

A Work Project presented as part of the requirements for the Award of a Master's Degree in
Finance from NOVA – School of Business and Economics

**COMMON-SIZED FINANCIAL STATEMENTS IN THE RETAIL AND AIRLINE
INDUSTRIES IN COLOMBIA**

Cash Conversion Cycle and Return on Assets

Teaching Case Study

Natalia Andrea Cabrera Méndez (#2382)

A Project carried out under the supervision of Professor Leonor Ferreira

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Abstract

This teaching case study intends to serve Financial Statement Analysis courses in the undergraduate and master's degree, by helping student's learning process, applying real-life examples in evaluating the ability to use and interpret fundamental data, assessing and analyzing the Cash Conversion Cycle and Return on Assets. Common-sized financial statements and other financial ratios from two Colombian companies, operating in the retail and airline industries are compared, highlighting the differences in cash conversion cycle, their components and the drivers of return on assets in each industry. Common-sized financial statements allow comparing different companies regardless of size and industry.

Key words: Profitability, Return on assets, Cash conversion cycle, Colombia, airline, retail

1. INTRODUCTION AND PURPOSE OF THE CASE STUDY

The educational course of Financial Statement Analysis, offered in finance, accounting and economics majors, focuses on providing students with the basic tools to understand and draw conclusions on the financial statements at a very first glance. Although being sometimes elective, this course is very important as today the vast majority of companies are required to report their financial statements to regulators and even to various stakeholders, for which financial statement analysis allows understanding the financial reporting in order to facilitate improved decision making (White, Sondhi and Fried, 2003). At the same time, Colombian education system has a lack of use of teaching case studies in general; not exploring this type of teaching that in many areas, such as in finance can have a dramatic improvement in learning since it allows students to participate in "real-life" decision making processes. For this reason and considering the fact that Colombian companies can provide exceptional data for this analysis, due to specificities that illustrate important features, the purpose of this project is to create a teaching case study addressed

to masters' students, in order for them to quickly analyze financial statements, especially in the format of common sized financial statements.

As the main motivation for this project is the lack of use of teaching case studies for the financial statement analysis course in Colombian education system, where more direct and less practical tools are used, this project is a teaching case study for the use of Colombian universities actually get involved in the analysis but may also be used by educators and students worldwide, being able to compare the different industries and draw conclusions in financial and accounting matters. To do so, two Colombian industries of great importance with its respective company such as retail (GRUPO ÉXITO) and airline (AVIANCA), which have not been studied before, to the best of our knowledge have been chosen. Their financial statements are carefully analyzed to understand the major drivers of each industry as well as its common-based financial statements to identify basic characteristics and differentiate the structure of the analyzed industries. Nevertheless, their indicators and financial ratios such as activity, liquidity and profitability are also analyzed.

This case study is organized as follows: Section 2 provides the key concepts that are useful to discuss and solve the case study and that are necessary for the instructor to review with students. Section 3 reviews the literature, Section 4 describes the methodology for the case study and its relevancy, Section 5 contains the case narrative and questions of the case study, as they are provided to students, Section 6 presents the suggested approach and discussion, and Section 7 concludes. Additional to the information given in the case study, the companies' financial information useful to understand the case is given as well as suggested grading criteria (see Appendices 4 and 7).

2. KEY CONCEPTS: CASH CONVERSION CYCLE AND RETURN ON ASSETS

Financial statement ratio analysis is the use of financial statements to analyze a company's financial position, its changes and performance, and to assess future financial performance (Wild, Subramanya and Halsey, 2006). Its importance derives from the ability to perform a business analysis, which is essential in all firms as it evaluates management, financial, strategies and business environment with the objective of improving business decisions. Financial statement analysis is made by looking into the fundamentals (financial statements, such as the balance sheet, the income statement and the cash flows statement) and interpreting a list of financial ratios, which, according to the classic classification by Weston and Copeland's (2005), are grouped in liquidity, profitability, management efficiency, leverage and valuation ratios. This research analyzes the Cash Conversion Cycle and the Return on Assets, covering profitability and liquidity as well, understanding how differences are driven by specific characteristics in the retail and airline industry and the economic environment. Financial statement analysis is sensitive to accounting regulation and accounting choice as well as currency exchange differences. Thus, this section introduces and discusses two key-concepts in the case study: cash conversion cycle and return on assets.

Cash conversion cycle

The cash conversion cycle (CCC) is "the period of time when cash is tied up in inputs and debtors: The company already paid production inputs but has not yet got the money from the debtors for the sale of inventory. The shorter the CCC, the better" (Stoltz et al, 2007: 39). The CCC is a very important metric for companies as it tells the duration for which the firm needs to finance its operations out of short-term or long-term loans. This metric looks at the amount of time needed to

sell inventory, the amount of time needed to collect receivables and the length of time the company is afforded to pay its bills without incurring penalties. Its calculation is the following:

$$\text{Cash Conversion Cycle} = \frac{\text{Average Collection Period}}{\text{Inventory Conversion Period}} + \frac{\text{Average Inventory}}{\text{Average Payment Period}} \quad [1]$$

The shorter the CCC, the more efficient the firm's operations and cash management; longer cycles, on the other hand, may be indicative of cash shortfalls and increased financing costs (White, Sondhi and Fried, 2003). This indicator must be compared to the industry levels to draw any kind of conclusions. There are many factors that influence the behavior of cash conversion cycle such as the average collection period, the inventory turnover and the average period of payment.

- **Average collection period:** Indicates the length of time that the receivables have been outstanding (Gibson, 2013). The average collection period is also affected, whether the business is seasonal, if it uses a natural business year as well as by the credit policy. The ratio is an indication on how efficiently the receivables are managed in the company.
- **Inventory turnover:** Measures the quality and liquidity of the inventory component of current assets (Subramanyam and Wild, 2009). When the inventory turnover ratio decreases over a period of time, or if is less than the industry averages, it suggests low moving inventory items attributed to obsolesce or weak demand (Subramanyam and Wild, 2009). This ratio is influenced by the inventory measurement basis, such as first-in-first-out (FIFO) or weighted average cost.
- **Average payment period:** Indicates the average time the company takes in paying its obligation to suppliers (Subramanyam and Wild, 2009) and gives an outlook on the company's negotiation efficiency with suppliers.

There are several ways to measure a company's liquidity, that is, the ability to convert assets into cash or obtain cash to meet short-term obligations (Subramanyam and Wild, 2009). The most

commonly used being the Current Ratio, Acid Test, and Cash Ratio. Liquidity ratios can be affected by exchange rates, where marketable securities and cash and equivalents in foreign currency are converted at the end of the year exchange rates.

Return on Assets

Return on Assets (ROA) is an indicator of how profitable a company is relative to its total assets. It is calculated by dividing a company's annual earnings by its total assets and is displayed as a percentage. ROA gives an idea as to how efficient management is at using its assets to generate earnings (Subramanyam and Wild, 2009). ROA depends on Asset Turnover and Return on Sales, it can be decomposed as follows:

[2]

$$\text{Return on Assets} = \text{Assets turnover} \times \text{Operating profit for ROA}$$

- **Return on Sales:** Is the ratio that indicates to what degree a firm is successful in achieving the maximum sales possible whilst simultaneously keeping costs low (Pendlebury and Groves, 1999). The return on sales is directly affected by the **trade discount**, the amount by which a manufacturer reduces the retail price of a product when it sells to a reseller, rather than to the end customer, which is targeted by the reseller, charging the full retail price.
- **Asset Turnover:** Measures the activity of the assets and the ability of the firm to generate sales through use of the assets (Gibson, 2013). Methods of acquisition of the assets (lease *versus* purchase) and subsequent financial reporting choices (capitalization *versus* operating lease report) may affect turnover ratios (White, Sondhi and Fried, 2003).
- **Operating Leverage:** Earnings are affected by controllable factors (e.g. management decisions) and uncontrollable factors (e.g. political interference). The greater the extent to which

uncontrollable factors exist, the more uncertain is a company's earnings stream (Siegel, 1991). The probable impact of the uncertainties that a company can face can be so important that the reported results have very little predictive value. In order to evaluate the operational risk of a firm, a comparison of its exposure with industry averages and past periods must be made.

