

AVIANCA HOLDINGS S.A.

TRANSPORTATION

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COMPANY REPORT

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Avianca on its way to old strength?

*But shrinking yields in a difficult environment lesson
the arising euphoria*

▪ The Airline industry struggles with declining ticket prices and strong competition. In 2015 passengers yields fell from 11.8 to 9.7 (in U.S. dollar cents) which could partly been offset by increasing passenger demand and a low oil price. However those effects were not enough to achieve a positive net profit in 2015.

▪ Moreover, within the first months in 2016, the stock of Avianca recovered 21.5% as the Colombian pesos appreciated slightly against the U.S. dollar and the oil price still remains on a very low level. Avianca presented Hernan Rincon as their new CEO and surprised with strong growth rates in passengers carried for the first months in 2016 (9.1% Y-o-Y.).

▪ If the latest recovery can be continued depends on the development of the oil price, as well as if Brazil, the biggest economy in South America can turn upward and strengthen the demand for passenger transportation.

▪ We see the fair value for Avianca at \$6.10, which indicates an upside potential of 18.5% to the current stock price of \$5.15. We believe the recent share price gives investors an opportunity to buy stocks of Avianca at a discount price to the real value of its current operations.

Company description

Avianca is a Colombian Airline that offers scheduled air passenger transportation services. The portfolio of Avianca ranges from domestic flights in South America to International flights to North-, and Central America as well as to Europe. Furthermore Avianca offers cargo transportation which accounts for roughly 14% of total revenues. The company was founded in 1919 and is headquartered in Panama City, Republic of Panama.

Recommendation: BUY

Price Target FY16: \$6.10

Price (as of 22-May-16) \$5.15

Reuters: AVH, Bloomberg: AVH:US

52-week range (\$) 3.40-13.15

Market Cap (\$m) 641.79

Outstanding Shares (m) 124.62

Source: Bloomberg



COLCAP vs. Avianca

Source: Bloomberg

(Values in \$ millions)	2015	2016E	2017F
Revenues	4361.3	4497.3	4791.3
EBITDAR	767	775	885
Net Profit	-139.5	50,3	112.0
EPS	-0,14	0.40	0.90
P/E	-	12.8	5.73
ROE	-10.2%	3.6%	7.6%
ROIC	4.0%	4.0%	5.0%
EBIT Margin	5.0%	4.7%	6.1%
Net Profit Margin	-3.1%	1.9%	4.0%
Debt/EBITDAR	6.8	7.0	6.52
Net (debt)	3168	3197	3452

Source: Company data, Bloomberg, Analyst's estimates

THIS REPORT WAS PREPARED BY FABIAN BLOCHER, A MASTERS IN FINANCE STUDENT OF THE NOVA SCHOOL OF BUSINESS AND ECONOMICS, EXCLUSIVELY FOR ACADEMIC PURPOSES. THIS REPORT WAS SUPERVISED BY SARA ALVES WHO REVIEWED THE VALUATION METHODOLOGY AND THE FINANCIAL MODEL. (SEE DISCLOSURES AND DISCLAIMERS AT END OF DOCUMENT)

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Executive summary

Investment Summary

The aviation industry is a huge market worldwide and about 1% of world GDP is spent on air transportation. In the last 20 years, costs for air transportation could be halved.¹ However because the airline industry is highly competitive, most of the cost reduction only favoured customers with lower fares. Although worldwide passenger transportation demand is increasing and low oil prices strongly benefited airlines in the previous years, it but could not prevent airline stocks to have a negative return (YTD: -8.53%).²

The stock of Avianca underperformed the industry (YTD: -45.9%), which is mainly because of the difficult economic environment in South America as well as the depreciation of the Colombian Peso. In 2015 Avianca reported a negative net income of U.S. dollar 139.5 million.³

Shrinking ticket prices are a huge threat for the profitability of the airline industry and low cost carriers, as well as open skie agreements⁴ intensify the competition. If Avianca can return to black figures in 2016 and afterwards will depend if the company can increase its operations and cut its costs at a higher speed than the decrease in ticket prices.

Figure 1: Avianca Guideline vs Forecast

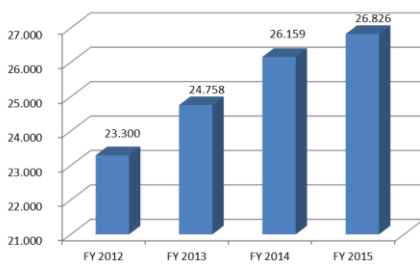
	Annual Report 2015	Avianca Guidance 2016	Analyst Estimate 2016
PAX growth	7,9%	3.0% - 5.0%	3,8%
ASK growth	8,4%	3.0% - 5.0%	3,1%
Load Factor	79,7%	78%-80%	79,0%
EBIT	5,7%	5.5% - 7.5%	4,7%

Source: Analysts Valuation Model

Company Overview

Avianca belongs to the leading airlines in Latin America and shipped more than **26 million passengers** in 2015. It operates a route network from its hubs in Bogota, San Salvador and Lima. Avianca offers flights to more than 100 destinations through domestic and international operations. Moreover, the airline offers **cargo services** through its flights, which are carried out through the bellies of aircrafts as well as through cargo planes. The company is headquartered in Bogota and is incorporated in Panama City. Its passenger operations are divided in 8 geographical segments, which are Colombia (domestic), Ecuador (domestic), Peru (domestic), Central America, Intra Home Markets, Europe, North America and South America. As it can be seen in figure 4, more than 50% of total passengers arise through domestic operations in Colombia. Followed by international flights to North America (14.05) and Central America (7.1%). Figure 2 shows the origin of Aviancas revenue, divided passenger and non passenger revenues. The share of non passenger revenues increased slightly in the past

Figure 2: Number of Passenger 2012-2015



Source: Avianca Annual Reports

¹ Source: IATA Economic Performance of the Airline Industry 2015 – End Year Report.

² Source: CSI Market; http://csimarket.com/Industry/Industry_Performance.php?ind=1102.

³ Which was mainly because of losses in foreign exchange of \$177.5 million (see chapter investment risk).

⁴ Agreements between countries and continents that reduce market entry barriers for foreign airlines in a country.

few years (2011: 16.1% vs 2015: 20.7%). It is expected that this trend is going to continue, which is mainly driven due to shrinking yields in the passenger segments and increasing capacity in the cargo fleet.

Figure 4: Distribution of Passenger among Regions and Revenues in US\$

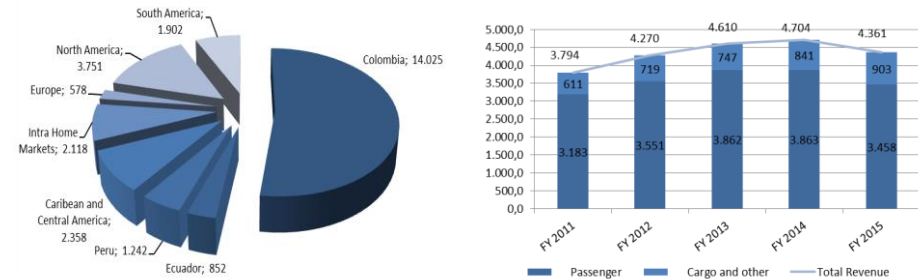


Figure 3: Flight Destinations



Source: Analysts Valuation Model based on Annual Report Avianca 2011-2015.

Avianca generates a relatively high percentage of non-passenger revenues, which makes the company less vulnerable to downturns in one segment. In order to strengthen its position in the cargo segment, Avianca acquired a minority position of AeroUnion, a small Mexican based company of cargo shipment in October 2014.

Another significant driver of revenue is the frequent flyer program Life Miles. In July 2015, Avianca announced to sell a 30% minority stake in **LifeMiles B.V** to Advent International for \$347.5 million. The transaction had a positive impact on liquidity and leverage and reduced the debt to EBITDAR by ~0.6x. Advent International has a long lasting experience in South America and is considered as the biggest private equity firm on the continent. We expect the corporation to bear fruits and give impulses to Life Miles, which recently stagnated in revenue growth.

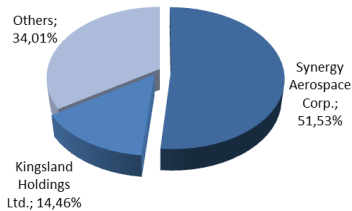
Lately, Avianca named former Microsoft Latin America president **Hernan Rincón** as their **new CEO**, replacing Alvaro Jaramillo Buitrago who served as an interim CEO after Fabio Villegas Ramírez stepped down in 2015. Hernan Rincón has served as CEO for Microsoft Latin America since July 2012, and was responsible for the long term business strategy of 46 countries. In most of which Avianca also operates. Due to its strong experience in Latin America, we expect Rincón to navigate Avianca well through its difficult business environment in the future.

In 2010 Avianca completed a **merger** with Salvador based airline **TACA**. The holding since then benefits from its increased network, stronger brand and synergies. Experts describe the merger to be very successful, which led to increased profits and an enlarged customer base. This merger drove the decision by LAN and TAN to create LATAM Airlines Group two years later, which is now

the leading airline in South America and Avianca's strongest competitor in many regions.⁵

Shareholder Structure

Figure 5: Shareholder Structure



Source: Avianca Annual Report 2015

Synergy Aerospace Corp. is the majority shareholder of Avianca. It holds 51.53% of its total outstanding shares.⁶ Synergy is an oil and aviation empire and is owned by Germán Efromovich a Brazilian entrepreneur. Synergy started acquiring shares in 2005, when Avianca was in bankruptcy proceedings. Furthermore Synergy acquires aircrafts in order to lease them to Avianca and TACA.⁷ Another significant shareholder is **Kingsland Holdings**, which holds about 14.46% of total outstanding shares. Due to a joint action agreement, Kingsland and Synergy hold a veto power over significant strategic and operating transactions.⁸ Kingsland is owned by the Salvadorian Roberto Kriete who is at the same time board member of the Mexican low-cost carrier Volaris. The airline focuses on central and north america. This is as well an important region for Avianca, as its revenue in north and central america combined make out of 30.3% of total revenues. Hence, Avianca and Volaris stand in direct competition in some routes. Because of the veto power that Kingsland hold, it is therefore not assured that actions will always be favorable for Avianca shareholders. Avianca Holding has 660.800.003 common shares and 340.507.917 preferred shares. Since 2011, the number of preferred shares has been increased continuously, whereas the amount of common shares has been decreased slightly. In average 161.804 shares of Avianca are traded daily, which ensures a high liquidity, and relatively low trading costs.

Regional Analysis

Domestic Markets

Colombia

Colombia is third largest economy in South America and its economy depends heavily on exports of petroleum, coffee and cut flowers. The drop in global economy prices has impacted the economy significantly. Its economy, the Colombian Peso depreciated by 56% against the U.S. dollar since 2014. In March 2016, the inflation hit 7.6%, which is the highest rate since October

Figure 6: Key Macro Data Colombia

12m. Ending	2014	2015	2016E
GDP growth	4,6%	3,1%	3,0%
Inflation	2,9%	5,0%	7,6%
Interest Rate	4,5%	5,8%	6,7%

Source: Trading Economics

⁵ As measured by total passengers carried in 2015.

⁶ It holds approximately 78.1% of its common shares. Source: (Avianca Annual Report 2014).

⁷ In the Airline Industry it is very common to lease aircrafts, rather than buying them, which is also the reason that EBITDAR is a better measure of profit than EBITDA.

⁸ Those transactions include: Mergers and consolidations, investments >\$30 million, the business plan and annual budget, capex > \$120 million and issuance of voting stock. Source: Avianca Annual Report 2014.

2008. Though, the worldbank forecasts gdp to grow by 3.0 and 3.3% for 2016 and 2017 respectively.⁹

Figure 7: Exchange Rate USD/COP



Source: Bloomberg

Looking at the number of carried passengers, Colombia is the biggest market for Avianca. In 2015, Avianca transported 14,0 million passengers through domestic flights in Colombia, which accounted for 52% of all carried passengers. \$948 million in revenue (27.4% of total revenue) has been achieved through passenger operations in Colombia. However, this is less than in 2014 (\$1.078 million), which is mainly because Avianca collects its ticket fares in Colombia in the local currency and the Colombian Peso depreciated strongly against the U.S. dollar. The devaluation of the currency can be observed by declining RASK (Revenue Available Seat Kilometer) from \$0.21 (2012) to \$0.15 (2015). However, the RASK is still on a relatively high level (\$0.15), which reflects that the Colombian domestic market is a very profitable and important segment for Avianca.

