maximum sale price of supply plant	\$ 7,743.9	92.2	\$ 7,524.5	92.3
+ Retail distributor margin	\$ 78.0	6.9	\$ 578.0	7.1
+ Evaporation loss	\$ 31.0	0.4	\$ -	0.0
+ Transport from supply plant to service station	\$ 48.7	0.6	\$ 48.7	0.6
Maximum sale price to the public per gallon	\$ 8,401.6	100	\$ 8,151.3	100

Source: Ministerio de Minas y Energía and BBVA Research

The revenue to the producer is updated every month depending on the changes in the benchmark parity price in the preceding 60 calendar days. This price depends mainly on the change in the exchange rate and on the price of fuel and diesel in the US¹³.

Thus, the correction in the producer's revenue depends not only on the trend in the parity price, but also on the difference between the parity price and the producer's revenue, as shown in Box B.2.

Table B.1.2

Mechanisms for adjusting the producer's revenue

	Gasoline			Diesel	
	Price parity with growing trend in the last 60 days	Price parity with decreasing trend in the last 60 days		Price parity with growing trend in the last 60 days	Price parity with decreasing trend in the last 60 days
Price of parity > Producer income	Increases in min{t%,3%}	no adjustment	Price of parity > Producer income	Increases in min{t%;2,8%}	no adjustment
Price of parity < Producer income	no adjustment	decreases in max{t%,3%}	Price of parity < Producer income	no adjustment	decreases in max{t%;2,8%}

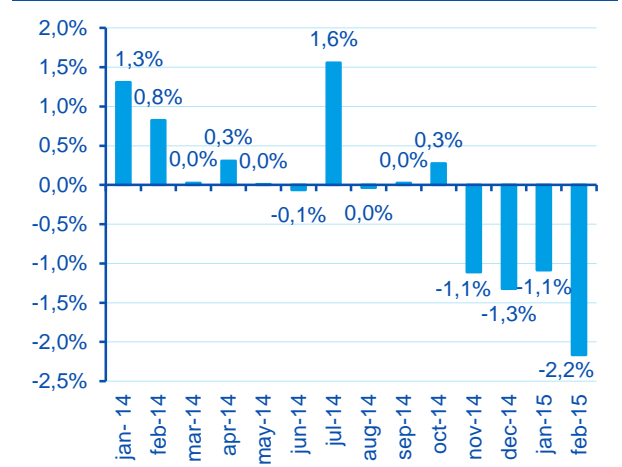
13. Specifically, the petrol price depends on the spot price of a gallon of fuel in the US gulf, and on the cost of maritime and land freight which reflects the opportunity cost of oil production. The price of diesel, meanwhile, is calculated on a weighted average of the opportunity costs of imported and domestic diesel; on the one hand, this calculation also bears in mind shipping and insurance costs. The international benchmark prices of fuels and insurance are in US dollars, and are converted every day into local currency.

So it is that the price of fuel falls when two factors coincide: the parity price is below the producer's revenue and the trend (t, average growth) in parity prices in the preceding 60 days is negative. It works the same way in the other direction: fuel prices rise when the producer's revenue is below the parity price and the trend in the preceding 60 in the parity price is positive. In any event, the producer's revenue cannot vary, either upwards or downwards, by more than 3% (2.8% in the case of diesel). If the rest of the fuel price structure remains constant, changes in the producer's income will have very little effect on the retail price of petrol within a range of 0 +/-1.7% from one month to the next, given the share that the producer's revenue has on the retail price of fuel. In the case of diesel, the monthly retail price variation is 0 +/-1.9%.

Prices paid by consumers have been showing the correction in the producer's revenue. The monthly CPI variations in fuels in the last few months have been around 1.2%, with the exception of the March correction. One of the mechanisms necessary in order to make a downward correction to the producer's revenue is that the parity price should have shown a downward trend in the preceding 60 days. However, fuel prices have jumped in recent months, revealing a growth trend and preventing the correction mechanism from being triggered. For this reason, the reductions this March were not effected through the system just described, but through decrees. In fact, the last adjustment decreed by the government implied a

reduction of around 4%, a rate which is well over the correction range set by the mechanism.