- ***Other variables affecting the Cash Conversion Cycle and Return on Assets***

There are other factors that may affect the liquidity and operating profitability such as:

Business cycle: Fundamental economic conditions are not under control of any company or industry; depending on the business cycle or the state of the world some firms have better results from one period to another. Nevertheless, companies with product lines having inelastic demand are least affected by the business cycle. Companies with product lines that are closely correlated to changes in GDP or other variables show more variability in earnings. (Siegel, 1991).

Seasonality: Seasonal variations affect production and consumption (Siegel, 1991). Some companies have a seasonal sales period in which they typically have a boost in sales and other periods in which they decline. Therefore, analyzing year-end financial statements is not always representative.

Currency exchange: Is the difference resulting from translating a given number of units of one currency into another currency. For financial analysis purposes, currency exchange differences play an important role, since by looking at these differences the analyst can make assumptions regarding the nature of the firm that is being analyzed as well as draw conclusions regarding the macro environment. Variations in the exchange rate also influence the Liquidity and CCC and causes payments / receipts to increase or decrease. The Colombian peso devaluated 36 percent

during 2015¹, being the reason why the case study focuses only in one period of time; to avoid the currency exchange effect in our data.

Accounting regulation: The use of different accounting affects valuation. For example, identical firms may use different valuation or revenue recognition methods (Gibson, 2013). Many countries around the world have adopted the International Financial Reporting Standards (IFRS) as their main accounting standards, Colombia not being the exception. When companies adopt IFRS their financial statements may change according to the new rules (Refer to Appendix 8), making comparison to the previous year biased. Therefore, the case study focuses in only one period of time, to avoid its effects in terms of comparison.

3. LITERATURE REVIEW

Financial analysis studies in Colombia have a wide history coming back to the 19th century. However, in Colombia the way how financial ratio analysis developed is two-fold, being different for creditor purposes and for managerial purposes. While banks focus the analysis in the ability of payment, managers in different industries highlight efficiency and profitability. There is a wide variety of studies related to financial analysis, such as the Resource Guide from Virginia Small Business Development (VSBD, 2011), which underlines the importance of financial statement analysis for startups and small business, being crucial to achieve a better understanding about the whole business, detect trends and major problems faced by companies. Also, the empirical research “Those unpredictable recessions” from the OECD (2011) analyses financial indicators, and whether or not they can predict turning points in the business cycle.

Empirical research about topics of financial analysis is very recent in Colombia, and to the best of our knowledge only few studies exist. Riviera and Alarcón (2012) studied the financial impact of

¹ The exchange rate Euro/USD for 2015 was 1.0887

a set of capital structures in the confection, carbon, media and oil and gas industries in Cali, Colombia. Other studies analyzed the probability of a company going into bankruptcy, and its credibility (Pérez, 2013). The impact of the delayed disclosure of the financial statements was also researched (Riviera et al, 2011).

Regarding, cash conversion cycle and profitability analysis, Raheman, Afza, Qayyum & Bodla (2010) concluded that cash conversion cycle, net trade cycle and inventory turnover in days are significantly affecting the performance of the firms, especially in the manufacturing firms. Also, Mongrut, Fuenzalida & Cubillos (2008) used an unbalanced panel data analysis for companies quoted in five Latin American capital markets and concluded that industry CCC, the company market power, its future sales and country risk have an influence on the way Latin American companies manage their Working Capital with significant differences among countries in the region.

As economic turmoils are more common in this decade than before, economic and finance studies point out the importance of the working capital and the liquidity levels for firms when analyzing the CCC. For instance, Hofler (2009) concluded that while firms make efforts to increase ROA in a way they pay their due obligations as late as possible to keep cash, decreases in activity volume decreases the cash flow too and this increases liquidity risk. Specifically, in the industries analyzed in this case study, Bagchi and Khamrui (2012) concluded that the CCC and debt used by firms are negatively associated with firm's profitability and in order to improve it firms should manage their Working Capital in more efficient ways. Their study is based in ten companies from the FMCG industry in India for a period of 10 years. Lai (2012) studied the impact of Working Capital management on firm value based using a panel data of 47 companies from the airline industry covering the period of 2002-2011. The results showed that there is a significant negative

relationship between CCC and firm value, and therefore managers can create firm value by reducing CCC.

However, regarding financial case studies for teaching in Colombia, there are few. The use of case studies is not very common in teaching methodology in Colombian universities, where only top universities, such as the Universidad de Los Andes, CESA and ICESI, use them in finance related courses, whereas teaching case studies such as Colombina (2006) and Parques Naturales (2009) from Universidad de Los Andes intend strategy and marketing courses. The few teaching case studies refer to the fact that is an option as part of the PhD graduation requirements and not for undergraduate and master studies, where empirical research is. In the repository cases from Universidad de Los Andes, there are 20 teaching case studies that have been published, being only one for finance courses: Tabacol, S, A. (2008), which tells the story of the sole nation-owned tobacco company in Colombia and discusses its restructuring due to the upcoming recession in the 90's. The case describes the major changes and asks students to discuss a financial explanation for wrong decisions, regarding investments and management with provided data (Rodriguez & Corredor, 2008). Another empirical research, and not teaching case study, analyzes the financial ratios and figures of the leather industry in Colombia analyzing the financial statements of 57 of leather companies in the country, calculating leading financial indicators and drawing conclusions about the level of assets, the impact of the macroeconomic situation and the development of the industry, as well as the importance of financial analysis for decision making processes compared to industry analysis (Olaya, Martínez, Velásquez & López, 2014).

Thus, this Work Project fills the void of few teaching case studies about Colombian companies, offering to the best of our knowledge the first case study in financial statement analysis to the academic masters and undergraduate students' community. It analyzes the Cash Conversion Cycle and Return on Assets and compares their components and drivers, in two of the most important

industries in Colombia; airline and retail, and at the same time two of the biggest companies of the country (AVIANCA and GRUPO ÉXITO) as samples for the analysis.

4. METHODOLOGY

The chosen approach for the case is the teaching case study. A case study is “an account or description of a situation or sequence of events, which raises issues or problems for analysis and solution” (Heath, 2006). The teaching case study includes teaching notes, which is a document designed to give other potential instructors valuable insights into the case and learning which can be derived from it (EECCH).

Data collected for this case study are the financial reports for the year 2015 from two well-known Colombian companies: GRUPO ÉXITO and AVIANCA, which serve as examples to illustrate the two industries analysed throughout the case study: The retail and airline industry, respectively. These companies were selected due to its recognition and size (See Appendix 1) and the industries were chosen because each one of them has distinctive characteristics in their activity which can be observed from their financial statements that make them comparable.

The financial reports were retrieved from the companies’ websites and converted into common sized financial statements. Common sized financial statements express all items expressed by revenues regarding the income statement and all items expressed by assets regarding the balance sheet. The technique enables figures to compare across firms and across time (for the same firm) regardless of size and it is most frequently utilized in the analysis of profitability as well as in the financial position (Wahlen et al, 2011). Nevertheless, for a complete understanding of them, a deeper analysis into the economics of the company’s environment, the country and region, as well as the company’s strategy should be made.

The analysis only covers one period. Financial reports with the most recent data available report to 2015, being the basis for the comparison between industries in the case study. Decision to consider

a unique period and not more periods is due to currency exchange changes and accounting regulation, which affected Colombian companies in the recent past². The analysis of the case focuses on understanding the drivers of the Cash Conversion Cycle and Return on Assets, as they are key concepts for students, and future managers of finance related courses, when differentiating different industry fundamentals.