Figure 8: Key Data by Avianca for the Colombian Market from 2012 - 2016

12 Months Ending	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016E
Number of Passengers (in k.)	11.340	12.396	13.603	14.025	14.782
RPK (in mil. USD)	4.546	5.022	5.664	6.288	6.561
ASK (in mil. km)	5.675	6.472	7.309	7.879	8.305
RASK (in USD)	0,21	0,20	0,19	0,15	0,15
Total Revenue (in mil. USD)	959	1.008	1.078	948	1.010

Source: Analysts Valuation Model based on Annual Reports by Avianca

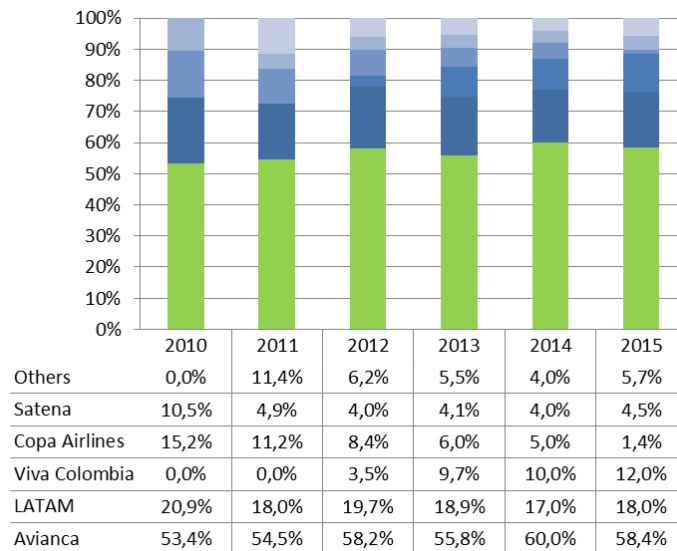
As it can be seen in the table, Avianca is the biggest player in Colombia. Within the last years, it could stabilize a market share at about 58%. The biggest competitor of Avianca in Colombia is **LATAM**, which until 2012 operated as LAN. LATAM is a merger of the airlines LAN (Chile) and TAM (Peru) and the biggest airline in South America with a fleet consisting of 310 aircrafts (Avianca: 194 aircrafts). In Colombia, they have a market share of 18%. However, in the last years the holding could not extend its market position in Colombia. A relatively new competitor in the Colombian market is **Viva Colombia**, which started its operations in 2012 and already has about 12% market share. Viva Colombia is a low cost carrier, founded by Viva Aerobus (Mexico), Bolivar Group (Colombia) and Ryanair. They follow a Ryanair-like model, which means that if luggage is needed or a seat wants to be reserved, it has to be paid separately. For people who do not need a a lot of luggage the offer therefore can be advantageous, as pure fares are lower. In a survey by Deloitte, 58% of the people stated that they do not see a significant difference in the service quality and would select the cheapest available option.¹⁰ Because of this mentality, low cost carriers gained substantial market shares in the last years. **Copa Airlines** (Panama) on the other

⁹ Source: World Bank; <http://www.worldbank.org/en/publication/global-economic-prospects/data>.

¹⁰ Source: Deloitte Report – Rising above the Clouds 2013.

hand lost significant market shares in the Colombian market. They used to hold about 15.2% in 2010, but meanwhile only play a minor role in Colombia (1.4%). However this is also a result of the group strategy to focus more on the international market. Copa Airlines claimed, that there is an irrational degree of competition in domestic markets.¹¹

Figure 9: Market Share for Colombia (domestic) between 2010 and 2015.



Source: Own illustration based on Annual Report Avianca 2012-2015 and Centre for Aviation

There are also a few bus companies, that offer trips between the bigger cities, such as from Medellin, to Bogota and Cali. Because the ticket prices for flights became much cheaper in the previous years, bus companies lost competitiveness. Furthermore, the road network in big parts of Colombia is not on a very good standard, which makes travelling by bus less comfortable. Therefore we see the threat through substitutes to be relatively low and believe that the airline industry can gain further market shares in the transportation industry in Colombia.

In Colombia it will be a challenge for Avianca to **hold its market share**, as Viva Colombia is strongly increasing its capacities. Colombia has an expanding middle class that Avianca estimated will represent 51% of the country's population in 2020, up from 31% in 2000.¹² Based on the analysis, we assume that Avianca will struggle to keep their market share at 58%, but they will still profit significantly from the increasing demand of air transportation in Colombia.

¹¹ Source: Centre for Aviation: <http://centreforaviation.com/analysis/colombias-aviation-market-poised-for-more-rapid-growth-in-2013-led-by-vivacolombia-avianca--lan-101354>.

¹² See Appendix 5.

Ecuador

In Ecuador, 58% of exports arise from crude oil and related products to oil. Conclusively, Ecuador has taken a hard hit by the oil price collapse and the GDP growth stagnated in 2015.¹³ Ecuador uses the U.S. dollar as functional currency, hence its currency does not devalue if the economy is in a recession. Therefore the country can not boost economic activity by printing money. Based on the economic situation, the World Bank estimates that the GDP of Ecuador will fall by 2.0% in 2016.

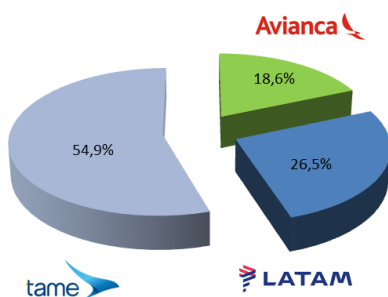
Domestic transportation in Ecuador is a relatively small market of Avianca as it accounts for only 3.3% of total carried passengers. As it can be seen in the table below, Avianca could not increase the number passengers carried since 2012 and was conclusively forced to reduce its capacities (ASK). Furthermore, the revenue per available seat kilometer is very low in Ecuador, which is very untypical for a domestic market. However it indicates a high competition and very low ticket prices.

Figure 11: Key Data by Avianca for the Ecuadorian Market from 2012 - 2016

12 Months Ending	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016E
Number of Passengers (in k.)	978	729	857	852	825
RPK (in mil. USD)	505	447	436	484	464
ASK (in mil. km)	630	576	563	607	587
RASK (in USD)	0,13	0,11	0,13	0,11	0,11
Total Revenue (in mil. USD)	67	50	58	51	50

Source: Analysts Valuation Model based on Annual Reports by Avianca

Figure 10: Market Share Ecuador



Source: Avianca Annual Report 2015

In Ecuador, Avianca operates as AeroGal, which was acquired by Avianca in 2012. The main competitors in Ecuador are LATAM and Tame Airlines. **Tame Airlines** is a Ecuadorian state airline and operates 19 routes to 15 destinations. It dominates the Ecuadorian domestic market and has about 54.9% market share. Because of low air fares, Avianca shifted capacity away from the domestic market in Ecuador. Conclusively the market share of Avianca decreased from 29.9% in 2012 to 18.6% in 2015.

Except of to the galapagos islands (13% of ASK in Ecuador), there is a high competition between airlines and **bus companies**. The most frequent route is from the capital Quito, to Ecuadors biggest city, Guayaquil. It accounts for 56% of ASK in Ecuador and can easily be reached within 8 hours by bus. Very low ticket prices are hard to competet with for airlines, as bus companies offer fares of about \$0,015/km. Avianca on the other hand offers its service for about \$0.105/km (RASK, see figure 11). Because of the clearly cheaper ticket prices,

¹³ Source: Trading Economics; <http://www.tradingeconomics.com/ecuador/exports>.

the short distances and the low purchasing power in Ecuador, we assume that the airline industry will lose further market shares in Ecuador.¹⁴

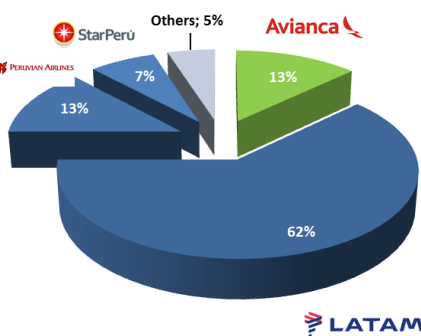
Based on a difficult economic environment, very low ticket prices, the dominant market power of the state airline Tame as well as the **strong competition** through bus companies, we believe that Avianca will reduce its domestic operations in Ecuador furtherly.

Peru

Peru is the seventh largest economy in South America with a strong service sector that stems about 60% of total GDP. The country will elect a **new president** on 5th June and it is expected that it will be Keiko Fujimori that has a reputation of being very market-friendly.¹⁵ The World Bank expects the GDP of Peru to grow strongly between 3.3% in 2016 and 4.6% in 2018.¹⁶ The outlook for Peru is therefore much brighter than for its neighbor countries, which is also because of being less dependent on the oil price.

Within the last years, Avianca could clearly increase its influence in the domestic Peruvian airline market. Since 2012, the capacity rose by 29.3%. Conclusively, Avianca increased its route network and passengers. On the other hand, Avianca could not enlarge its revenue, which can be blamed on increasing competition and therefore shrinking ticket prices. Figure 12 gives an overview about key data in the Peruvian market from 2012 to 2016.

Figure 12: Market Share Peru



Source: Avianca Annual Report 2015

Figure 13: Key Data by Avianca for the Peruvian Market from 2012 - 2016

12 Months Ending	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016E
Number of Passengers (in k.)	976	1.225	1.209	1.242	1.324
RPK (in mil. USD)	630	785	734	815	860
ASK (in mil. km)	787	1.012	947	1.021	1.088
RASK (in USD)	0,12	0,12	0,12	0,09	0,09
Total Revenue (in mil. USD)	75	93	85	75	81

Source: Analysts Valuation Model based on Annual Reports by Avianca

Based on the economic development in Peru, the market can be seen as one of the most promising in South America. Avianca has identified the possibilities and steadily increased its capacity by 29.7% in the last 4 years, becoming the 3rd largest airline in Peru after LAN and Peruvian. **Peruvian** is the 2nd biggest player, that launched its operations in 2009 and focuses primarily on domestic operations. **LAN** is a part of LATAM and market leader in Peru. They dominate 62% of the domestic market and have one of their main hubs in the Peruvian capital Lima.¹⁷ **Star Peru** completes the market, which however could not

¹⁴ Source: Ecuador Living: <http://www.ecuadorliving.com/2014/05/24/ecuador-purchasing-power-concerns.html>.

¹⁵ Source: Focus Economics; <http://www.focus-economics.com/countries/peru>.

¹⁶ Source: World Bank; <http://www.worldbank.org/en/publication/global-economic-prospects/data>.

¹⁷ Further main hubs are Santiago, Sao Paulo and Bogota.

increase its number of passengers in 2015 (-0.4%). Similar to Avianca, which ultimately could not significantly increase its number of passengers further and stagnated at about 1.2 million. This might be because of the very strong competition for market shares within LAN, Peruvian and Avianca.

Recently it could be observed that the strong competition resulted in lower ticket prices, which pressured the yield and operating margin of Avianca (RASK 2012 – 2015: -22.5%). However, we expect that Avianca is going to maintain its market share and will face the competition, as the market **outlook** in Peru is very **promising**.

International Markets

Caribbean and Central America

The Caribbean and Central American market is defined by operations between Belize, Cuba, Dominican Republic, Panama, Costa Rica, Guatemala, Honduras and Nicaragua. In Q4 of 2015, the economy in Central America and the Caribbean expanded by solely 2.8%, which is the smallest rate in the last 4 years. Especially the service sector in Panama underperformed compared to previous years. The region grew by 3.2% in 2015 and for 2016, a GDP growth rate of 3.1% is expected. However, for the future, experts believe that the region will grow faster than Latin America, which is also based on benefits from the recovery in the United States.¹⁸

In 2015, Avianca achieved 6.5% of total revenues through operations in Central America. Its carried passengers accounted for 2.358 million, which is about 8.8% of all passengers. It can therefore be considered as one of Avianca's most important markets. Total revenues fell from \$270 million in 2012 to \$225 million in 2015, which is mainly a result of declining ticket prices in the region. An other cause for concern is the extremely low load factor in 2015, that only accounted for 70.5% and is therefore clearly the lowest among the different geographic segments by Avianca. Avianca increased the seating capacity significantly from 2013 to 2015 (24.3%) but could merely increase the number of passengers (6.6%) in the same period. Hence, we assume that Avianca will shift excess capacities from Central America in order to achieve a load factor between 78% and 80%, which will ensure profitable operations.¹⁹

Figure 14: Destinations Central America



¹⁸ Source: Focus Economics; <http://www.focus-economics.com/regions/central-america>.