Figure B.1.1
Monthly variation in fuel CPI



Source: DANE and BBVA Research

Our oil price scenario contains a recovery in the price of crude from the second half of this year. This would of course trigger an upwards trend on international benchmark prices and would favour a lower exchange rate, which would put upward pressure on retail prices in Colombia. In order for there to be further reductions in domestic prices, the price of oil needs to fall, which is an unlikely scenario; or else the government will have to continue reducing producer revenues at its discretion, as it has been doing for the past few months.

5 Perspectives

Signs of a cyclical slowdown on the horizon

The BBVA Research scenario for 2015 is that consumption will be the main driver of domestic demand, with annual growth of 4.3%. Household spending will perform solidly thanks to the high levels of confidence and the significant progress being made in the labour market. This level of growth is lower than in 2014 when it stood at close to 5%, and thus vehicle sales in 2015 are expected to be lower than in 2014.

Furthermore, this year households may lose some purchasing power if the increases in vehicle prices which we discussed earlier do, in fact, materialise. That is, if prices rise on average by 10% as a result of a depreciation of the peso (plus an additional percentage linked to domestic inflation), in a context in which household incomes will not be growing by more than 7.7% (if they grow at the same rate as GDP), it is apparent that households will have to spend most of their income on buying the same car, or else buy a lower-priced vehicle. This may be partially reversed in 2016, when incomes will continue to grow at a similar rate to that estimated for 2015, but prices will tend to stabilise thanks to an appreciation in the exchange rate (caused by the increase in the oil price) and the effects of the FTA on cars with progressive tariff reductions.

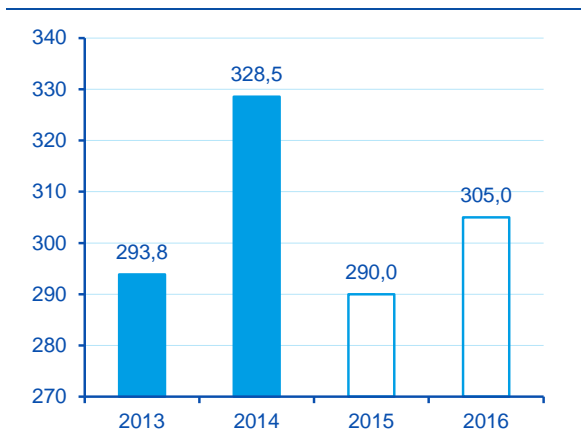
In January and February the vehicle sales data, adjusted for seasonal factors, were already showing a slowdown of -3.9% and -3.7% compared to the month before (Figure 3.5) and a YoY fall of -7.6% compared to February 2014. The durable goods cycle seems to be starting a phase of deceleration, which magnifies the GDP economic cycle. In addition, this cycle may be strengthened by the higher exchange rate since the end of 2014 and its negative effect on vehicle imports. And indeed, January imports fell by an annual 1.6% in the area of overseas car purchases, a fall which may accentuate in coming months.

Lower sales are explained in part by the deterioration in households' willingness to buy vehicles. In February 2015, for the first time since February 2010, there were two consecutive months with a negative balance in their assessment of whether it was a good time to buy a family car. Furthermore, the index was at its lowest since April 2009. In the past, the cycles of this indicator had gone through long periods of pessimism; and the breaks in trend were linked to a general recovery of the economy and the labour market.

Thus, whereas in 2014 stocks fell by 1,395 units, in the first two months of 2015, 1,965 units were stockpiled in car dealerships. That is, during 2014 the distributors had to dig into their stocks that had accumulated in 2013 (776 in all) and were delivering cars later in order to keep pace with high demand. On the contrary, at the beginning of 2015, dealerships had a stock of product with which to meet future demand. This is helpful in terms of prices, given that these cars must have been imported when the dollar was lower than the record highs it reached in the first quarter of this year. But it is an unequivocal sign that purchasing decisions are taking longer.