It is good to remark that the teaching case study was not directly pre-tested. The same questions but applied to different sample companies were pre-tested among masters' students at Nova School of Business and Economics in Lisbon³ and not directly from Colombia. Nevertheless, the teaching case study was shown to a management professor from Unicoc University in Bogotá, not having yet the feedback.

CASE NARRATIVE

Colombia as the rest of Latin America was having a good economic time until 2014; while its main commercial partner, China, was growing at a rate of 10 percent and therefore buying commodities such as coal, petroleum, nickel and copper, which are abundant in the region. Nowadays, China's growth reduced to about 6.5 per cent (World Bank, 2016), which lead to a slowdown in imports of commodities and negative impacted in revenues. China's deceleration added up to the low prices of oil and the climate changes that affect the internal demand have caused a huge depreciation of the local currencies in Latin America, and Colombia was no exception (Andi, 2015).⁴ The retail and, in a stronger way, the airline industry were affected by the currency devaluation, which is reflected in their financial reports.

² Refer to Appendix 3

³ The test was made with students enrolled in the Financial Statement Analysis course, an elective short course offered to the Masters Programs in Finance and Management in the years 2014 and 2015, both in the Fall and Spring semesters.

⁴ Nevertheless, the predictions of 2017 reveal improvement due to the pact of the oil producers to reduce the supply in order to increase the prices and the improvement of the commercial partners of the region. Even though it is predicted that Latin America will suffer a deceleration of 2.2 per cent, Colombia is among the few countries that will contribute with positive figures of about 2.5 per cent.

The industries selected for the case are the retail and airline. The companies selected to represent those industries were chosen due to their high worldwide recognition and importance for Colombia's overall economy, being in the annual ranking made by Semana Magazine, the 100 biggest Colombian companies where GRUPO ÉXITO ranked the 8th position and AVIANCA the 9th, based on the company's assets (El Tiempo, 2015).

While the retail industry in developed countries has almost reached a saturation point, the industry in Colombia is far from that point; penetration rates in Colombia are still low, even compared to other countries in Latin America, and the industry presents many opportunities. In order to take advantage of the opportunities, big chain companies are making alliances with the small ones to broaden their presence.

According to the International Association of Air Transport, the worldwide growth rate of the air industry is 5.7 percent, from which Colombia grew in 2015 that is 2.3 percent above the global average (IATA, 2015). Although Latin America is currently facing economic downturn mainly due to the deceleration of China's growth and the depreciation of raw materials, the good economic figures in the industry reflect the attractiveness that Colombia is generating in terms of tourism, as well as the possibility of doing business and making investments. Nevertheless, there are some internal and external issues that affect the air industry in the country, such as exchange rate, fuel prices, and transportation, among others. Although the fuel prices have decreased since 2014, the depreciation of the Colombian peso against the dollar, which was 36% in 2015, has affected the results, as 28% of the fuel is imported and the majority of debt is in U.S. dollars. Moreover, airline companies have to transport the fuel from the port thorough the country, which increases the prices in approximately 25%, and the increase in airport authorizations by the concessionaires. (Portafolio, 2015).

Case questions:

Exhibits 1 and 2 show the common-sized balance sheets and income statements of two Colombian companies. These companies rank among the top ten in size in the country, and operate in the airline and retail industry, respectively. The financial reports correspond to the fiscal year 2015 and were prepared according to the International Financial Reporting Standards (IFRS/ IAS). COMPANY A presents individual financial statements whereas COMPANY B report in a consolidated basis.

Based on the information in Exhibits 1, 2 and 3 (Refer to Appendix 2), discuss the following questions.

QUESTION 1: Match COMPANY A and COMPANY B's common sized financial statements with the industry they correspond to. Justify your answer based in industry characteristics.

QUESTION 2: Calculate and interpret the cash conversion cycle (CCC) for COMPANY A and for COMPANY B. What are the main drivers of the cash conversion cycle in each company? Justify your answer making use of your common knowledge. What can you say regarding COMPANY A and COMPANY B liquidity?

QUESTION 3: Calculate the Return on Assets (ROA) for COMPANY A and for COMPANY B. Discuss the results discussing the factors that influence it.

5. SUGGESTED APPROACH

- ***Question 1: Identifying the industries***

The purpose of QUESTION 1 is to ensure students can learn and guess the fundamentals figures and percentages from a financial statement, detecting anomalies, and helping this for decision making process. The suggested approach is mainly from industry research, rather than financial metrics, as companies may have unique characteristics. In order to match the presented common sized financial statements and ratios with the industries, students are advised to analyze the statements and ratios for major differences between the companies and comparing their figures with industry

average that can be found in databases⁵, case studies, industry fundamentals as well as personal knowledge.

The summary of suggested solution is shown in table 1

Table 1. Question 1 Companies identification - Suggested solution

	COMPANY A	COMPANY B
	Retail	Airline
Industry Characteristics	High levels of inventory	High portion of fixed assets
	Low account receivable	High amount of debt
	Low profit margin	Negative profit (due to economic downturn)
	High inventory turnover	
	Relevant portion in intangibles	High fixed operating expenses

COMPANY A (Retail industry)

The retail and consumer's goods industry in general is characterized for its high levels of inventories in their financial statements, since they need to have enough merchandise on stock at any time to meet customer demands. As can be seen in Exhibit 1, COMPANY A has 7.5% of inventories in their assets, the second highest among the two industries, being below COMPANY B. Another typical component of retail and consumer's goods industry is the low level of accounts receivable, as they mainly receive cash and payment cards COMPANY A has by far among the three companies the lowest accounts receivables (1.4%). Also, another typical indicator is a low margin, as they are mainly commercializing primary goods in where is hard to increase prices also because of regulatory framework, which sets caps for basic need groceries and articles.⁶

Most transactions in retail and consumer's goods industry are settled with cash and cash equivalents. Stores are usually not owned but rented, so the companies do not require much debt (Hoffman, 2013). The industry average regarding inventory turnover in the retail and consumer

⁵ CSI Market, Euromonitor, Aerolatin News, Bloomberg, Valuation Resources.

⁶Nevertheless, the predictions for 2017 reveal improvement due to the pact of the oil producers to reduce the supply in order to increase prices. The Confederación Colombiana de Consumidor supervises and regulates the prices of food and beverages of essential needs.

goods industry is seven days (CSI market, 2016), which makes sense to be high as they contain groceries and products that rotate a lot; COMPANY A has an inventory turnover of 9.23 days. Big retail companies belonging to a group in the sector allows and facilitates the accounting recognition of goodwill and brands (Ibañez, 2014) which makes them usually have big intangibles, COMPANY A having 10.5% of total assets and being the highest among the two companies.

As the first indicator of inventories cannot be easily seen (COMPANY A has higher inventory levels) and cash (COMPANY B has higher cash and equivalents levels) students may match COMPANY A with the retail industry mainly by identifying the low levels of accounts receivables (1.4%) and low profit margin (24.1%) that when compared to Company B are instantaneously highlighted. So therefore with the 1.4% of accounts receivables, the 10.5% intangibles and 24.1% profit margin it can be concluded that Company A is operating in the retail industry.

COMPANY B (Commercial Airline)

In the balance sheet of airlines companies, it is highlighted the big number of fixed assets, which relate to the aircrafts, maintenance equipment and airport operating licenses. Also the high amounts of debts are characteristics as they have to finance their fixed assets. The airline industry has very distinctive characteristics that allow students to have a first glance perspective of this type of industry. The commercial airline industry is very sensitive to oil prices movements, as fuel is approximately 32% of the Cost of Goods, and exchange rate movements, having most of their revenues in domestic currencies while debt is usually denominated in US Dollars (GOL, 2014: 12). Students are expected to search about the economic situation, industry averages and be able to conclude that with the big number of fixed assets (68.7%), the high debt (544%) and the negative profit before taxes (-3.9%) COMPANY B operates in the commercial airline industry.