¹⁹ Break Even Load Factor of Avianca accounts for 75.1% in 2015, see Chapter "Load Factor".

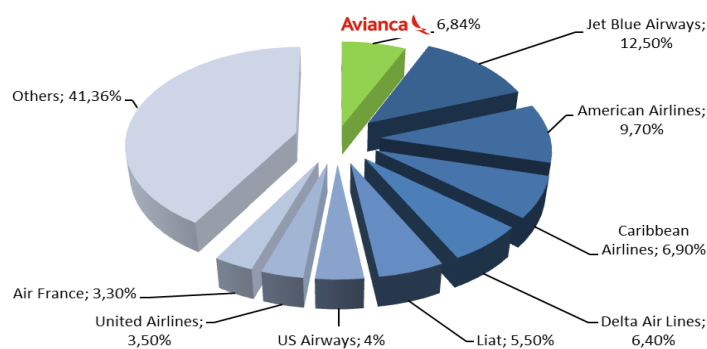
Figure 15: Key Data by Avianca for the Caribbean Market from 2012 - 2016

12 Months Ending	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016E
Number of Passengers (in k.)	2.205	2.211	2.300	2.358	2.510
RPK (in mil. USD)	1.776	1.843	2.016	2.027	2.417
ASK (in mil. km)	2.322	2.313	2.542	2.875	3.059
RASK (in USD)	0,15	0,15	0,14	0,11	0,11
Total Revenue (in mil. USD)	270	282	282	225	274

Source: Analysts Valuation Model based on Annual Reports by Avianca

As it can be seen in figure 16, the airline industry in Central America suffered significantly during the financial crisis, but could recover relatively quickly since then. In average it grew annually by 0.4% from 2005 to 2014.²⁰ The aviation industry in Central America & the Caribbean is less clearly than in the domestic segments. Unlikely to in Colombia, Peru or Ecuador, the market is not dominated by a few players that hold the majority of the market share, but the 7 biggest airlines in the region only hold about 50% of the capacity. Almost 42% of the market is dominated by airlines that individually hold less than 3%. **United Airlines** and **JetBlue Airways** showed strong growth rates between 2010 and 2014 by 548% and 82.9% respectively. Combined with **American Airlines**, the group can be identified as Aviancas core competitors in Central America. It can be observed that US airlines are aiming to increase their influence in Central America, whereas non-US airlines are also expanding into the US.²¹ US airlines see potential in the growing middle class, which enables more and more people to travel for exploration and to visit friends. Because many countries are on islands, there is a relatively low competition by substitute transportation, such as buses. Increasing demand for passenger transportation can therefore almost solely be overtaken by airlines.

Figure 17: Airline Industry Market Shares in Central America



Source: Routes Online²²

²⁰ Measured in ASK (Available Seat Kilometers).

²¹ See Chapter North America.

²² Source: Routes Online <http://www.routesonline.com/news/29/breaking-news/246845/data-what-are-the-fastest-growing-airlines-in-the-caribbean/>.

Based on this facts, we see the Caribbean and Central America to be a **key market**, where Avianca could potentially increase its market position significantly and profit from the growing economy in the region. On the other hand it is also a region that has been targeted by US carriers that belong to the biggest airlines in the world and have very strong financials.

Intra Home Markets

The home markets of Avianca exists of operations between Colombia, Ecuador, Peru, Salvador, Costa Rica, Guatemala. As it can be seen in the table, Avianca could continuously increase the capacity (ASK) in the segment by average 7.8% annually.

Figure 18: Key Data by Avianca for Intra Home Markets from 2012 - 2016

12 Months Ending	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016E
Number of Passengers (in k.)	1.786	1.971	2.070	2.118	2.210
RPK (in mil. USD)	3.037	3.241	3.435	3.650	3.912
ASK (in mil. km)	3.792	4.176	4.432	4.747	4.952
RASK (in USD)	0,11	0,12	0,11	0,09	0,09
Total Revenue (in mil. USD)	323	375	390	328	359

Source: Analysts Valuation Model based on Annual Reports by Avianca.

The Avianca Group currently has a 24% share of international flights from/to **Ecuador** and is just 3% behind the LATAM Airlines Group (27%). TAME, which is the leader for domestic operations in Ecuador, is a relatively small player regarding international flights (7%). Moreover, significant positions are hold by Americal Airlines (12%) and Copa Airlines (16%). Avianca is slightly weaker in international passenger markets serving **Peru**. There they hold 13% and are therefore far behind LAN Peru (32%), but ahead of Copa Airlines (5%) and American Airlines (4%).²³ ²⁴ Avianca recently announced to install a new route from San Andres (Colombia) to San Jose (Costa Rica) in order to strenghten its market position. In 2015, the market grew by 10.2% vs 2.7% by Avianca. Therefore, Avianca clearly underperformed the growth rate in the market, which account for 9.8 million passengers per year. Within its Home Segments, Avianca should pay attention to the low cost carrier Viva Colombia, that increased its international capacity to 300.000 seats in 2015 (Avianca: 4.7 million). **Viva Colombia** serves routes from Bogota to Lima, Quito and Panama City, which directly compete with Aviancas service. Their operations are so far not very profitable, as they only reached a load factor of 66% (Avianca: 79.5%), but the company still has some time to reach maturity and already demonstrated its

²³ Source: Centre For Aviation; <http://centreforaviation.com/analysis/avianca-market-share-in-ecuador-slips-as-domestic-operation-is-reduced-while-lan-and-tame-expand-128486>.

²⁴ Source: Centre For Aviation; <http://centreforaviation.com/analysis/perus-aviation-market-remains-on-a-sound-footing-despite-overall-weakness-in-latin-america-242952>.

ability in the Colombian domestic market to gain a high market share in a very short time.

Europe

Within Europe, especially the development of Spain and United Kingdom is relevant for Avianca, as the fleet approaches the cities Madrid, Barcelona and London. Europe faces a lot of challenges, such as the refugees that are streaming into the continent, the economic slowdown of its important trading partner China and a possible exit of the EU- member state Great Britain.

However, Europe is a very promising market for Avianca as they could boost the capacity from 4.134 ASKs to 6.746 in the last 4 years. Therefore carried passenger and revenues rose by 27.3% and 53.1% respectively.

Figure 19: Key Data by Avianca for the European Market from 2012 - 2016

12 Months Ending	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016E
Number of Passengers (in k.)	454	525	560	578	599
RPK (in mil. USD)	3.282	3.855	4.037	5.943	5.517
ASK (in mil. km)	4.134	4.753	5.169	6.746	6.983
RASK (in USD)	0,09	0,09	0,09	0,07	0,08
Total Revenue (in mil. USD)	288	336	379	441	419

Source: Analysts Valuation Model based on Annual Reports by Avianca

Recently in December 2015, members of the Schengen community eliminated the Visa requirements for Peruvian and Colombian citizen. This measure will allow more people to travel to Europe and will stimulate passenger traffic. However, leading European airlines, such as **Air Europa**, **Tap**, **British Airways** and **Iberia** already reacted and reduced ticket prices in order to overtake market shares. Though, Avianca responded by increasing the weekly frequencies from 3 to 5 in the route Cali-Madrid and from 4 to 7 in the route Bogota-London.²⁵ Particularly Iberia is considered as a direct and important competitor for Avianca, as the Spanish airline, similar to Avianca has daily flights from Bogota to Madrid and from Lima to Madrid.

We assume that Avianca will **increase** its **capacities** further to the European market in order to not miss the increasing passenger demand between the continents. Due to the increased capacity we expect the Load Factor to adjust from 88.0% in 2015 to 79% in 2016 and onwards. Furthermore, because of the lower ticket prices, we see the RASK on a low level between \$0.07 – 0.08\$ in the long run.

²⁵ Source: Avianca Annual Report 2015.

North America

The North American market is defined as United States, Canada and Mexico.

The economy of the United States is the biggest in the world and is expected to grow by 2.5% in 2016 and 2.4% in 2017.²⁶ In December 2015, The FED increased the interest rate the first time after 10 years, but recently announced that it will be very careful by increasing the interest rate further.²⁷

Figure 20: Key Macro Data USA

12m. Ending	2014	2015	2016E
GDP growth	1,5%	2,4%	2,5%
Inflation	1,6%	0,1%	1,0%
Interest Rate	0,25%	0,5%	0,5%

Source: Trading Economics

The North American market is crucial for Avianca, as it covers a population of nearly 530 million people. Almost one quarter of passenger revenues arise from international operations to North America (23.5%). Avianca maintains huge capacities from and to North America and is the largest foreign carrier in Miami, which from South America is seen as the most important destination in the United States (Avianca: 42 departures per week).

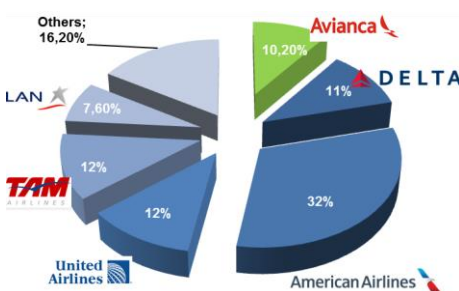
Figure 21: Key Data by Avianca for North America from 2012 - 2016

12 Months Ending	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016E
Number of Passengers (in k.)	3.467	3.519	3.659	3.751	3.862
RPK (in mil. USD)	9.195	9.710	10.063	10.976	10.848
ASK (in mil. km)	11.581	11.973	12.885	13.336	13.732
RASK (in USD)	0,10	0,10	0,09	0,08	0,08
Total Revenue (in mil. USD)	920	962	954	824	833

Source: Analysts Valuation Model based on Annual Reports by Avianca

In 2015, Avianca launched new routes from Bogota to Los Angeles and from Lima to Cancun. Moreover, Avianca announced that it will extend its operations to New York, starting from April 2016. Those measures go in line with the corporations strategy to continuously expand its capacity and market share in the region.²⁸ However, at the same time the routes are highly competitive and more airlines are trying to achieve higher market shares. First in line is **Viva Colombia**, that recently launched new routes from Bogota and Medellin to Miami. Although the market share of the low cost airline is still very low, it may increase its operations further, if the current routes prove to be prosperous. Besides the already strong competition with American Airlines, United Airlines and Delta, there is Jet Blue (currently 3.9% market share) that is planning a new international push into Central America, launched new operations between Bogota and Fort Lauderdale and could increase its seats by 19.4% in 2015.²⁹

Figure 22: Market Share North America



Source: Airline Leader.com

²⁶ Source: World Bank; <http://www.worldbank.org/en/publication/global-economic-prospects/data>.

²⁷ Source: ABC; <http://www.abc.net.au/news/2016-03-17/us-federal-reserve-scales-back-its-rate-rises/7253820>

²⁸ It will be operating 3 times a week, starting from April 2016. Source: <http://airlineroute.net/2016/02/17/av-bogjfk-s16/>.

²⁹ Source: Airline Leader; <http://www.airlineleader.com/categories/regions/latin-america-remains-a-bright-spot-for-us-airlines-216113>.

South America

In 2015 the region suffered a strong economic downturn. Brazil and Venezuela accounted for the lion share of the **recession** where its political leaders, Dilma Rousseff and Nicolas Maduro are claimed to be responsible. High inflation, increasing unemployment rate and shrinking GDP hit Brazil, which is the biggest economy in South America. Brazil as a part of the BRICS countries used to be named as one of the most promising economies in the world.³⁰

Within the South American market, **Brazil** is the most important country for Avianca, as operations to Brazil account for almost 50% of the capacity. Besides of Ecuador, South America is the only geographical segment of Avianca that could not increase the number of passengers since 2012 (-9.2%). Moreover, Avianca lowered its exposure to the oil rich country **Venezuela** where it cancelled the route to Valencia and reduced its operations to the capital Caracas to 4 flights per day.³¹ This decision was also based on the fact that the **inflation** in Venezuela is among the highest in the world.³² This led to strong losses in 2015, as Avianca had to depreciate a cash position that was hold in Venezuelan Bolivars (See Chapter Investment Risks).