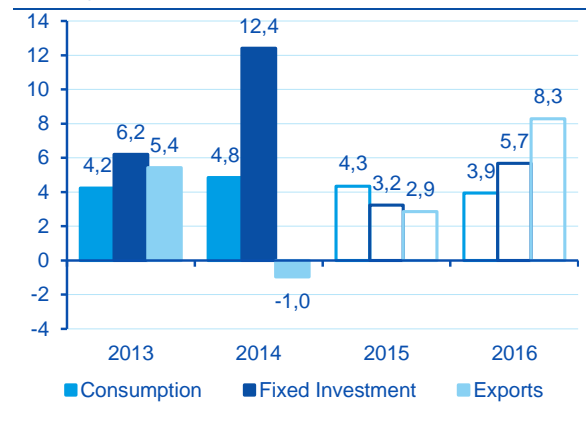
To sum up, we expect total vehicle sales of approximately 290,000 in 2015, with a higher proportion of Colombian-built vehicles (around 40%, see Figure 5.1). In 2016 we expect a slight uptick in vehicle sales over 2015 but still with less volume than in 2014, coming in at 305,000 units. Although in 2016 consumption will fall even more, sliding from 4.3% in 2015 to 3.9% in 2016, due to the 2pp increase in sales tax, fixed investment will increase noticeably, from 3.2% to 5.7% (Figure 5.2). This increase is due to the consolidated recovery of industry, better oil prices (although still under USD100/bbl) which are encouraging new drilling projects and are allowing those that had been put on hold to resume, as well as the surge in exports.

Figure 5.1
Vehicle sales: observed and estimated ('000s of units)



Source: Fenalco and BBVA Research

Figure 5.2
GDP by demand: observed and estimated



Source: BBVA Research

On the other hand, in 2015 the higher real exchange rate could protect the national auto parts industry from growing imports from China and India, as well as strengthening exports. In addition, greater momentum in the United States could represent an opportunity for this sector.

The potential for vehicle sales in the medium term

Despite the cyclical slowdown in sales in the car sector, the fundamentals show its strength and great potential in the medium term.

Between 2000 and 2014, per capita GDP, corrected for Colombia's purchasing power parity, doubled, rising from USD6,620 to USD13,460, so there was a significant increase in average household per capita income. Every member of an average household has a monthly income equivalent to COP538,000 (at 2013 prices), 50% higher than the 2003 value (after discounting inflation). This means that an average Colombian household, which contains 3.5 people, has an average monthly income of COP1.9mn (at 2013 pesos). This improvement has been accompanied by a reduction in the urban unemployment rate of more than 8pp and in the national rate of 6pp between 2001 and 2014. Poverty has also been reduced by 19pp between 2002 and 2013.

The good performance of average household income is strengthened by the population mass receiving this income. Colombia is currently enjoying a demographic bonus: the population of working age, in an accumulative phase, is growing at higher rates than the dependent population (the elderly and children), so the country's capacity to save and consume is on the rise. The middle classes are growing in Colombia and consumption potential is growing with them.

According to our calculations, the percentage of people in the middle, high-middle and high classes (those with incomes over USD15,000 p.a.) rose from 13% to 20% between 2006 and 2014. This meant there was a 3.1 million increase in population in these income levels over this eight-year period. Today there are 15.6 million people of low income, 24.4 million in the medium-low range, 4.4 million in the mid-middle class, 3.9 million in the middle-high class and 4.9 million in the upper class (see the definition of middle class on page 3 of our [Explosion of the emerging middle class](#) Economic Watch, in Spanish). Without a doubt, this is the result of the country's economic stability, with high growth rates, low inflation rates and reductions in unemployment.

The low penetration rate of vehicles in Colombia, with 100 vehicles for every 1,000 inhabitants, when compared to other countries at a similar stage of development, shows the sector's possibilities (Figure 5.3).