- **QUESTION 2: Cash conversion cycle and its components**

The objective of Question 2 is to analyze the different components that affect the CCC and how it varies from the retail and the airline industry, as they have unique components that affect the CCC, such as DSO, DIO and DPO, from each other that students should explore and analyze.

In order to answer to this question, the suggested approach calculates the cash conversion cycle (CCC) by applying its formula. Students are expected to compute the cash conversion cycle with the available data by first calculating the $DPO = 360 / (\text{Net purchases}/\text{Accounts payable } 2015)$ and subtracting the result from the Operating Cycle (DSO + DPO). The suggested solution is shown in table 2.

Table 2 (Solution Question 2) – Cash conversion cycle and its components

COMPANY	A	B
+ Days Sales Outstanding	8.55	23.87
+ Days Inventory Outstanding	39.00	6.91
= Operating Cycle	47.56	30.77
- Days Payable Outstanding	112.98	80.40
= Cash Conversion Cycle	-65.42	-49.62

The first thing to consider when analyzing the CCC of both companies is the industry in which they operate, the retail and airline industry. Retail and airline companies usually have low DSO, which depends on sales, and not varies much between them as they collect sales almost in cash and do not usually give credit to customers. On the other hand, DPO depends on purchases and suppliers (purchases of merchandises); retail companies usually have a big bargain power with suppliers, and therefore they can manage the behavior of the DPO. Regarding DIO, it depends on the level of inventories and how the company measures them; there is a big difference between the two industries, given the nature of airline industry that has no inventories and the retail industry, whose inventory has a high inventory turnover due to the basic consumption products they sell.

This of course, will impact CCC of airlines contributing to the differences between both industries as well as the difference existing between their Operating Cycle.

To a great extent, industry factors may determine the length and components of the CCC. Department stores may have short or negligible accounts receivables collection periods but lengthy inventory days on hand (Siegel, 1991). As CCC depends on its three different components DPO, DIO and DSO and since each one of them varies with the industry, the CCC will vary as well. Airlines typically have a heavier structure in terms of fixed tangible assets, while the retail industry has more inventories. CCC between industries and even between competitors varies as well because of management decisions, as the three components depend on how companies manage the variables: how long they take to pay their suppliers, how much time they allow their customers to pay them and how they value their inventories (FIFO or weighted average). It is worth to remark that these decisions may vary in different states of the economy.

As seen in Table 2, the CCC for both companies is negative: -65.42 days (COMPANY A) and -49.62 days (COMPANY B). This is due to the high amount of days that each one takes to pay to its suppliers, as well as the high inventory turnover of COMPANY A, due to its industry. The fact that the CCC for both companies is negative reflects how they do not pay their suppliers until they receive payment from its customers. Therefore, COMPANY A and COMPANY B do not need to hold very much inventory and still hold its money for a longer time period.

Table 3: Comments on the Cash Conversion Cycle

	COMPANY A	COMPANY B
Industry	Retail	Airline
Comments on CCC	Low DSO High DIO High DPO	Low DSO Low DIO High DPO

- *Comment the liquidity and the factors which affect it*

This sub question is intended to ensure the understanding about the liquidity degree among industries and relate them to the CCC and its components. Students are expected to compute three ratios that can be computed with the available information: Current ratio, Acid-test and Cash ratio. Table 7 shows the results for the calculation of liquidity ratios for COMPANY A and COMPANY B. The suggested solution can be found in Appendix 3.B

The Current Ratio indicates the amount of cash available at the balance sheet date plus the amount of other current assets the firm expects to turn into cash within one year (from collection of receivables and sales inventory) relative to obligations coming due during that period (Wahlen, Baginski and Bradshaw, 2011).

A comparison between industry averages should be performed in order to determine the typical values for each industry. In some industries, the typical Current Ratio is below two, which for many years was the guideline for the minimum (Gibson, 2013), while others require a larger ratio. In general, the shorter the Operating Cycle, the lower the Current Ratio, and vice-versa (Gibson, 2013); data from COMPANY A and COMPANY B can prove this. Students should pay attention to the DSO and DPI as they guide on whether the company is having high ratio due to its receivables or inventories, respectively.

COMPANY A has higher Current Ratio than COMPANY B; the contrary happens for the acid test, thus suggesting that liquidity in COMPANY A has different characteristics than in COMPANY B. Additionally, the difference between the Current Ratio and the Acid-Test ratio is bigger in COMPANY A than in COMPANY B. This is mainly because of the higher level of inventories in COMPANY A, due to its retail nature. The DIO is important to analyse as it tells the quality of the inventories that are being considered in the Current Ratio.

Students should also analyse the difference between the Acid-Test ratio and the Cash Ratio, as if these two ratios differ means that the DSO is an important part of the assets. Performing this analysis, and linking the companies to their industries it can be concluded that in COMPANY A, the retailer, the DSO plays a bigger role in the assets, when compared to COMPANY B.

- ***QUESTION 3: Return on Assets (ROA) and the main drivers of profitability***

The purpose of Question 3 is to understand the drivers of Return on Assets from industry to industry, getting further insights by analyzing its components: Operating Profit for ROA, Asset turnover and the Operating Leverage. The importance of ROA relies in its ability to measure a firm's success in using assets to generate earnings independent of the financing of those Assets (Wahlen, Baginski and Bradshaw, 2011).

Return on Assets can be broken as a product of two factors: Asset Turnover and Profit Margin for ROA. A deeper analysis on the firm's level of fixed assets can be performed from decomposing the Profit Margin for ROA in the product of Operating Profit /Gross Profit (effect of operating fixed assets) and Gross Profit/Sales (level of variable assets).

The ROA components differ across industries depending on their economic characteristics, and across firms within an industry and depending on the design and implementation of their strategies (Wahlen, Baginski and Bradshaw, 2011). With the suggested solution (shown in Table 4) students can conclude that COMPANY A, the retailer, has a higher return on assets than COMPANY B, which corresponds to the airline industry. Return on Assets in COMPANY A is higher than in COMPANY's B mainly due to higher profitability and efficiency as it belongs to the retail and consumers which typically has a high turnover/low profit margin strategy, selling large volumes at low prices and profit margins. In order to keep profitable, the firms in the retail industry carefully control costs and investments to achieve an acceptable Return on Investments (White, Sondhi and Fried, 2003). By contrast, COMPANY B, which belongs to the airline industry, has a lower Return on Assets partly

affected by the state of the economy (refer to Appendix 3); the industry was affected by the currency devaluation having debt in U.S. dollars which impacts the return on assets. The ROA equation provides interesting managerial insights; deciding between the strategies involves a trade-off between the Profit Margin for ROA (product differentiation) and Asset Turnover (low-cost leadership), meaning that different businesses can actually achieve the same ROCE (Morels et al, 2011; 137).

Table 4: (Decomposition of ROA)

	COMPANY A	COMPANY B
Profit Margin for ROA	5.09%	4,85%
Assets Turnover	69.5%	51.9%
Return on Assets EBIT/Assets	3.53%	2.52%

Students are expected to compute the Assets Turnover with the information given in the exhibits by using the Total Receivables from Exhibit 1 and Days of Sales Outstanding from Exhibit 3. Days of Sales Outstanding needs to be converted into Receivables Turnover ($360/8.55 = 42,11$) and apply the formula shown in Table 5 so that Receivables cancels and the result would be Sales/Assets, the formula of Asset Turnover.

Table 5: (Asset Turnover calculation)

$$\left[\frac{\text{Receivables}}{\text{Assets}} \times \frac{\text{Sales}}{\text{Receivables}} \right] = 1.65\% \times 42.11 = 69,5\%$$

The Asset Turnover ratio indicates the ability to use assets to generate sales, and the Profit Margin for ROA indicates the firm's ability to use sales to generate profits (Wahlen, Baginski and Bradshaw, 2011). Students are expected to compute the indicators as shown in *Table 4*, from which it can be concluded that COMPANY A shows a higher ROA than COMPANY B, because the Profit Margin for ROA and the Asset Turnover are higher.