Figure 23: Key Data by Avianca for South American from 2012 - 2016

12 Months Ending	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016E
Number of Passengers (in k.)	2.095	2.181	1.900	1.902	1.907
RPK (in mil. USD)	5.884	6.114	5.626	6.266	6.060
ASK (in mil. km)	7.411	7.539	7.204	7.651	7.671
RASK (in USD)	0,11	0,12	0,11	0,09	0,09
Total Revenue (in mil. USD)	643	761	641	566	559

Source: Analysts Valuation Model based on Annual Reports by Avianca

The market in South America, is mainly dominated by four players, which besides of Avianca are **TAM**, **Gol** and **Azul**. The Paraguayan airline Tam and the Brazilian Gol combined control about 72% of the market capacity. Avianca is a relatively small player, but could increase its market share slightly in 2015, achieving 9.4% vs 8.4% in 2014. Moreover, there is some hope, that the Olympic Games in Rio de Janeiro could boost the transportation demand in South America in 2016, but it proved to be very limited during the world cup 2014 in Brazil.³³

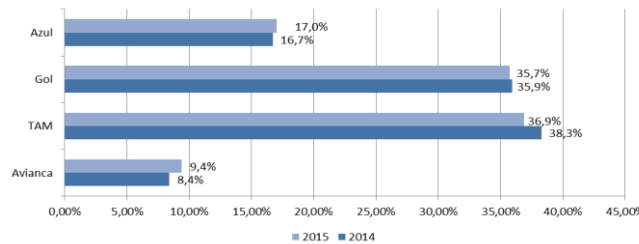
³⁰ Source: Focus Economics; <http://www.focus-economics.com/regions/latin-america>.

³¹ Source: Avianca Annual Report 2015.

³² Source: Financial Times; http://www.ft.com/fastft/2016/01/22/imf-sees-venezuela-inflation-at-720-this-year/?ft_site=falcon&desktop=true, Inflation in 2016 is expected to account for 720% according to the IMF.

³³ Source: Airline Leader ; <http://www.airlineleader.com/categories/regions/brazil-its-raining-on-their-parade-270310>.

Figure 24: Airline Industry Market Share 2014 vs. 2015 in Brazil



Source: Airline Leader³⁴

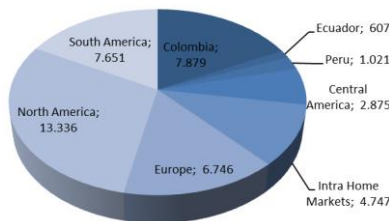
We assume that Avianca will be able to **maintain** its **capacities** and number of passengers in 2016. South America is a market with a lot of potential for the airline industry, that has not been exploited fully in the last 3-4 years. There is hope that the new Brazilian president Michel Temer could bring the Brazilian economy back on a grow path and that an increasing oil price could furthermore strengthen the economy of the upper South American countries (Venezuela, Ecuador, Colombia). Avianca gains 15.8% of its revenues in this region and we believe that this segment has the biggest potential for a positive surprise.

Key Drivers

Available Seat Kilometers (ASK)

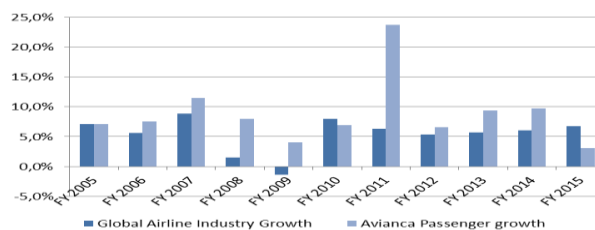
ASK is a measure of the **flight capacity** by an airline. It is the product of the number of seats available by the number of kilometers flown. In the previous years, the global airline demand grew constantly. Its revenues increased from US\$369 billion in 2004 to \$746 billion in 2014.³⁵ The diagram shows the yearly passenger growth rates of Avianca and of the global market between 2005 and 2015. Except during the economic crisis from 2008 to 2009, the growth was consistently above 5%. On the one hand, this trend was driven by globalisation and higher demand by business travellers. On the other hand, **less visa restrictions** and **lower ticket prices** enabled the **growing middle class** to travel for leisure and exploring.

Figure 25: ASK among Regions



Source: Avianca Annual Report 2015

Figure 26: Growth of Global Airline Industry vs. Growth of Avianca



Source: Avianca Annual Report & IATA

³⁴ Source: Airline Leader; <http://www.airlineleader.com/categories/regions/brazil-its-raining-on-their-parade-270310?nc=1>
³⁵ Source: PWC; <http://www.strategyand.pwc.com/perspectives/2015-aviation-trends>.

The pie chart adjoining illustrates the distribution of ASK (Available Seat kilometres) among regional segments in 2015. As it can be seen in figure 25, Avianca has its biggest capacities in North America (29.7%), followed by Colombia (17.6%) and South America (17.0%).

Load Factor

The load Factor indicates how many available seats in an airplane are occupied by paying passengers. It assesses how efficiently an airline fills its seats and generates revenue. In 2015, Avianca achieved a **load factor of 79.9%**. An important factor within the load factor concept is the break-even load factor. It is a percentage of seats that an airline has to sell at a given yield to cover its costs. In 2015 the **break-even load factor** of Avianca accounted for **75.1%**, which indicates that a positive EBIT can be achieved if at least 75.1% of the seating capacity is utilized by paying passengers.³⁶ Aviancas load factor spread in 2015 conclusively accounted for 4.8%. The higher the load factor spread the greater the EBIT. The average break-even load factor in the Latin American airline industry was 60.9% in 2015.³⁷ . If demand is low in one region, airlines tend to shift the offer to other routes in order to have an adequate load factor that can cover costs.

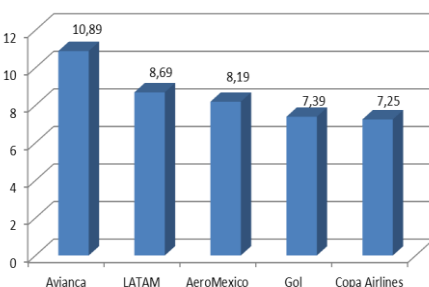
Figure 27: Load Factor- Avianca & Peers

Load Factor	Domestic	International
Avianca	80,2%	79,5%
LATAM	81,7%	83,3%
Viva Colombia	86,0%	66,0%
Copa Airlines	75,2%	75,2%

Source: Avianca Annual Report/Bloomberg

The average load factor for international operations by Avianca accounted for 79.5% in 2015. This is slightly below the industry average (80.6%)³⁸ but higher than the average value of its peers in South America (74.8%). As it can be seen in figure 27, domestic load factors tend to be higher than international load factors. Regarding the domestic load factor, Avianca underperforms its peers slightly 80.2% vs 81.0%. Avianca states to achieve a load factor in the long run between 78%-80%, which is line to our expectation of 79%.³⁹

Figure 28: RASK – Avianca vs. Peers



Source: Avianca Annual Report/Bloomberg

Revenue Available Seat Kilometer (RASK)

Revenue Available Seat Kilometer describes how much **revenue** can be achieved **per kilometer per seat**. It is determined by dividing total revenues by total available seat kilometers. The value is basically determined by how much customers pay for their tickets. It is a ratio that is widely used in the airline industry in order to compare different airlines by its **profitability**. LATAM, which is the biggest player in South America, reported RASK of 8.69 cents in 2015, vs. in average 10.89 cents by Avianca. As it can be seen in figure 29, RASK

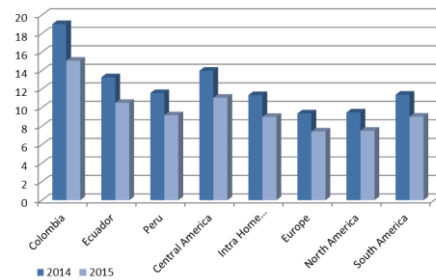
³⁶ This Factor includes solely passenger transportation and excludes revenues and costs through cargo and other segments.

³⁷ Source: IATA; Economic Performance of the Industry end year 2015.

³⁸ Source: International Air Transport Association; <http://www.iata.org/pressroom/pr/Pages/2015-12-10-01.aspx>.

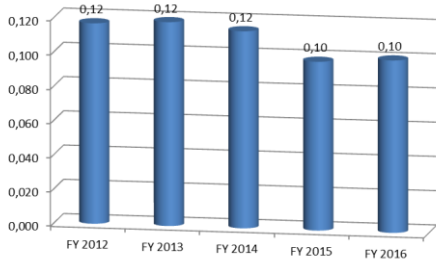
³⁹ Source: Avianca Annual Report 2015.

Figure 29: Avianca RASK among Regions



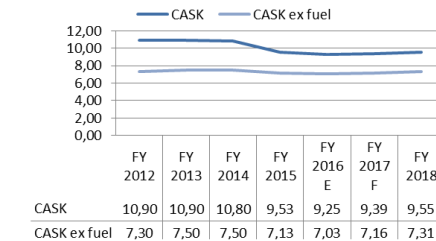
Source: Avianca Annual Report

Figure 30: RASK 2012- 2016



Source: Avianca Annual Report

Figure 31: CASK/CASK ex fuel



Source: Analysts Valuation Model

decreased among the regions, which was mainly because of a depreciation of the Colombian Peso against the U.S. dollar. Furthermore, increased competition that lead to shrinking ticket prices have been claimed to be a cause for the lower RASK. The diagrams also highlights that revenues per kilometer fluctuate over different segments. Domestic flights in Colombia, Ecuador and Peru tend to have higher revenues per kilometer than international flights to Europe or North America. The reasons are on the one hand a different extent of competition and on the other hand lower CASK (costs available seat kilometers) for longer flights due to economies of scale.

In the last years a trend in the airline industry has been observed which is a higher awareness and sensitivity to ticket prices and lower focus on extra services, such as extra luggage in the plane. This is especially notifiable in emerging markets where Avianca operates. That is also a reason for the success story of **low cost carriers** in the last years, which already control about 25% of the worldwide market. Especially in domestic flights, such as in Colombia, Ecuador or Peru, low cost carriers identified the customers wish to save money and do not include check-in baggage in the ticket price which therefore makes them optically cheaper.

Commodity and Utility Prices

Avianca is exposed to the volatility of commodities, such as to crude oil or **jet fuel**. It is an important factor for Aviancas profitability, as in 2015 aircraft fuel accounted for 25.2% of total costs. However because of declining oil prices, this share is currently relatively low and used to be at 33% in 2012. Absolute numbers in 2015 state that CASK (Total Costs Available Seat Kilometers) accounted for \$9.53 vs. CASK ex. fuel of \$7.13. The reasons for the decrease of the oil price are multifarious. On the one hand, demand from China is not as strong as it used to be. On the other hand, the supply remains on a very high level, as the **OPEC** is not finding an agreement to decrease the oil price. OPEC members, such as Saudi Arabia, Iran or Ecuador are afraid, if they lower the oil supply, non-OPEC members, such as the 2nd biggest oil producer Russia will take over market shares. Vagit Alekperov, a top Russian oil executive recently announced that there is very little chance of Russia ever agreeing to restrain output.⁴⁰ Another factor that will drive the oil supply is the sanctions on Iran which have been lifted on January 16th. As Iran has around 158 billion barrels of oil reserves the market is expected to be flooded by cheap oil. Based on the political and economic environment, we expect the oil price to remain at a low level.⁴¹

⁴⁰ Source: CNN; <http://money.cnn.com/2016/04/20/news/economy/russia-oil-opek-lukoil-alekperov/>.

⁴¹ Source: Vox; <http://www.vox.com/2015/7/14/8962651/oil-prices-iran-nuclear-deal>

In order to reduce its exposure to jet fuel price risk, Avianca enters into **derivative financial instruments** using heating oil and jet fuel. Avianca decided to hedge 100% of the expected fuel consumption from September to December 2015. A fixed price of U.S. dollar 42 for WTI has been achieved. Backwards looking, we can state that it was a wise decision, as the oil price averaged between 45 and 50 U.S. dollars.⁴² Furthermore the oil price is strongly volatile to extreme events. Therefore, using financial instruments will make the operating result more foreseeable and less risky.

Figure 32: Distribution of Operating Costs in 2015

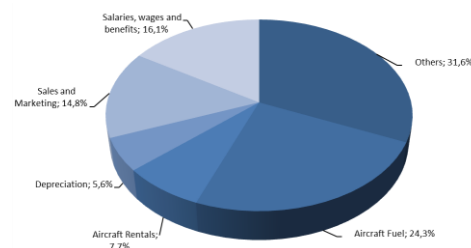
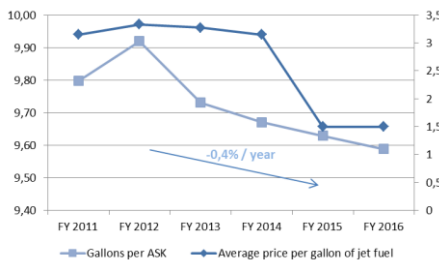


Figure 33: Fuel Consumption/Efficiency

Source: Analysts Valuation Model, based on Avianca Annual Report 2015.