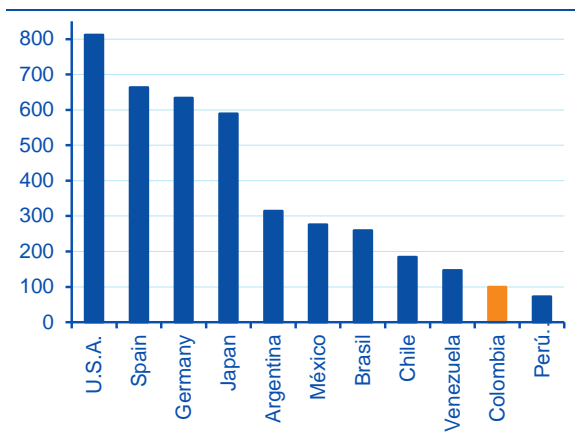
Even more so, the number of vehicles is positively correlated with a country's phase of development and Colombia is growing, with an expanding middle class. Countries such as the United States, Spain and Japan have over five times as many vehicles per head of population than Colombia.

The situation with motorcycles is only a little more favourable, with a penetration rate of 23.3% of households in 2014 (15.1% in 2008) compared to 13.5% (up from 12.4% in 2008) in the case of private cars¹⁴. Once again, the potential penetration differs by region. In Bogotá, 20.4% of households have a private car, in Valle del Cauca the figure is 18%, and in Antioquia it is 12.6%. Atlántico and Pacífico show a 7% and 6% respectively. In addition, of households throughout the country owning a motorcycle, 90.7% (89.5% in 2013) have just one. This percentage slides to 87.2% (85.6% in 2013) in the case of private vehicles.

The penetration figures may be a sign of the socio-economic gap between the countryside and the city, with penetration rates for private cars of 15.8% in urban households, against 4.8% in the country. However, when one looks at the figures for motorcycles, there is scarcely any difference between urban and rural areas, and such difference as there it goes in the opposite direction, with higher penetration in the countryside (24.5%) than in the city (23%). This could perhaps be because motorcycles are more useful in the country, but it is equally likely to be because households buy more cars than motorcycles as their incomes rise (see Box 1 in our 2012 Automotive Outlook).

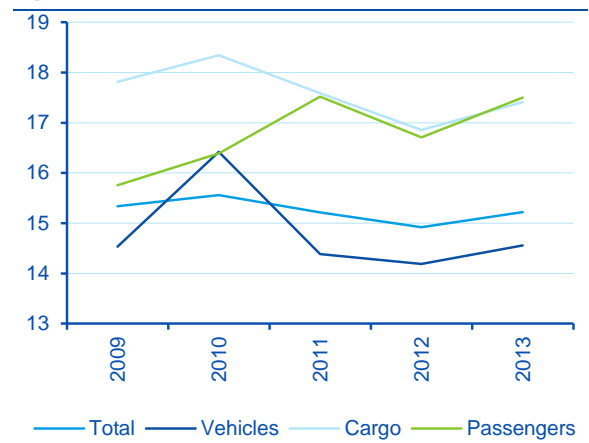
We believe that a faster rate of replacement of the country's automotive fleet is required. Between 2009 and 2012, the average age of a vehicle in Colombia merely edged down, from 15.3 to 14.9 years old (Figure 5.4). The need for renewal appears to be more urgent in the areas of freight and passenger transfer, with average vehicle ages of 16.9 and 16.7 years respectively.

Figure 5.3
Vehicle penetration index (number of vehicles per 1,000 inhabitants)



Source: Lubrita and BBVA Research

Figure 5.4
Age of the vehicle fleet in Colombia 2009-13



Source: Ministerio de Transporte and BBVA Research

14: 2014 Standard of living survey.

DISCLAIMER

This document has been prepared by BBVA Research Department, it is provided for information purposes only and expresses data, opinions or estimations regarding the date of issue of the report, prepared by BBVA or obtained from or based on sources we consider to be reliable, and have not been independently verified by BBVA. Therefore, BBVA offers no warranty, either express or implicit, regarding its accuracy, integrity or correctness.