Students can also compare the results to industry averages; the airline industry has an average ROA of 2.86% and Profit margin for ROA of 4.96% (CSI Market data, 2015) which is very similar to the results of COMPANY B. On the other hand, the retail stores have a higher Asset Turnover as usually its strategy is not based on profit margins but on the ability to run efficient operations and generate big asset turnover, which an example is the discounts and promotions. Comparing to the industry, the retail industry is very efficient having an Asset Turnover ratio of 2.05 on average in 2014 (CSI Market data, 2015). COMPANY A presents an Asset Turnover ratio of 69.5% due to its high investments during the year. Contrary, since the airline industry is much more capital-intensive having higher tangible fixed assets, which means it takes more time to turn assets over time.

Table 6:(Profit Margin for ROA decomposition)

	COMPANY A	COMPANY B
Operating Profit /Gross Profit	21.08%	11.12%
Gross Profit/Sales	24.13%	43.62%
Operating Profit for ROA	5.09%	4.85%
Degree of Operating Leverage (DOL)	4.74	8.99

The numerator of the Profit Margin for ROA can be broken by examining the different expenses the firm had in the period and which lead to determine the operating profit. Students are expected to analyze each component and relate it to the industry characteristics where the company operates. In *Table 6*, the Profit Margin for ROA is decomposed into Operating Profit /Gross Profit and Gross Profit/Sales. The first component indicates the level of fixed costs the firm has and the second component indicates the level of variable costs firms operate with a different mix of fixed and variable costs in their cost structures. By examining the decomposition of Operating Profit for ROA students can analyze the Operating Risk of COMPANY A and COMPANY B.

The Operating Risk (Operating profit / Gross Profit) measures how much of fixed costs impact the

firm's operating profit. The lower the result of the ratio, the higher the Operating Risk is, meaning that there are higher fixed costs that impact the firm's operating profit.

The result for COMPANY B (11.12%) is much lower than COMPANY A (21.08%) indicating that COMPANY B has a greater Operating Risk. COMPANY B belongs to the airline industry, thus has a higher portion of fixed assets as it incurred in fixed costs such as depreciation, insurance and compensation costs. By contrast, COMPANY A, the retailer has a lower Operating Risk, as the majority of its costs are variable in its cost structure (reseller), even though it still has some fixed costs due to necessary expenditures in sales and marketing coming from high competition. Students are also expected to make an analysis regarding the Degree of Operating Leverage in the two companies. Technically, Operating Leverage results from the existence of fixed operating expenses in the firm's income stream. It can be defined as the firm's ability to use fixed operating costs to magnify the effects of changes in sales on its EBIT (Khan et al, 2007). The Degree of Operating Leverage measures this changes and the greater the effect of a change in sales on profits (Hansen et al., 2009: 607). As shown in Table 6, COMPANY A has a lower DOL than COMPANY B, which results are strictly linked with the Operating Risk analysis. When sales of COMPANY A increase in one percent its operating income increases by 4.74 per cent, and vice-versa. When COMPANY's B sales decrease in one per cent its operating income decreases 8.99 times more, and vice-versa. The majority of retailers have high proportion of variable costs in their cost structures, whereas an airline company, which incurs in high fixed costs, has big increases in their operating profit when the sales increase, also called economies of scale. Firms with high levels of operating leverage experience greater variability in their ROAs than firms with low levels (Wahlen, Baginski and Bradshaw, 2011).

6. CONCLUSION

This Work Project aimed at elaborating a teaching case to serve Financial Statement Analysis courses in the undergraduate and master's degree, by helping student's learning process, applying real-life examples in evaluating the ability to use and interpret fundamental data, assessing and analyzing the Cash Conversion Cycle and Return on Assets, combined with Colombian industry research with the purpose of discussing Colombian economic specificities, aiming at showing the differences and similarities between the industries' financial data as well as some economic characteristics that affect and influence management decision towards the CCC and ROA of a firm. While building the case study, some limitations were identified, which are proposed for further analysis in related researches. Future research can be made around the analysis of the ratio's variations over a period of time, which allows to perform a deeper ratio analysis. The comparison among periods can highlight the effects of the currency rate, which has affected Colombia recently, and the effects of change in accounting regulation, which is expected to happen in 2017. Also, the knowledge regarding seasonality of sales and product life cycle are crucial in analysing the changes over time in the ROA.

Concluding, the present work project produced new insight in two Colombian industries; Airline and Retail, justified with two of the biggest companies in the country. This case study is expected to help students to understand, analyse and draw conclusions of the cash conversion cycle and profitability among industries, of course combined with theoretical knowledge discussed in class adding value to the learning process.

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APPENDIXES

Appendix 1 – Company information

GRUPO ÉXITO Grupo Éxito is part of the French retailer Groupe Casino in the South American region. The Group is the largest retailer in South America with presence in Brazil, Argentina, Uruguay and Colombia and 2,518 stores thorough the continent, opening 16 stores during the last quarter of 2016. During 2015, Grupo Éxito acquired Grupo Pão de Açúcar in Brazil, its latest acquisition (ESMmagazine, 2016)

Financial report 2015:

During 2015, Avianca's revenue grew 22%. Operating costs, excluding the effect of fuel, increased by 36%, mainly due to operational growth, the increase in the exchange rate, among others. Fuel costs increase by 3% due to the overall increase in the operation. In 2015 the net result was a loss, which includes the negative effect on exchange difference reflecting the devaluation of 31.6% compared to 2014, adding up the changes in the exchange rate policies in Venezuela. The indicator return on equity, excluding loss exchange difference is at 7.1% and the yield of active, excluding loss of 0.8% change. An increase in debt is presented due to the financing of productive fixed assets such as Boeing fleet built at the end of 2014. The level of debt to equity is only 8.25 times (Avianca, 2015)

AVIANCA Aerovías del Continente Americano S.A. has been the national airline and flag carrier of Colombia since December 1919. It is headquartered in Bogotá, D.C. with its main hub at El Dorado International Airport. Avianca also comprises a group of seven Latin American airlines, whose operations are combined to function as one airline using a code sharing system. Avianca is the largest airline in Colombia and second largest in Latin America. Avianca together with its subsidiaries has the most extensive network of destinations in Latin America.[7] It is wholly owned by Synergy Group S.A., a South American holding company established by Germán Efromovich and specializing in air transport. It is listed on the Colombia Stock Exchange (Wikipedia)

Financial report 2015:

At the close of 2015 consolidated the revenues of the consolidated financial statements had a growth of 218% explained by a positive result in Colombia. However, these results are not comparable with 2014 due to addition of the operations of Brazil and Argentina. The increase in the operating income was of 2%, driven especially by good results in the sales over last quarter. Financial debt closed the year 2015 with an adjusted net financial debt (NFD) of COP \$ 3.6 billion and an indicator of DFN / EBITDA adjusted about 3.8. (Grupo Exito, 2015)

Appendix 2 – Financial information

Exhibit 1. (Common-sized Balance Sheets)

BALANCE SHEET on December 31st, 2015	COMPANY A	COMPANY B
Current Assets		
Cash and equivalents	5.3%	5.4%
Accounts receivable	1.4%	2.9%
Inventories	7.5%	1.0%
Other current assets	1.9%	8.3%
Total current assets	16.2%	17.6%
Non-current assets		
Total Fixed assets	19.5%	68.7%
Accounts receivable in the long term	0.2%	0.5%
Investments	52.7%	4.2%
Intangibles	10.5%	2.0%
Other non-current assets	0.9%	7.0%
Total non-current assets	83.8%	82.4%
TOTAL ASSETS	100%	100%
Current liabilities		
Debt	3.5%	6.0%
Accounts payable	16.5%	6.5%
Other current liabilities	2.8%	23.2%
Total current liabilities	22.8%	35.8%
Non-current liabilities		
Debt	25.8%	45.0%
Accounts payable in the long term	0.0%	0.1%
Other non-current assets	1.9%	9.8%
Total non-current liabilities	27.6%	54.9%
TOTAL LIABILITIES	50.4%	90.6%
Shareholder's equity	49.6%	9.4%
TOTAL LIABILITIES AND EQUITY	100%	100%