From 2017 to 2019, Avianca is planning to put 33 new airplanes of the type A320neo into operation. They promise to consume 15% less fuel than the existing A320 family. Hence, we expect Avianca to increase its **fuel efficiency** by 0.4% y-o-y for the whole fleet.⁴³ Based on this assumption we assume, that consumption of gallons per ASK can be reduced from 9.63 in 2015 to 9.43 gallons per ASK in 2020 (see figure 33).

Source: Avianca Annual Report

In 2015, Avianca successfully reduced the number of **fleet families** from 9 in 2010 to 4. This measure will reduce crew and staff training costs as well as lower expenses for maintenance.⁴⁴

Valuation

Valuation Methodology

In order to evaluate a fair price for Avianca, an Adjusted Present Value Analysis (**APV**) and a Discounted Cash Flow (**DCF**) analysis have been performed. Furthermore, the results reliability has been verified by comparing with **multiples** of a selected peer group.

APV is not as commonly used as DCF, but it is advantageous over DCF if a company operates in an emerging market, as it is the case for Avianca. On the

⁴² Avianca used a Call- Option and hedging expenses between U.S. dollar 5 million and 7 million accrued. See Appendix.
⁴³ 0.4% is the average increase of efficiency from 2011 to 2015.
⁴⁴ Source: Avianca Annual Report 2015

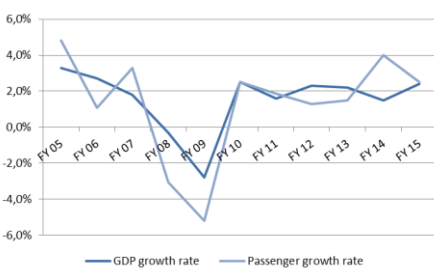
one hand, no fixed debt ratio is needed, as the firm is valued without consideration to its leverage, also tax shields are calculated by discounting actual period by period tax savings. Moreover, it is not necessary to assume a constant corporate tax rate.⁴⁵ Furthermore it is easier to track down where the value comes from and it is more flexible by adding other effects, such as costs of distress.⁴⁶

Firstly we broke down the company in the eight different geographic segments of passenger transportation as well as forecasting separately cargo transportation and other non-passenger revenues. We believe that due to different operating margins in the segments, as well as different economic expectations, a more realistic value can be achieved by separating the segments. All forecasts are strongly based on existing macroeconomic expectations. Besides, the valuation has entirely been performed in US\$, as it is the functional and reporting currency of Avianca.

Total Revenues

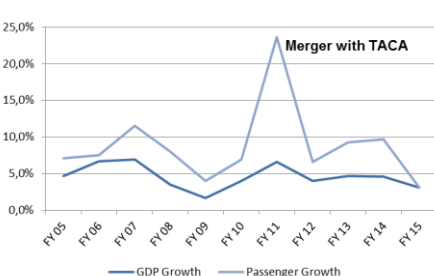
Initially we look at **passenger revenues**: the revenue depends on the number of passengers and how much a passenger pays for its flight. In order to estimate the passenger growth we looked at the growth rate of GDP. The real GDP growth rate is adjusted for inflation and takes into account the growth of population in a country. As it can be seen in figure 34, there is a high **correlation** between the **GDP growth rate** and the growth in **number of passengers**. For Europe and North America, we therefore assume that the growth in passengers will be equal to the growth in GDP. However, this assumption does not hold for the developing markets in which Avianca operates. As it can be seen in figure 35, the airline industry grew much faster than the GDP. Based on an analysis of the correlation in the last 10 years, we observed that the airline industry grew in average **1.7 times** faster than GDP. Therefore we assume that passenger demand in developing countries will keep increasing 1.7 times faster than the GDP growth rate (this factor has been tested for sensitivity – see chapter scenario analysis). Based on the regional analysis in the previous chapter and the competition that Avianca faces, we made different scenarios, according to which we believe if Avianca can decrease, increase or sustain its market share in the respective region (for Details see Appendix 7). Based on this forecast, we expect that passenger demand will growth by 3.8% in 2016, which is within the guideline of Avianca (3%-5%).

Figure 34: Correlation Demand & GDP - Developed Market



Source: IATA & Avianca Annual Report

Figure 35: Correlation Demand & GDP - Developing Market



Source: IATA & Avianca Annual Report

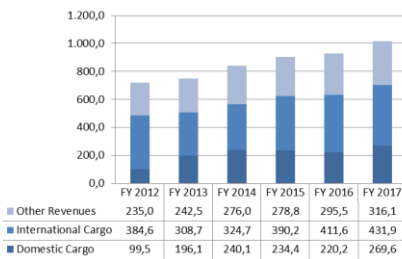
⁴⁵ Source: Jaime Sabal, WACC or APV- The Case of Emerging Markets.

⁴⁶ Source: Finance Theory II (2003), Dirk Jenter.

As already mentioned in chapter “**Load Factor**”, we assume the load factor to remain stable at **79%** (Avianca guideline 78%-80%), which indicates that ASK and number of passenger’s grow at the same pace. We believe this assumption to be realistic, as Avianca has the possibility to adjust its capacities according to passenger demand. To obtain the total revenue per segment, it is necessary to forecast RASK. As already explained previously, RASK determines how many revenue per available seat kilometer can be achieved. We cautiously believe that Avianca cannot increase ticket prices stronger than by the inflation rate.⁴⁷

Moreover we analysed **non passenger revenues**, which mainly arise from cargo revenues and the frequent flyer program Life Miles. In order to forecast cargo revenues, we assumed the cargo load factor to remain stable at 60%, this is in line to a varying load factor between 63.9% in 2011 and 59.1% in 2015. According to a press release of Avianca, the company will continuously improve its cargo segment by adding the A330F aircraft to its fleet. It is able to carry 40% more **cargo capacity** than previous cargo fleets.⁴⁸ Based on forecasts of Boeing, the cargo segment in South America is expected to increase between 4.8% (Latin America-Europe) and 5.2% (Latin America-North America) y-o-y (measured in ATK- Available ton kilometer).⁴⁹ Because of the modernization in the fleet of Avianca, as well as the fact of having a cargo network hub in Bogota, we conservatively believe that Avianca will be able to **increase** its cargo **capacity** by **4.5% annually** in the next years.⁵⁰ The largest competitors with respect to international cargo operations are LATAM and Centurion Air Cargo. Within the peer group of Avianca, the average load factor accounted for 42.4% in 2015, which is a sight for big excess capacities in South America. We assume that Avianca will not be able to increase cargo prices stronger than by the inflation rate. The share of domestic cargo revenue to international cargo revenue is assumed to remain stable at 0.54. Chart displays the evolution of revenues from 2012 to 2017F.

Figure 36: Cargo Revenues



Source: Avianca Annual Report 2015

Operating Expenses

Accordingly we had to forecast the costs, which we broke down in 11 different cost categories.

We expect further **operating expenses**, such as for flight operations, ground operations, air traffic and aircraft rentals to growth at the same pace like ASK. Therefore we calculated the average share that these costs had in relation to

⁴⁷ Inflation of U.S. dollar has been taken, under the assumption that a higher inflation in other currencies would cancel out with depreciation in the exchange rate.

⁴⁸ Cargo operations are carried out by Tampa Cargo S.A.S which is a 100% Subsidiary of Avianca based in the US.

⁴⁹ Source: World Air Cargo Forecast; Boeing; Forecast 2013-2033 in Latin America-Europe

⁵⁰ Source: Export.gov; <http://www.export.gov/industry/aerospace/aerospaceresourceguide/colombia088797.asp>. The airport El Dorado in Bogota is the busiest airport for cargo transportation in South America.

ASK. Next we used a moving average of 4 years to forecast the costs. **Sales and Marketing** however is expected to grow with revenue, Avianca pays a commission of about 13.0% to intermediates for the sale of their tickets.⁵¹ Also we expect the **salaries** of Avianca's employees to grow by a moderate pace of 3.75% annually. Besides, we assume the number of employees that will be needed for operations to grow slightly between 2.47% and 2.54% per year in the long run.

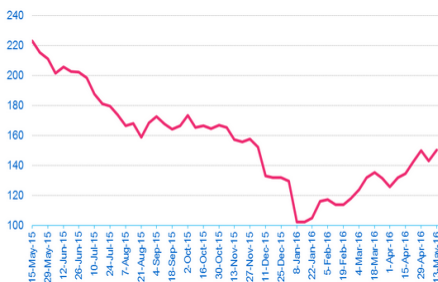
According to a press release on 3rd of May, Avianca will reduce its **CAPEX** by about 50%. This reduction will start in 2016 and shall last at least for 3 years. In order to make this reduction possible, we assume that Avianca will hold a stable ratio of 105.5% (Property, Land and Equipment vs Total Revenues) in the following years.⁵²

Moreover, **depreciation** is expected to be 4.5% per year of depreciable assets, which is in line to historical observations. Costs for maintenance and repairs depend on the number of aircrafts, which we forecasted accordingly to the order book of Avianca.

As already explained previously, a very important cost factor is **jet fuel prices**. It makes out for about 25.2% of total costs. The price depends heavily on where the fuel is being bought, which makes it very difficult to forecast. Prices range from \$2.07 in Bogota to \$1.29 per gallon in Sao Paulo.⁵³ We expect Avianca to achieve an average purchasing price of \$1.52 per gallon throughout the year.

Moreover, we base this assumption on the fact that the average jet fuel price in 2016 is on a similar level as it was in 2015. The development of the jet fuel price can be seen in figure 37.

Figure 37: Jet Fuel Price 2015 - 2016



Source: IATA

Based on revenues and costs, the income statement, cash flow statement and balance sheet have been forecasted. Forecasted operating cash flows, cash flows to the firm, as well as the capital structure are significant for the following valuation.

Discounted Cash Flow (DCF) and WACC

In order to obtain a value through DCF, it is necessary to identify an appropriate discount rate. Therefore we used the weighted average costs of capital (WACC).⁵⁴

WACC

⁵¹ Average marketing costs divided by total revenues of the previous 5 years.

⁵² 105.5% is based on the value for December 2015.

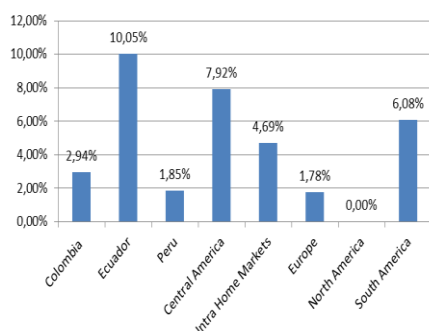
⁵³ Source: Aeroportos; <http://aeroportos.weebly.com/fuel-prices.html#.VyQSpkZuORg>.

⁵⁴ Formula: $WACC = \frac{E}{D+E} K_e + \frac{D}{D+E} K_d (1 - \tau)$

CAPM

Rf	1,7%
Beta	1,06
Country Risk	3,2%
Mature Market Risk	6,3%
Equity Risk	9,5%
Cost of Equity	11,8%

Figure 38: Country Risk Premium



Source: Stern NYU

Cost of Debt

Spread	4,5%
Risk free Rate	1,7%
Rating S&P	B
pre tax cost of Debt	6,2%

WACC 2016

Cost of Debt	6,2%
Share Debt	79,3%
Cost of Equity	11,8%
Share Equity	20,7%
Tax Rate	0,25
WACC	6,6%

WACC exists of the **costs for debt** and for **equity**. Firstly we estimated the costs for equity which we determined with the CAPM. Initially we had to estimate a **risk free rate**, which brings up the problem of the absence of long-term default free bonds in Colombia. However, based on the facts that it is a valuation of an ADR, the U.S. dollar is the functional currency of Avianca and we forecasted cash flows with inflation of the U.S. dollar it is justified to use the risk free rate for the USA. Therefore we followed the rule that the inflation rate in cash flows and in the discount rate has to be the same.

Avianca operates in a region with high growth that is accompanied with significant macroeconomic risk. As we did not include the risk in the risk free rate, we had to include it separately in a **country risk premium**. As it can be seen in figure 38 we multiplied the different country risks with its market shares in Aviancas operations.⁵⁵ Therefore we come up with a country risk premium of 3.23%. Furthermore we added the **mature equity market risk** that accounts for 6.25% in a mature market such as the airline industry. Additionally we obtained a **Beta** by running a regression of daily market returns of Avianca (AVH) against the S&P500 for the last 2 years. According to the Beta, Avianca is slightly more volatile than the market (1.06). Therefore we obtain cost of equity of 11.8%.⁵⁶

Additionally, cost for debt had to be calculated, which we obtained by the sum of the **spread** (4.5%) and the **risk free rate** (1.7%). The size of the spread is due to the Rating of Avianca (B). Conclusively we obtain costs of capital of 6.6% for 2016. As we did not assume the debt/equity ratio to stay stable over time, we furthermore forecasted the WACC y-o-y. The US inflation rate is expected to account for 1.7% in the long run. However, based on a conservative and careful approach we assumed the infinite growth rate to be at 1.2% after the forecasting period of 10 years.⁵⁷ Furthermore the value of the corporation has been tested for its sensitivity to changing assumptions of the infinite growth rate (see chapter scenario analysis).