Estimations this document may contain have been undertaken according to generally accepted methodologies and should be considered as forecasts or projections. Results obtained in the past, either positive or negative, are no guarantee of future performance.

This document and its contents are subject to changes without prior notice depending on variables such as the economic context or market fluctuations. BBVA is not responsible for updating these contents or for giving notice of such changes.

BBVA accepts no liability for any loss, direct or indirect, that may result from the use of this document or its contents.

This document and its contents do not constitute an offer, invitation or solicitation to purchase, divest or enter into any interest in financial assets or instruments. Neither shall this document nor its contents form the basis of any contract, commitment or decision of any kind.

In regard to investment in financial assets related to economic variables this document may cover, readers should be aware that under no circumstances should they base their investment decisions in the information contained in this document. Those persons or entities offering investment products to these potential investors are legally required to provide the information needed for them to take an appropriate investment decision.

The content of this document is protected by intellectual property laws. It is forbidden its reproduction, transformation, distribution, public communication, making available, extraction, reuse, forwarding or use of any nature by any means or process, except in cases where it is legally permitted or expressly authorized by BBVA.

This report has been produced by Colombia Unit

Chief Economist

Juana Téllez
juana.tellez@bbva.com

Fabián García
fabianmauricio.garcia@bbva.com

Mauricio Hernández
mauricio.hernandez@bbva.com

María Claudia Llanes
maria.llanes@bbva.com

Santiago Muñoz
santiago.munoz.trujillo@bbva.com

Interns:

Eugenio Camacho
eugeniojose.camacho@bbva.com

Mariana Toro
mariana.toro@bbva.com

BBVA Research

Group Chief Economist

Jorge Sicilia Serrano

Developed Economies Area

Rafael Doménech Vilariño
r.domenech@bbva.com

Spain

Miguel Cardoso Lecourtois
miguel.cardoso@bbva.com

Europe

Miguel Jiménez González-Anleo
mjimenezg@bbva.com

US

Nathaniel Karp
Nathaniel.Karp@bbva.com

Emerging Markets Area

Alicia García-Herrero
alicia.garcia-herrero@bbva.com

Cross-Country Emerging Markets Analysis

Alvaro Ortiz Vidal-Abarca
alvaro.ortiz@bbva.com

Asia

Le Xia
le.xia@bbva.com

Mexico

Carlos Serrano Herrera
carlos.serranoh@bbva.com

LATAM Coordination

Juan Manuel Ruiz Pérez
juan.ruiz@bbva.com

Argentina

Gloria Sorensen
gsorensen@bbva.com

Chile

Jorge Selaive Carrasco
jselaive@bbva.com

Colombia

Juana Téllez Corredor
juana.tellez@bbva.com

Peru

Hugo Perea Flores
hperea@bbva.com

Venezuela

Oswaldo López Meza
oswaldo.lopez@bbva.com

Financial Systems and Regulation Area

Santiago Fernández de Lis
sfernandezdelis@bbva.com

Financial Systems

Ana Rubio
arubiog@bbva.com

Financial Inclusion

David Tuesta
david.tuesta@bbva.com

Regulation and Public Policy

María Abascal
maria.abascal@bbva.com

Recovery and Resolution Strategy

José Carlos Pardo
josecarlos.pardo@bbva.com

Global Coordination

Matías Viola
matias.viola@bbva.com

Global Areas

Economic Scenarios

Julián Cubero Calvo
juan.cubero@bbva.com

Financial Scenarios

Sonsoles Castillo Delgado
s.castillo@bbva.com

Innovation & Processes

Oscar de las Peñas Sánchez-Caro
oscar.delaspenas@bbva.com

Contact details:

BBVA Research Colombia

Carrera 9 No 72-21 Floor 10th

Bogotá, Colombia

Tel: 3471600 ext 11448

E-mail: bbvaresearch_colombia@bbva.com

www.bbvaresearch.com