Note: Total accounts receivables 1.65%

Exhibit 2 (Common-sized Income Statements)

INCOME STATEMENT in 2015 COMPANY A COMPANY B

Sales	100%	100%
Cost of goods sold COGS	-75.9%	-56.4
GROSS PROFIT	24.1%	43.6%
Administrative expenses	-1.7%	-17.0%
Sales expenses	-9.7%	-17.2%
Depreciation and amortization	-7.6%	-4.5%
OPERATING PROFIT	5.1%	4.9%
Financial income	4.7%	1.0%
Financial expenses	-1.7%	-4.5%
Currency exchange	-1.8%	-5.2%
Minority interest	1.4%	0.0%
PROFIT BEFORE TAXES	7.6%	-3.9%

Exhibit 3 (Financial ratios)

	COMPANY A	COMPANY B
Days Sales Outstanding	8.55	23.87
Inventory Turnover	9.23	52.14
Net purchases during 2015 (in millions COP ⁷)	7,985,366	4,458,788
Accounts payable at the end of 2015 (in millions COP)	2,505,973	995,772

Assumption: The year has 360 days

⁷ The exchange rate COP/USD in 2015 was 3,174.50

Appendix 3 – Colombian Peso COP / U.S. Dollar USD



The currency presented in 2015 the highest devaluation in the last 10 years, reaching 31.6% (DANE, 2015) at the end of the year. This behavior of the currency was mainly due by the falling oil prices, nervousness generated by the uncertainty of China's economic growth and the expectation regarding the rates of the federal reserve of the United States (Avianca, 2015)

Appendix 4 – Tables

Table A. Industries and Companies

Company	Industry	Company Name
A	Retail	Grupo Éxito
B	Airline	Avianca

Table B: Liquidity ratios

COMPANY	A	B
Year	2015	
Current Ratio	0.71	0.49
Acid-test Ratio	0.31	0.46
Cash ratio	0.23	0.15

Appendix 4 – Main differences between Colgaap (Colombian accounting standards) and

IFRS

- The full set of financial statements: Under IFRS/ IAS has five financial statements that are considered fundamental for investors and shareholders, whereas COLGAAP has six. The extra financial statement is “Changes in financial position”, which intention is to report how the company obtained money, how did it spend it and how much is left in the end of the period. In few words, it is a statement of uses and sources of funds.

Under the NIFF the minority interest is included in the equity.

- Property, plant and equipment: Under IFRS/ IAAS the significant spare parts are considered property, plant and equipment, whereas under COLGAAP are always considered inventory.

The IFRS allows showing an account for enabling or retiring a property or operation and allows a provision in the liabilities as a counterpart.

- Intangibles: The intangibles under the IFRS/ IAS are amortizable depending if their useful life is finite or not, whereas under COLGAAP is always amortizable according to the fiscal norm. Under IFRS/ IAS the goodwill is not amortizable and impairment test is made, whereas under COLGAAP it is amortizable for 10 years and there are no impairment tests to make.
- Revenue recognition: Under IFRS there is a separation when the revenue is made on credit and considers interest's charges on it, whereas under COLGAAP is not made.
- Inventories: The IFRS forbids the use of the LIFO method, whereas in Colombia is up to the company to choose between FIFO, LIFO and weighted average cost. The choice of the measurement basis for inventories affects directly the CCC, as the inventory may be biased during inflation or deflation periods when depending on the inventory costing method the value of the inventory may be overstated.

The use of spare parts under COLGAAP is considered in a 100 per cent as inventory, while under IFRS it is initially presented as inventory and later recognized as an expense when consumption occurs.

- Leasing: They have different connotations for the meaning of financial and operational leasing. Under IFRS17 / IAS17 the classification of leasing depends upon the economic essence, whether all the risks are transferred or not, and not upon the contract length like under COLGAAP. This difference affects the financial analysis of companies, since some leasing agreements that were classified as operational shift to financial and therefore reported in the balance sheet.
- Currency exchange: According to IFRS the exchange differences are recognized in the financial statements. The exchange differences which arise on monetary items are reported in the income statement of the period. Monetary items, such as cash, trade receivable, trade payables, pensions, and other employee benefits to be paid in cash, are units of currency held and assets and liabilities to be received or paid in a fixed or determinable number of units of currency. The exception to the previous rule is that the exchange differences that arise on monetary items that form part of the reporting entity's net investment in a foreign operation are recognized in the group financial statements within a separate component of equity. These exchange differences are recognized in the profit or loss on disposal of the net investment.

Appendix 5 – Balance sheet and Income statement

- Grupo Éxito

The following financial statements were taken from Grupo Éxito's website [www.almacenesexito.com](http://www.almacenesexito.com/files/inversionistas/pdf/Informes-trimestrales/4T15/Informes_de_fin_de_Ejercicio.pdf)
http://www.almacenesexito.com/files/inversionistas/pdf/Informes-trimestrales/4T15/Informes_de_fin_de_Ejercicio.pdf

Balance sheet

Activo	Notas	2015	2014
Activo corriente			
Efectivo y equivalentes de efectivo	6	810,647	2,706,110
Cuentas comerciales por cobrar y otras cuentas por cobrar	7	217,742	162,155
Gastos pagados por anticipado		18,008	25,883
Cuentas por cobrar partes relacionadas	8	71,887	54,374
Inventarios	9	1,141,806	1,153,097
Activos por impuestos	21	133,373	67,925
Otros activos financieros	10	67,027	20,344
Activos no corrientes mantenidos para la venta	11	-	6,740
Total activo corriente		2,460,490	4,196,628
Activo no corriente			
Propiedades, planta y equipo, neto	12	2,961,052	2,900,345
Propiedades de inversión, neto	13	96,442	98,535
Plusvalía	14	1,453,077	1,056,621
Activos intangibles distintos de la plusvalía, neto	15	140,115	81,419
Inversiones contabilizadas utilizando el método de la participación, neto	16	7,900,651	2,320,681
Cuentas comerciales por cobrar y otras cuentas por cobrar	7	19,709	16,381
Gastos pagados por anticipado		12,996	12,918
Activo por impuestos diferidos	21	-	-
Otros activos financieros	10	138,177	147,063
Otros activos no financieros		398	398
Total activo no corriente		12,722,617	6,634,361
Total activo		15,183,107	10,830,989

Pasivos y patrimonio	Notas	2015	2014
Pasivo corriente			
Pasivos financieros	17	529,710	5,479
Provisiones por beneficios a los empleados	18	4,103	5,360
Otras provisiones	19	69,192	62,773
Cuentas por pagar comerciales y otras cuentas por pagar	20	2,505,973	2,437,895
Cuentas por pagar partes relacionadas	8	157,619	118,241
Pasivos por impuestos	21	108,086	78,289
Otros pasivos financieros	22	2,351	158,085
Otros pasivos no financieros	23	84,803	71,194
Total pasivo corriente		3,461,837	2,937,316
Pasivo no corriente			
Pasivos financieros	17	3,911,747	36,416
Provisiones por beneficios a los empleados	18	32,257	42,205
Otras provisiones	19	8,520	13,214
Cuentas por pagar comerciales y otras cuentas por pagar	20	-	573
Pasivos por impuestos diferidos	21	190,776	44,670
Otros pasivos financieros	22	-	-
Otros pasivos no financieros	23	49,488	51,588
Total pasivo no corriente		4,192,788	188,666
Total pasivo		7,654,625	3,125,982
Patrimonio de los accionistas, ver estado adjunto	24 y 25	7,528,482	7,705,007
Total pasivo y patrimonio de los accionistas		15,183,107	10,830,989

Las Notas que se acompañan forman parte integral de los estados financieros separados.