Adjusted Present Value (APV)

Moreover we evaluated the operations of Avianca with APV, which has already mentioned can be advantageous to DCF in emerging markets. APV is a method to value a company as if it were all-equity financed without consideration of its leverage.

⁵⁵ Based on Revenue; the Country Risk Premium is based on relative equity volatility by provided by Stern.nyu and is based on the default spread for the countries.

⁵⁶ $R_e = R_f + \beta[R_m - R_f + CRP]$

⁵⁷ Further details regarding the valuation, see chapter Scenario Analysis.

Levered Beta	1,06
Market Debt / Equity	3,6
Risk free rate	1,7%
Risk Premium	9,5%
Unlevered Beta	0,29
Unlevered costs of Equity	4,43%

Firstly we unlevered the Beta (1.06) with the market debt/equity ratio of 3.6. Conclusively the **unlevered beta** accounts for 0.29. The CAPM results in 4.43% which serves as discount rate for cash flows to the firm.⁵⁸ Discounting those cash flows resulted in a value of unlevered firm in the amount of \$3046.2 million.

Furthermore we added the **tax shields** which Avianca is assumed to gain throughout the years. They have been calculated by multiplying the tax rate with the costs of debt and the appropriate interest bearing debt of each year. Additionally those tax shields have been discounted by the cost of debt.

Moreover it is necessary to subtract **costs for bankruptcy** from the value of the levered firm. We estimate that in case of bankruptcy, 50% of the value can be recovered. According to S&P, 26.4% of firms with a B- Rating have been defaulted in a time horizon of 5 years. Based on these assumptions we obtain costs for bankruptcy of \$402.1 million.

Default Rates S&P

Rating	Rate
AAA	0,0%
AA	0,3%
A+	0,4%
A	1,4%
BBB	2,3%
BB	12,2%
B+	19,3%
B	26,4%
CCC	46,6%
CC	65,0%
C	80,0%
D	100,0%

Scenario Analysis

In order to test for the sensitivity of the stock price, a sensitivity analysis has been performed. Three key factors have been identified that have a strong influence on the value of Avianca Holdings. Firstly to mention, there is the (1) **infinite growth rate**, which determines how Avianca is going to growth after the forecasted period. For the normal case we assumed a conservative value of 1.2%, which is below the target inflation rate of the U.S. dollar. As it can be seen in the table, it still has a strong influence on the stock price although we took already minimized the effect by taking a forecast period of 10 years.

	Worst Case	Bad Case	Normal Case	Good Case	Best Case
Infinite Growth Rate	0,80%	1,00%	1,2%	1,40%	1,60%
Stock Price in US\$	4,17	5,24	6,44	7,80	9,35

Source: Analysts Valuation Model based on Valuation by APV.

Another important factor is the (2) **Load Factor** of Avianca, which is based on customer demand and is crucial for the profitability of the company. The higher the load factor the greater the profit. As it can be seen in the following table, the company's value is highly sensitive to the load factor. This is because, higher utilization can almost be considered as pure profit, as the marginal costs for an additional passenger in the airline industry are very low.

	Worst Case	Normal Case	Best Case
Load Factor	78,5%	79,0%	79,5%
Stock Price in US\$	3,71	6,44	9,17

Source: Analysts Valuation Model based on Valuation by APV.

⁵⁸ In contrast to DCF, where we used operating free cash flows, we used free cash flows to the firm for the evaluation of APV. The difference is the non-operating free cash flow that adjusts the operating free cash flow by financing activities.

Moreover, the (3) **oil price** has been tested regarding its influence on the stock price of Avianca. Fuel expenses account for 25.2% of Aviancas total costs. Its development is therefore fundamental for the value determination of the company. As it can be seen in the table, an increase between 2-4% has a significant impact on the value of the corporation.

	Worst Case	Bad Case	Normal Case	Good Case	Best Case
Oil Price In US\$/Gallon	1,56	1,54	1,52	1,5	1,48
Stock Price in US\$	3,37	4,90	6,44	7,98	9,51

Source: Analysts Valuation Model based on Valuation by APV.

Furthermore we tested for sensitivity of the exchange rate (Colombian Peso vs. U.S. dollar). However, due to the fact that Avianca currently has a similar ratio of expenses denotiated in U.S. dollar (68.0%) and revenues denotiated in U.S. dollar (64.2%), the total effect on the profit of Avianca is relatively low (Colombian Peso/US Dollar 2500 effect on EBIT \$-41.8). Avianca prices fares in other currencies according to the exchange rate to the U.S. dollar, which lowers their exposure to currency risk. Indeed it can harm the competitiveness, as flights of Avianca becomes more expensive if the Colombian Peso depreciates (see appendix 9 and 10 for more details).

	Stronger Peso	Current Exchange Rate	Weaker Peso
Currency Risk Analysis			
U.S. Dollar / Colombian Pes	2500	3050	3600
effect on EBIT	-550,0	0	550,0

Moreover a scenario analysis has been performed in order to value the company based on three different scenarios and see how its value fluctuates if several indicators together move into one direction. Under a risk averse approach, we value the worst case scenario of the company with a greater probability (15%) than the best case scenario (10%). Moreover possible changes in passenger growth was taking into account. Furthermore, we took an average of the results, achieved through DCF and APV valuation. In Conclusion we achieve a target stock price of 6.10, that indicates an upside potential of 18.5% to the current stock price (see following diagram for details)

Figure 39: Scenario Analysis

Assumptions	APV			DCF		
	Bad Case	Normal Case	Good Case	Bad Case	Normal Case	Good Case
Infinite Growth	1,1%	1,2%	1,3%	1,1%	1,2%	1,3%
Oil Price	1,54	1,52	1,48	1,54	1,52	1,48
Passenger Growth	2,5%	3,8%	5,1%	2,5%	3,8%	5,1%
Load Factor	78,5%	79,0%	79,5%	78,5%	79,0%	79,5%
Scenario Analysis						
Weights	15%	75%	10%	15%	75%	10%
Stock Price	3,82	6,44	10,14	2,08	5,89	10,47
Target Stock Price		6,42			5,78	
<u>Average of APV/DCF</u>						
Target Stock Price	6,10					
Current Share Price	5,15					
Return	18,4%					
Recommendation	BUY					

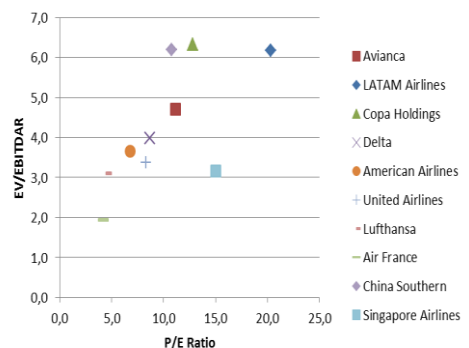
Source: Analysts Valuation Model.

Multiples

In order to verify the results, a multiple analysis has been performed. The current P/E-Ratio and EV/EBITDAR account for 12.8 and 4.7 respectively. Therefore, Avianca is slightly undervalued to its global peers, which have a P/E-Ratio of 12.8 and EV/EBITDAR of 5.4 (see appendix for whole table). Based on our forecast and target price for Avianca, a P/E-Ratio of 14.1 and EV/EBITDAR of 5.2 is implied. Avianca would therefore be slightly more expensive than its global peers regarding P/E and slightly undervalued regarding EV/EBITDAR. Comparing the target ratios to its direct competitors in South America Avianca is still underprized. Bearing in mind that Avianca has a lower exposure to the struggling market Brazil than its local peers and considering the fact that Avianca operates in a market that is growing faster than of its peers in Europe and North America, we believe that our target price of \$6.10 is justified.

Figure 40: Multiple Analysis by Region **Figure 41: P/E and EV/EBITDAR**

Airline	P/E Ratio	EV/EBITDAR	EBITDAR Margin
Avianca (Actual)	12,8	4,7	27,0
Avianca (Target)	15,1	5,1	17,2
LATAM Airlines	20,3	6,2	31,0
Copa Holdings	12,8	6,3	25,8
Peer Group in:			
South America	16,5	6,2	28,4
North America	9,0	4,0	32,1
Europe	8,1	5,3	25,2
Asia	12,2	5,2	34,7
Global Average	12,8	5,4	29,3

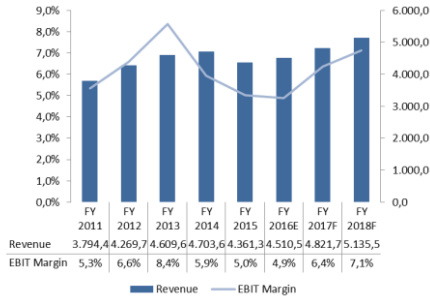


Source: Analysts Valuation Model, based on Bloomberg

Financial Analysis

Profitability Ratios

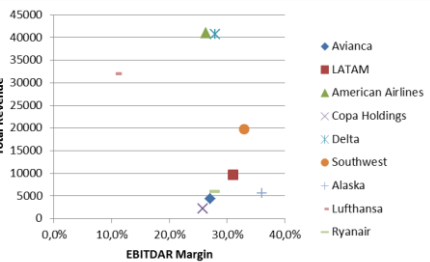
Figure 42: Revenue & EBIT Margin



Source: Analysts Valuation Model

Resulting from our financial forecast, we expect Avianca to achieve an **EBIT margin** of 4.7% in 2016. This estimation is close to the guidance of Avianca (5.5%-7.5%) and slightly below the EBIT margin of 2015 (5.7%). According to IATA (International Air Transport Association), the average **net profit margin** in the worldwide aviation industry will account for 5.1% in 2016.⁵⁹ We assume that Avianca will underperform the industries average ending up with a net profit margin of 1.9% for 2016. The **ROIC** of Avianca in 2015 accounted for **4.0%** which we expect can be increased to 5.0% in 2016. The **EBIT** is assumed to remain at a similar level compared to the previous year (\$209.2 million in 2016 vs \$218.8 million in 2015). However the ROIC of Avianca still relatively low compared to >8% average in the airline industry worldwide. The airline industry is typically very intensive in capital, so it is very common that profitability ratios, such as ROI or ROA are very low. For 2016 we forecast **ROA** to be **0.9%**. However the information value of ROA in the airline industry is not very strong, as the invested capital depends heavily on how many planes are actually hold in assets and how many are leased. Therefore it is important to analyse **EBITDAR**, which adjusts the earnings by costs for aircraft rentals. As it can be seen in the scatter, the EBITDAR margin of Avianca (27.0%) in between its peers (LATAM: 31.0%, Copa Airlines: 25.8%). Because the costs of capital (6.64%) are higher than the Return on Invested Capital (4.0%), Avianca achieves a negative **EVA** throughout the years (U.S. dollar-126 million in 2016).

Figure 43: P/E & EBITDAR Margin



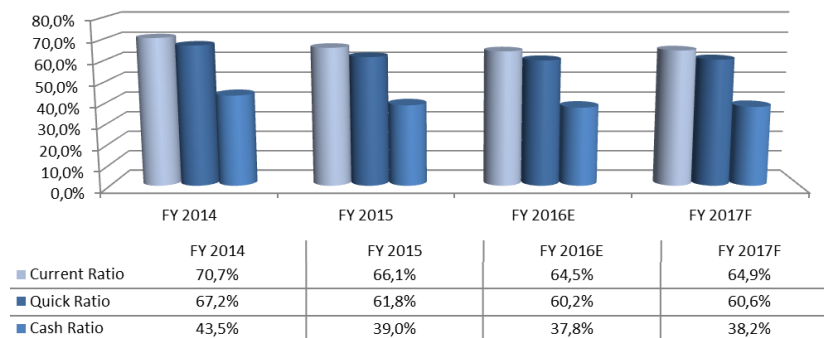
Source: Bloomberg

Coverage Ratios

The diagram shows current ratio, quick ratio and cash ratio of Avianca from 2014 to 2016E. **Current Ratio** measures the ability to pay off its short-term liabilities with current assets. Acceptable ratios are usually between 1 and 3. The greater the ratio, the more capable is a company to pay its obligations. Avianca has a low current ratio of **0.66** in 2015, which results in the need of depreciating a significant cash position hold in Venezuelan Bolivars in 2015. Furthermore it is very common in the airline industry that short term accounts payable tend to be higher than short term accounts receivable. This is because in average, Avianca collects its accounts receivable already after 25.3 days vs. paying its accounts payable only after 61.2 days. Therefore we do not see the coverage ratios of Avianca to be critical.

⁵⁹ Source: International Air Transport Association; <http://www.iata.org/pressroom/pr/Pages/2015-12-10-01.aspx>.

Figure 44: Liquidity Ratios

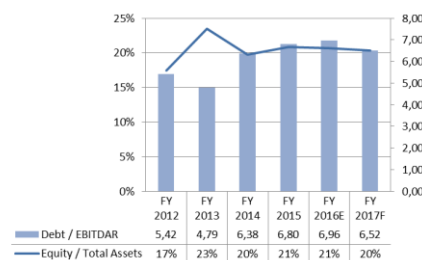


Source: Analysts Valuation Model based on Annual Report Avianca 2014 – 2015.

Because of the above explained fact that current liabilities are higher than current assets, Avianca has a negative **working capital** of \$ -319.3 million in 2015. A negative working capital improves the cash flow from financing and gives Avianca the opportunity to use the funds to finance its operating activities. Within the concept of working capital, we assume that 7% of revenues can be used as operating cash. For the future, we expect Avianca to maintain a relatively low current ratio within a range between 0.65 and 0.71.

Leverage Ratios

Figure 45: Debt/EBITDAR Equity/Assets



Source: Analysts Valuation Model

The adjoining diagram shows the evolution of the leverage of Avianca from 2012 to 2017F. Over time, Avianca remained a relatively stable Equity/Assets ratio, pending between 17% and 21%. We expect that Avianca will hold the leverage stable, and targets to hold 20% and 25% of total assets in Equity in the long run. This indicates a **debt/equity ratio** of 3.8 in 2015, which is slightly above LATAM (3.0).⁶⁰ However, in 2015 **Debt/EBITDAR** reached a relatively high value of 6.8x. If Avianca did not sell a 30% stake of LifeMiles in July 2015, this value could even be about 0.6 points higher. Reasons are a lower EBITDAR and at the same time an increasing debt. For 2017 we expect that Avianca will be able to return to a leverage of 6.5, which is close to the level in 2014. On May 3rd, Avianca gave out a leverage target of net debt to EBITDAR of 5.0x. It is intended to be achieved 2019, which is confirmative to our forecast of leverage between 4.8x and 5.4x in the long run. Furthermore, we assume that the ratio between short term and long term debt will remain stable over time at about 11.9%.

Company Ratings

Changes in corporate ratings can influence a company’s value significantly, as a downgrade could increase the difficulty to issue debt and additionally makes it

⁶⁰ Debt/Equity Ratio of LATAM, Source: Yahoo Finance: <https://finance.yahoo.com/q/ks?s=LFL>.

more expensive. Therefore it is worth to keep an eye on the actions of rating agencies.

Recently on March 24th, **Fitch** has announced that it would downgrade the rating for Avianca from BB- to B. The outlook is stated to remain negative and reflects the difficult operating environment of Avianca. Furthermore, Fitch reacted to an increased leverage (debt/EBITDAR) of 6.8 which is higher than in previous assumptions of 5.0x – 5.5x.

Simultaneously, on the 13th of April, **Standard & Poor's** downgraded Avianca Holdings S.A. from “B+” to “B”. S&P highlights the higher leverage and weak operating performance as main reasons. The outlook however is kept as stable. Especially the sluggish economic growth in South America and high volatile exchange rate over the next 12 months could result in highly leveraged financial risk according to S&P. The downgrading could result in increasing costs of debt. As it can be seen in figure 46, Avianca has a better credit rating than GOL, which is because of the lower exposure to the Brazilian market.

Figure 46: Credit Rating Avianca & Peers

	S&P	Fitch
Avianca	B	BB-
GOL	CC-	C
LATAM	BB-	B+

Source: Bloomberg

Investment Risks

As it could have been observed in the **sensitivity** analysis, the value of the corporation is very sensitive to changes in the oil price and passenger demand. This is because the net profit margin of Avianca is very thin (1.9%). Small changes in the oil price can therefore have a huge impact on the market capitalization. The main question therefore is, if Avianca will be able to forward an increasing oil price to the customers in the course of higher ticket prices.

Furthermore the valuation is based on the assumption that in the following three years, Avianca will spend 38.7% less in **CAPEX** than between 2013 and 2015.⁶¹ That is conforming to a press release of Avianca and implies that investments are not increasing faster than revenues.⁶²

Moreover, Avianca operates in regions that include significant macroeconomic and political risk that can hugely impact the operations of Avianca. Such as in 2015, when Avianca had to depreciate funds equivalent to U.S. dollar 236.732 million that were hold in Venezuelan Bolivares and because of country restrictions could not been repatriated. In consequence to high inflation in Venezuela and a changing **exchange rate**, Avianca suffered huge losses.⁶³

⁶¹ 38.5% based in Analysts Valuation Model, which is on the base of a Press Release of Avianca to reduce CAPEX.

⁶² Keep the Ratio stable in the future at 105.5% as in 2015

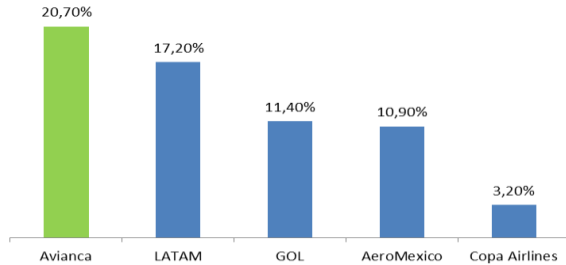
⁶³ This risk has been reduced significantly, as all current positions in VEF combined now only account for \$8.842.

Based on our analysis, we believe that the airline industry is in a difficult operating environment and might face further challenges through high competition with low cost carriers. However, especially in emerging markets, the transportation industry has not unfolded its whole potential. The low oil price that is favoring the industry since 2014/2015 could not stop the stock price of Avianca to drop by 45.9% (YTD) but probably only helped to reduce further losses.

In conclusion we believe that Avianca can be a good addition to the portfolio of a speculative investor and we believe it to be slightly underpriced compared to its peer group.

Appendix

Appendix 1: Share of non passenger revenue of total revenue of Avianca and Peers



Source: Avianca Presentation December 2015.

Appendix 2: Avianca Board of Directors in 2016

Name	Position	Age	Nationality
Germán Efromovich	Chairman of the Board of Directors	65	Brazilian and Colombian
Roberto José Kriete	Director	62	Salvadoran and Colombian
José Efromovich	Director	61	Brazilian and Colombian
Alexander Bialer	Director	68	Brazilian
Raul Campos	Director	68	Brazilian
Isaac Yanovich	Director	72	Colombian
Alvaro Jaramillo	Director	63	Colombian
Juan Guillermo Serna	Director	61	Colombian
Ramiro Valencia	Director	69	Colombian
Monica Aparicio Smith	Director	61	Colombian
Oscar Darío Morales	Director	62	Colombian

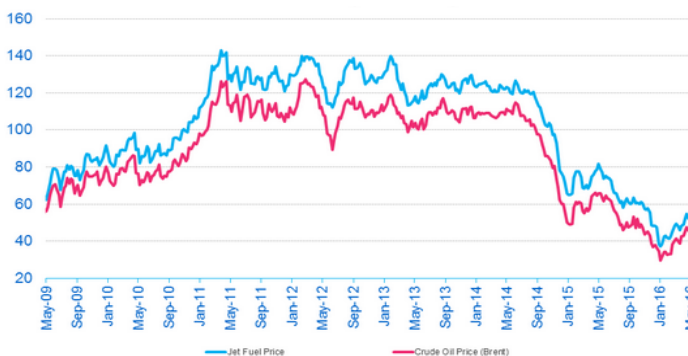
Source: Avianca Annual Report 2015.

Appendix 3: 2014 & 2015 Revenues and Expenses breakdown by currency

	Revenue		Costs and Expenses	
	2015	2014	2015	2014
U.S. Dollar	68.0%	64.5%	64.2%	64.1%
Colombian Peso	24.5%	29.4%	22.7%	24.1%
Euro	4.3%	4.5%	2.6%	2.7%
Other	3.1%	1.6%	10.5%	9.1%

Source: Own illustration based on data from Avianca Annual Report 2015.

Appendix 4: Development of the Oil Price and Jet fuel Price from 05/2009 to 05/2016



Source: <http://www.iata.org/publications/economics/fuel-monitor/Pages/price-development.aspx>.

Appendix 5: Amount of Middle class of total population



Source: Centre for Aviation; <http://centreforaviation.com/analysis/colombia-aviation-enjoys-a-rational-supply-demand-balance-even-with-vivacolombias-swift-growth-178755>.

Appendix 6: Multiples of Peer group

	Airline	Country	P/E Ratio	EV/ EBITDAR	EBITDAR Margin	Weight in %
Lat.-America	Avianca (Actual)	Colombia	11,2	4,7	27,0	50%
	Avianca (Target)		14,3	5,2	17,5	
	LATAM Airlines	Chile	20,3	6,2	31,0	
	Copa Holdings	Panama	12,8	6,3	25,8	
	Global Peer Group	Worldwide	12,8	5,4	29,3	
	Average		16,5	6,2	28,4	
	Median		16,5	6,2	28,4	
North America	Delta	United States	8,7	4,0	28,0	30%
	Southwest	United States	11,2	4,7	33,0	
	American Airlines	United States	6,8	3,7	26,3	
	Alaska	United States	9,5	4,8	36,1	
	Spirit	United States	9,3	3,7	43,2	
	United Airlines	United States	8,3	3,4	26,3	
	Average		9,0	4,0	32,1	
	Median		9,0	3,9	30,5	
Europe	Ryanair	Ireland	13,8	13,8	49,4	15%
	Int. Consolidated	Britain	9,1	4,7	27,2	
	Lufthansa	Germany	4,5	3,1	10,9	
	Easyjet	Britain	10,1	6,1	20,1	
	SAS	Sweden	6,8	2,1	15,7	
	Air France	France	4,2	1,9	27,8	
	Average		8,1	5,3	25,2	
	Median		8,0	3,9	23,6	
Asia	Cathay	Hongkong	7,8	4,8	32,6	5%
	China Southern	China	10,8	6,2	38,4	
	Singapore Airlines	Singapore	15,0	3,2	26,6	
	China Eastern	China	15,4	6,7	41,1	
		Average		12,2	5,2	
	Median		12,9	5,5	35,5	

Source: Analysts Valuation Model, based on Data from Bloomberg.

Appendix 7: Change in market share / region based on competitor analysis

Country	Change	Consequence
Colombia (Domestic)	Decrease slightly	10% below average
Ecuador (Domestic)	Decrease strongly	20% below average
Peru (Domestic)	Sustain	Average
Central America	Sustain	Average
Intra Home Markets	Decrease slightly	10% below average
Europe	Increase slightly	10% above average
North America	Increase slightly	10% above average
South America	Sustain	Average

Source: Analysts Valuation Model.

Appendix 8: Calculation of EVA and ROIC

In Millions of USD 12 Months Ending	FY 2016 12/31/2016	FY 2017 12/31/2017	FY 2018 12/31/2018	FY 2019 12/31/2019
Non Current Assets				
Intangible Assets	426,7	454,6	482,3	511,1
Property Plant & Equipment	4.744,7	5.054,8	5.363,5	5.684,1
Current trade and other receivables	288,3	307,2	325,9	345,4
Accounts receivable from related parties	23,8	25,3	26,9	28,5
Prepaid Expenses	51,4	52,0	56,5	58,9
Ependable spare parts and supplies net of provision for obsolescence	70,9	75,5	80,2	85,0
Operating cash	314,8	335,4	355,9	377,1
Accounts payable	494,8	516,6	541,2	564,7
Accounts payable to related parties	9,7	10,1	10,6	11,1
Accrued expenses	112,8	119,9	128,6	137,2
Air traffic liability	508,6	532,2	551,4	543,6
Operating Working Capital	-376,7	-383,2	-386,5	-361,7
Total Invested Capital	4.794,7	5.126,1	5.459,3	5.833,5
ROIC (Return on Invested Capital)	4,01%	4,95%	5,47%	6,17%
NOPLAT (Net Operating Profit less adjusted tax)	192,4	253,9	298,7	359,7
WACC	6,64%	6,60%	6,59%	6,60%
ROIC - WACC	-2,63%	-1,65%	-1,11%	-0,43%
EVA	-126,0	-84,5	-60,8	-25,2

Appendix 9: Share of assets/liabilities hold in U.S. dollar / Colombian Pesos

	USD	Colombian Pesos
Cash and cash equivalents	\$ 385,843	\$ 28,155
Available-for-sale securities	—	—
Accounts receivable, net of provision for doubtful accounts	174,109	99,138
Secured debt and bonds	(2,464,261)	(109,764)
Unsecured debt	(876,828)	(3,216)
Accounts payable	(230,772)	(174,418)
Net financial position exposure	<u>\$ (3,011,909)</u>	<u>\$ (160,105)</u>
Sensitivity analysis		
Change of 1% in exchange rate		
Effect on profit of the year		\$ (1,601)

Source: Avianca Annual Report 2015.