Income statement

Por los años finalizados el 31 de diciembre de 2015 y 2014 (Cifras expresadas en millones de pesos colombianos)

	Notas	2015	2014
Operaciones continuadas			
Ingresos de actividades ordinarias	26	10,539,297	9,758,680
Costo de ventas	27	(7,996,657)	(7,394,406)
Ganancia bruta		2,542,640	2,364,274
Gastos de distribución	28	(1,024,036)	(931,213)
Gastos de administración y venta	28	(178,175)	(169,233)
Gastos por beneficios a los empleados		(785,763)	(705,641)
Otros ingresos operativos	29	44,702	13,987
Otros gastos operativos	29	(121,973)	(23,108)
Otras ganancias, netas	29	58,544	6,467
Ganancia por actividades de operación		535,939	555,533
Ingresos financieros	30	916,625	188,633
Gastos financieros	30	(793,402)	(148,497)
Participación en las ganancias de subsidiarias, asociadas y negocios conjuntos que se contabilizan utilizando el método de la participación		144,415	70,007
Ganancia antes del impuesto a las ganancias por operaciones continuadas		803,577	665,676
Gasto por impuestos	21	(230,082)	(166,246)
Ganancia neta del ejercicio por operaciones continuadas		573,495	499,430
Ganancia por acción (*)			
Ganancia por acción básica (*):			
Ganancia por acción básica en operaciones continuadas	31	1,281.26	1,115.79
Ganancia por acción diluida (*):			
Ganancia diluida por acción procedente de operaciones continuadas	31	1,281.26	1,115.79

(*) Cifras expresadas en pesos colombianos.

Las Notas que se acompañan forman parte integral de los estados financieros separados.

- Avianca

The following financial statements were taken from Avianca's website www.avianca.com
<http://www.avianca.com/es/Documents/estados-financieros-consolidados-avianca-2015.pdf>

Balance sheet

	Notas	31 de diciembre de 2015	31 de diciembre de 2014
Activos			
Activos corrientes:			
Efectivo y equivalentes de efectivo	8	\$ 806.938	\$ 867.733
Efectivo restringido	8	16.525	4.754
Inversiones disponibles para la venta	6	—	2.914
Cuentas por cobrar, neto de estimación para cuentas de cobro dudoso	9	611.463	634.973
Cuentas por cobrar con partes relacionadas	10	670.910	1.112.283
Repuestos no reparables y suministros, neto de provisión por obsolescencia	11	150.176	105.290
Gastos pagados por anticipado	12	119.875	100.766
Activos mantenidos para la venta	13	1.858	3.235
Depósitos y otros activos	14	267.932	228.265
Total activos corrientes		2.645.677	3.060.213
Activos no corrientes:			
Inversiones disponibles para la venta	6	2.498	567
Depósitos y otros activos	14	627.595	410.742
Cuentas por cobrar, neto de estimación para cuentas de cobro dudoso	9	76.381	46.708
Cuentas por cobrar con partes relacionadas	10	354.479	26.908
Activos intangibles	16	301.902	231.119
Impuesto diferido activo	32	706.845	77.276
Propiedades y equipo, neto	15	10.344.431	6.681.038
Total activos no corrientes		12.414.131	7.474.358
Total activos		\$ 15.059.808	\$ 10.534.571

	Notas	31 de diciembre de 2015	31 de diciembre de 2014
Pasivos y patrimonio			
Pasivos corrientes:			
Porción corriente de deuda a largo plazo	17	\$ 903.416	\$ 762.910
Cuentas por pagar	18	985.705	914.123
Cuentas por pagar con partes relacionadas	10	2.060.134	812.843
Gastos acumulados	19	223.102	205.914
Provisión para litigios	33	28.279	22.585
Provisión para condiciones de retorno	20	44.842	57.847
Beneficios de empleados	21	101.410	115.544
Ingresos diferidos por transporte no devengados	22	1.009.150	801.687
Otros pasivos	23	29.435	190.593
Total pasivos corrientes		5.385.473	3.884.046
Pasivos no corrientes:			
Deuda a largo plazo	17	6.776.976	4.706.309
Cuentas por pagar	18	10.607	50.089
Cuentas por pagar con partes relacionadas	10	27.750	32.569
Provisión para condiciones de retorno	20	256.685	99.368
Beneficios de empleados	21	392.553	395.347
Pasivos por impuesto diferido	31	730.186	20.310
Ingresos diferidos por transporte no devengados	22	22.204	27.798
Otros pasivos no corrientes	23	44.943	20.259
Total pasivos no corrientes		8.261.904	5.352.049
Total pasivos		13.647.377	9.236.095
Patrimonio:			
Acciones comunes		102.070	102.070
Capital adicional pagado		402.836	402.836
Utilidades retenidas y reservas de OCI	25	243.383	536.207
Revaluación y otras reservas		(7.650)	19.034
Efecto por traducción de moneda		668.588	237.171
Total patrimonio atribuible a la Compañía		1.409.227	1.297.318
Participación no controladora		3.204	1.158
Total patrimonio		1.412.431	1.298.476
Total pasivos y patrimonio		\$ 15.059.808	\$ 10.534.571

Income statement

	Notas	Por el año terminado al 31 de diciembre de	
		2015	2014
Ingresos operacionales:			
Pasajeros	27	\$ 5.642.073	\$ 4.767.632
Carga y otros	27	2.187.368	1.411.183
Total ingresos operacionales		<u>7.829.441</u>	<u>6.178.815</u>
Gastos operacionales:			
Operaciones de vuelo		113.992	74.973
Combustible de aeronaves		1.695.941	1.596.904
Operaciones terrestres		792.781	541.251
Arrendamiento de aeronaves		680.121	433.184
Servicios a pasajeros		219.616	159.774
Mantenimiento y reparaciones		541.299	293.210
Tráfico aéreo		370.152	259.314
Mercadeo y ventas		1.347.384	1.053.705
Generales, administrativos y otros		302.500	197.470
Salarios, sueldos y beneficios		1.032.008	855.490
Depreciación y amortización	15,16	353.880	219.546
Total gastos operacionales		<u>7.449.674</u>	<u>5.684.821</u>
Utilidad de operación		<u>379.767</u>	<u>493.994</u>
Gastos por intereses		(350.523)	(196.865)
Ingresos por intereses		74.388	32.436
Instrumentos financieros derivados		2.749	13.316
Diferencial cambiario		(409.615)	72.858
(Pérdida) utilidad antes del impuesto sobre la renta		<u>(303.234)</u>	<u>415.739</u>
Gasto de impuesto sobre la renta - corriente	32	(18.485)	(50.719)
Gasto de impuesto sobre la renta - diferido	32	(58.077)	(37.010)
Total gasto por impuesto sobre la renta		<u>(76.562)</u>	<u>(87.729)</u>
(Pérdida) utilidad neta del periodo		<u>\$ (379.796)</u>	<u>\$ 328.010</u>

Appendix 6 – Purpose of the questions

	Purpose	Suggested ratios
QUESTION 1 Industry characteristics	Explore the usefulness of financial statements and ratio analysis and discuss the industry fundamentals.	<ul style="list-style-type: none">• Common sized balance sheet• Common sized income statement
QUESTION 2 Cash Conversion Cycle	Analyze how different components affect the Cash Conversion Cycle and understand why it varies from industry to industry.	<ul style="list-style-type: none">• Days of sales outstanding.• Days of inventory outstanding.• Days of payables outstanding.
Return on Assets	Understand the reasons behind the Return on Assets (ROA) from industry to industry, getting further insights by analyzing its drivers.	<ul style="list-style-type: none">• Profit margin for ROA.• Asset turnover.• Degree of operating leverage.
QUESTION 3 Liquidity	Ensure the understanding about the liquidity degree among industries and relate them to the Cash Conversion Cycle and its components.	<ul style="list-style-type: none">• Current ratio.• Acid-test ratio.• Cash ratio.