Appendix 10: Sensitivity Analysis of Changing Exchange Rate- Colombian Peso against U.S. dollar

Currency Risk Analysis	Stronger Peso	Current Exchange Rate	Weaker Peso
Change in %	-18,0%	0,0%	18,0%
U.S. Dollar / Colombian Pesos	2500	3050	3600
Total Revenues in mil. \$	63032	59593	56154
Total Expenses in mil. \$	57397	53916	50435
EBIT in mil \$ Sum from 2016-2025	5635	5677	5719
effect on EBIT	-41,8	0	41,8
denotiated in	Revenues	Expenses	
U.S. Dollar	68,0%	64,2%	
Colombian Peso	32,0%	35,8%	

Financial Statements

Income Statement

In Millions of USD 12 Months Ending	FY 2014 12/31/2014	FY 2015 12/31/2015	FY 2016E 12/31/2016	FY 2017F 12/31/2017	FY 2018F 12/31/2018	FY 2019F 12/31/2019	FY 2020F 12/31/2020
Operating Revenue							
Passenger	3.862,7	3.458,0	3.569,7	3.773,1	4.000,9	4.233,3	4.477,1
Cargo and other	840,9	903,3	927,6	1.018,2	1.083,0	1.154,5	1.230,5
Total Operating Revenue	4.703,6	4.361,3	4.497,3	4.791,3	5.083,9	5.387,8	5.707,5
growth rate	2,04%	-7,28%	3,12%	6,54%	6,11%	5,98%	5,94%
Operating Expenses							
Flight operations	56,7	58,1	83,8	80,7	77,4	81,8	88,2
Aircraft Fuel	1.345,8	1.006,8	1.038,2	1.076,5	1.124,3	1.174,3	1.225,2
Ground operations	397,6	412,4	429,3	451,0	471,9	481,9	498,5
Aircraft Rentals	299,2	317,5	333,8	348,9	362,5	372,2	385,3
Passenger Services	154,5	149,3	162,3	170,3	177,1	182,8	191,3
Maintenance and repairs	268,9	309,7	309,1	331,5	350,4	369,4	388,0
Air traffic	206,2	203,0	221,3	225,8	234,6	239,0	249,1
Sales and Marketing	605,7	612,8	585,1	621,5	666,9	711,5	757,4
General, administrative and other	165,2	176,2	178,8	183,1	187,7	192,1	196,5
Salaries, wages and benefits	725,8	666,1	714,0	766,3	821,8	881,5	945,3
Depreciation, amortization and impairment	198,7	230,7	232,4	244,6	264,5	277,9	296,0
Total Operating Expenses	4.424,1	4.142,5	4.288,1	4.500,1	4.739,0	4.964,4	5.220,8
growth rate	4,72%	-6,36%	3,51%	4,94%	5,31%	4,76%	5,16%
EBIT	279,5	218,8	209,2	291,2	344,9	423,4	486,8
Interest Expense	-134,0	-169,4	-163,3	-163,6	-181,2	-191,7	-204,2
Interest Income	17,1	19,0	21,2	21,7	20,9	23,1	25,1
Derivative Instruments	5,9	0,6	0,0	0,0	0,0	0,0	0,0
Foreign Exchange	10,3	-177,5	0,0	0,0	0,0	0,0	0,0
Taxable Income	178,8	-108,5	67,1	149,3	184,5	254,9	307,7
Income Tax Expense - current	-33,8	-17,3	-12,0	-26,8	-33,1	-45,7	-55,1
Income Tax Expense - deferred	-16,5	-13,7	-4,7	-10,6	-13,1	-18,0	-21,8
Total Income Tax Expense	-50,3	-31,0	-16,8	-37,3	-46,1	-63,7	-76,9
Net Profit	128,5	-139,5	50,3	112,0	138,4	191,1	230,7

Cash Flow Statement

In Millions of USD 12 Months Ending	FY 2014 12/31/2014	FY 2015 12/31/2015	FY 2016E 12/31/2016	FY 2017F 12/31/2017	FY 2018F 12/31/2018	FY 2019F 12/31/2019	FY 2020F 12/31/2020
EBIT	279,5	218,8	209,2	291,2	344,9	423,4	486,8
Notional Income Taxes	-69,9	-54,7	-52,3	-72,8	-86,2	-105,8	-121,7
Tax Adjustment	19,6	23,7	35,5	35,5	40,1	42,1	44,8
NOPLAT	229,2	187,8	192,4	253,9	298,7	359,7	409,9
Depreciation	198,7	230,7	232,4	244,6	264,5	277,9	296,0
Operating Gross Free Cash Flow	427,8	418,5	424,9	498,4	563,2	637,6	705,8
Capex (PPE & Intangibles)	1.146,3	699,7	390,6	582,6	600,9	627,4	663,7
Change in NWC	-90,2	-7,9	57,3	6,6	3,3	-24,8	5,9
unlevered operating free cash flow	-808,7	-289,1	91,5	-77,6	-34,4	-14,6	48,0
change in other long term assets	-21,2	-6,1	-1,9	-4,0	-4,0	-4,2	-4,4
change in other liabilities	73,5	19,2	0,7	16,3	17,4	15,0	17,6
Operating free cash flow	-756,4	-275,9	90,4	-65,4	-21,0	-3,8	61,3
change in pension liability	-102,8	-45,7	4,2	4,5	4,6	4,8	4,9
change in long term deferred tax assets and liabilities	23,0	27,5	0,2	0,5	0,3	0,5	0,6
change in employee benefits	-3,2	-16,3	1,1	1,2	1,2	1,2	1,3
change in restricted cash	21,6	-3,4	-0,2	-0,4	-0,4	-0,4	-0,4
change in long term securities available for sale	14,6	-0,6	0,0	-0,1	-0,1	-0,1	-0,1
Profit of earnings in foreign exchange and derivate instr.	16,2	-176,9	0,0	0,0	0,0	0,0	0,0
change in assets held for sale	6,1	-2,0	-0,1	-0,2	-0,2	-0,2	-0,2
change in deposits and other assets	-28,8	-28,5	-7,7	-16,6	-16,5	-17,2	-18,1
change in other current / non current liabilities	96,8	-107,9	0,9	1,9	1,9	2,0	2,1
Total non operating free cash flows	43,5	-353,8	-1,5	-9,2	-9,0	-9,3	-10,0
Total Free Cash Flow to the Firm	-712,9	-629,6	88,9	-74,5	-30,0	-13,1	51,3

Balance Sheet

In Millions of USD 12 Months Ending	FY 2014 12/31/2014	FY 2015 12/31/2015	FY 2016E 12/31/2016	FY 2017F 12/31/2017	FY 2018F 12/31/2018	FY 2019F 12/31/2019	FY 2020F 12/31/2020
Assets							
Cash and cash equivalents	640,9	479,4	494,3	526,6	558,8	592,2	627,4
Restricted cash	2,0	5,4	5,6	5,9	6,3	6,7	7,1
Securities available for Sale	1,2	0,0	0,0	0,0	0,0	0,0	0,0
Accounts receivable, net of provision for doubtful accounts	355,2	279,6	288,3	307,2	325,9	345,4	365,9
Accounts receivable from related parties	27,4	23,1	23,8	25,3	26,9	28,5	30,2
Expendable spare parts and supplies net of provision for obsolescence	65,6	68,8	70,9	75,5	80,2	85,0	90,0
Prepaid expenses	56,1	45,7	51,4	52,0	56,5	58,9	64,2
Assets held for sale	1,4	3,3	3,4	3,7	3,9	4,1	4,3
Deposits and other assets	174,1	130,7	134,8	143,6	152,4	161,5	171,1
Total Current Assets	1.323,8	1.036,0	1.072,6	1.140,0	1.210,8	1.282,2	1.360,2
Securities available for Sale	0,2	0,8	0,8	0,9	0,9	1,0	1,0
Deposits and other assets	218,0	246,5	254,2	270,8	287,3	304,5	322,6
Accounts receivable, net of provision for doubtful accounts	42,4	59,7	61,6	65,6	69,6	73,8	78,1
Accounts receivable from related parties	11,2	0,0	0,0	0,0	0,0	0,0	0,0
Intangible assets	416,1	413,8	426,7	454,6	482,3	511,1	541,5
Deferred tax assets	35,7	232,3	239,5	255,2	270,7	286,9	303,9
Property and equipment, net	4.128,1	4.599,3	4.744,7	5.054,8	5.363,5	5.684,1	6.021,5
Total Non Current Assets	4.851,7	5.552,4	5.727,4	6.101,8	6.474,4	6.861,4	7.268,6
Total Assets	6.175,5	6.588,4	6.799,9	7.241,8	7.685,2	8.143,6	8.628,8
Liabilities and Equity							
Current portion of long term debt	458,7	412,9	422,6	455,8	487,1	520,0	548,5
Accounts payable	547,5	481,7	494,8	516,6	541,2	564,7	591,2
Accounts payable to related parties	13,8	9,4	9,7	10,1	10,6	11,1	11,6
Accrued expenses	138,3	118,2	112,8	119,9	128,6	137,2	146,1
Provisions for legal claims	14,2	13,4	13,8	14,7	15,6	16,5	17,5
Provisions for return conditions	61,4	52,6	54,3	57,8	61,4	65,0	68,9
Employee benefits	49,2	32,9	34,0	35,1	36,3	37,6	38,8
Air traffic liability	461,1	432,5	508,6	532,2	551,4	543,6	568,5
Other liabilities	127,5	12,7	13,1	13,9	14,8	15,7	16,6
Total Current Liabilities	1.871,6	1.566,3	1.663,7	1.756,2	1.847,1	1.911,4	2.007,8
Long Term Debt	2.711,9	3.060,1	3.132,1	3.378,2	3.610,5	3.854,3	4.065,6
Accounts payable	21,2	3,6	3,7	4,0	4,2	4,4	4,7
Provisions for return conditions	70,5	109,2	112,6	120,0	127,3	134,9	142,9
Employee benefits	173,5	127,7	132,0	136,5	141,1	145,9	150,8
Deferred tax liabilities	15,8	239,9	247,3	263,5	279,6	296,3	313,9
Air traffic liability	85,9	93,5	88,7	92,9	98,3	100,8	105,3
Other non current liabilities	8,5	15,4	15,9	16,9	17,9	19,0	20,1
Total Non Current Liabilities	3.087,1	3.649,4	3.732,3	4.011,9	4.278,9	4.555,7	4.803,3
Common Stock	82,6	82,6	82,6	82,6	82,6	82,6	82,6
Preferred Stock	42,0	42,0	42,0	42,0	42,0	42,0	42,0
Additional paid in capital on common stock	234,6	234,6	234,6	234,6	234,6	234,6	234,6
Additional paid in capital on preferred stock	469,3	469,3	469,3	469,3	469,3	469,3	469,3
Retained Earnings	355,7	507,1	537,3	604,5	687,5	802,2	940,7
Revaluation and other reserves	24,6	18,4	19,0	20,2	21,4	22,7	24,1
Non Controlling interest	8,1	18,6	19,2	20,5	21,7	23,0	24,4
Total Equity	1.216,7	1.372,6	1.404,0	1.473,7	1.559,2	1.676,5	1.817,6
Total Liabilities and Equity	6.175,5	6.588,3	6.799,9	7.241,7	7.685,2	8.143,6	8.628,8

Disclosures and Disclaimer

Research Recommendations

Buy	Expected total return (including dividends) of more than 15% over a 12-month period.
Hold	Expected total return (including dividends) between 0% and 15% over a 12-month period.
Sell	Expected negative total return (including dividends) over a 12-month period.

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