Appendix 7 – Teaching methodology

The case study is intended to be discussed and solve by groups of three students taking finance related courses, especially Masters' courses of Financial Statement Analysis. The time frame for the development of the case study is two weeks, so that students have enough time to make proper research regarding industries comparable and economic data.

Appendix 8 – Grading Criteria

Points (out of 100)	Comments
Presentation	10
Overall Presentation	3.75 Cover page Physical Presentation Slides or not Resume Table Industry information (2.5 if three out of four, otherwise 1.25 - 3.75 to best ones)
Sources	3.75 Bibliography Source Quotation Only bibliography 1.25. 2.5 relate bibliography with contents. 3.75 Sources management
Methodology and Source Relation	2.5 Details of methodology - SUBJECTIVE - distinguish between groups
Q1: Company Identification	40
Correct Identification of Industries	15 7.5 per industry
Justification with BS data	10 2.5 per industry
Justification with IS data	10 2.5 per industry
Justification with Industry averages	5 2.5 per industry
Q2: Cash Conversion Cycle	25
Ratio computation/interpretation	7.5 Correct calculation and explanation of the ratios full points
Overall assessment	2.5 General assessment of the ratios calculated
Link to previously defined industries	7.5 Specific assessment of results linked to industries
Liquidity	
Ratio computation/interpretation	7.5 Correct calculation and explanation of the ratios full points
Q3: ROA	25
Ratio computation/interpretation	7.5 Correct calculation of ROA and its components (Assets turnover and profit margin for ROA)
Decomposition of ROA	7.5 Correct calculation and interpretation of the decomposition of ROA. Analysis
Overall Assessment	2.5 General assessment of the ratios calculated
Link to previously defined industries	7.5 Specific assessment of results linked to industries

CASE STUDY:

COMMON-SIZED FINANCIAL STATEMENTS IN THE RETAIL AND AIRLINE INDUSTRY IN COLOMBIA

COMPARING PROFITABILITY AND CASH CONVERSION CYCLE

JANUARY 2017
FINANCIAL STATEMENT ANALYSIS
NATALIA CABRERA

Matching the companies to the industries (Retail)

Inventory

- High levels of inventory due to merchandise
- High inventory turnover

Accounts receivables

- Low levels of accounts receivables
- Clients pay in cash or cards

Profit Margin

- Low profit margin due to high COGS
-

Matching the companies to the industries (Airline)

Fixed Assets	Operating Expenses	Debt
<ul style="list-style-type: none"> High portion of fixed assets representing aircrafts and equipment 	<ul style="list-style-type: none"> High operating expenses due to fuel, salaries, amortization, etc. 	<ul style="list-style-type: none"> High level of debt due to assets financing (aircrafts)

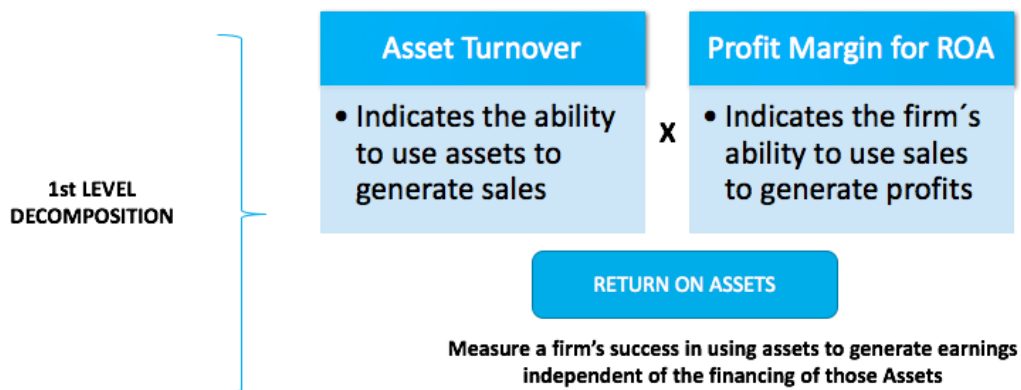
Activity Ratios

Liquidity Ratio	Calculation	Interpretation
Receivable Turnover	$\text{Net Credit Sales} / \text{Average Accounts Receivable}$	Measures the amount it takes a firm to collect its payments from sales on credit
Inventory Turnover	$\text{Sales} / \text{Average Inventory}$	Measures how long it takes to a firm to convert its inventories into sales
Payable Turnover	$\text{Net Credit Purchases} / \text{Ave. Accounts Payable}$	Indicator of a firm's performance in paying their supplies
Operating Cycle	$\text{DSO} + \text{DIO}$	Measures the number of days a company makes to complete the operating cycle
Cash Conversion Cycle	$\text{Operating Cycle} - \text{Days Payable Outstanding}$	Number of days it takes a business to convert its production inputs into cash receipts

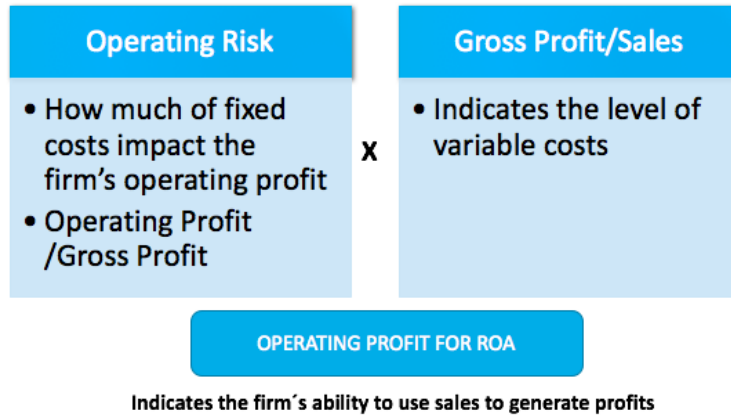
Liquidity Ratios

Liquidity Ratio	Calculation	Interpretation
Current Ratio	Current Assets / Current Liabilities	Measures the firm's ability to pay off its short terms obligations with its current assets
Acid-test Ratio	(Current Assets – Inventory) / Current Liabilities	Measures the ability of a firm to use its near cash minus inventory to meet its current liabilities immediately.
Cash Ratio	(Current Assets – Accounts receivables) / Current Liabilities	The ratio of a firm's total cash and cash equivalents to its current liabilities.

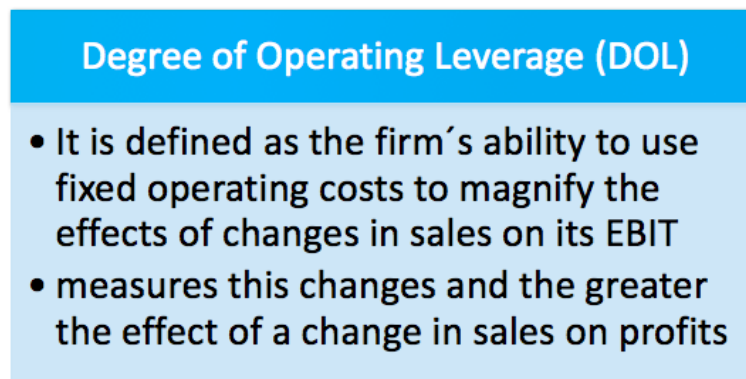
Return on Assets



Operating Profit for ROA



Operating Risk



References/Suggested readings

* (Gibson, 2013) Gibson, Charles H. 2013. *Financial Statement Analysis*. Mason, OH: South-Western.

* (Wahlen et al., 2011) Wahlen, James; Baginski, Stephen and Bradshaw, Mark. 2011. *Financial Reporting, Financial Statement Analysis, and Valuation: A Strategic Perspective*. Boston: Cengage Learning.

* (Subramanyam et al., 2009) Subramanyam, K., and Wild, John. 2009. *Financial Statement Analysis*. 10th ed. McGraw-Hill.

