

FUNDAÇÃO GETULIO VARGAS  
ESCOLA DE ADMINISTRAÇÃO DE EMPRESAS DE SÃO PAULO

**THE IMPACT OF IFRS 16 ON THE LESSEES' VALUATION:**

Experimental Evidence of the Impact of Lease Accounting Principles on Analysts'  
Assessment of Lessees' Financial Position and Performance

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SÃO PAULO

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Applied Thesis presented to Escola de  
Administração de Empresas de São Paulo da  
Fundação Getulio Vargas, as required to  
obtain the title of Professional Master in  
Management for Competitiveness

Research Line: Finance and Controlling

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## DEDICATÓRIA

*À Virgem Maria, causa da nossa alegria*

## **ABSTRACT**

**Purpose:** Until 1983 companies have not recognized any leased asset or any lease liability. From 1984 until 2018, while the IAS 17 was effective, companies recognized only finance lease assets and the respective liability. Since 2019, companies implemented IFRS 16, thus began to recognize virtually all lease assets and liabilities. Such change affects the measurement of income; hence also impact financial ratios such as liquidity, leverage and profitability.

**Design/Methodology:** Based on experimental evidences, we investigate how analysts react to the recent change in accounting policy promoted by IFRS 16.

**Findings:** Results show that analysts tend to value differently companies under different lease accounting rules, calculating higher EBITDA and higher Net Debt when IFRS16 is applied.

**Research limitations:** The Colombian survey did not collect any demographical data. The Brazilian experiment collected such information but was limited to fifty-two qualified respondents.

**Practical implications:** Many studies have been conducted to predict how financial ratios should change after IFRS 16 implementation, but none to predict how market will value companies.

**Social implications:** Analysts do not behave as corporate finance literature predicts; i.e., analysts may not adjust target firms' financial reports before calculating the ratios and reaching conclusions about their financial performance and position. Hence, the mandatory accounting police change required by the IFRS 16 is a valuable decision aid to financial analysts.

**Originality:** Prior research on the recent lease accounting policy change has focused on archival data and aims to assess the impact of IFRS on firms' financial performance and financial position. However, there is a lack in literature on the effect of such mandatory accounting policy change on analysts' reaction. This study fills such gap.

**Keywords:** *Lease, IFRS 16, IAS 17, Valuation, EBITDA, Net Debt, Humans, Econs*

## RESUMO

**Proposta:** Até 1983 nenhuma informação referente aos contratos de *lease* era contabilizada. De 1984 a 2018, sob a norma IAS 17, apenas as informações de *lease* financeiro eram contabilizadas. Desde 2019, com o IFRS 16, começaram a ser contabilizadas todas as informações originadas de um *lease*. Tal mudança afetou o reconhecimento de lucro e impactou métricas financeiras como liquidez, alavancagem e lucratividade.

**Metodologia:** Baseado em evidências experimentais, investigamos como analistas reagem às recentes mudanças de política contábil promovidas pelo IFRS 16.

**Resultados:** Analistas tendem a avaliar de forma diferente empresas sob diferentes regras contábeis de *lease*, calculando um EBITDA e uma Dívida Líquida maior quando o IFRS 16 é aplicado.

**Limitações de Pesquisa:** A pesquisa colombiana, não coletou dados demográficos. O experimento brasileiro coletou tais dados, mas se limitou 52 respondentes válidos.

**Implicações Práticas:** Diversos estudos previram como os indicadores financeiros deveriam se comportar após a aplicação do IFRS 16, mas nenhum analisou o impacto no valor das empresas.

**Implicações Sociais:** Analistas não se comportam como prediz a literatura de finanças; i.e., analistas talvez não ajustem as demonstrações das empresas avaliadas antes de calcular os indicadores financeiros ou emitir pareceres sobre sua performance e valor. Portanto, a mudança contábil proposta pelo IFRS 16 é uma valiosa ajuda para tomada de decisões.

**Originalidade:** Pesquisas anteriores sobre política contábil de *lease* tiveram o objetivo de avaliar o impacto na posição financeira da companhia. Contudo, há um espaço na literatura sobre o impacto que tais políticas nos analistas. O presente estudo preenche este vazio.

**Keywords:** Lease, Arrendamento Mercantil, IFRS 16, IAS 17, Valuation, EBITDA, Dívida Líquida, Humans, Econs

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## I. INTRODUCTION

Until the reporting period ended on 31 December 1983, i.e., before the International Accounting Standard (IAS) 17 – Accounting for Leases had become effective, companies that “acquired” assets under a lease agreement (the lessees) used to account for leases as operating expenses; hence no leased asset or lease liability was recognized.

In the early 1980s the International Accounting Standards Committee (IASC) was convinced that such generally accepted accounting policy was not appropriate because lessees’ balance sheet was not representing their financial position faithfully, relevant lease liabilities were off balance sheet. Hence, in September 1982 the IASC issued the IAS 17.

From the reporting period beginning on 01 January 1984 until the reporting period ended on 31 December 2018, i.e., while the IAS 17 was effective, lessees were required to classify their lease arrangements as operating lease or finance lease. For operating leases there was no accounting change, lessees continued to account for leases arrangement as operating expenses; and the cash outflows associated with lease payments were classified in the statement of cash flows as from the operating activity. However, for finance leases, at inception, lessees were required to recognize the leased assets at fair value and the respective liability at the present value of minimum lease payments. Subsequently, lessees should depreciate the leased asset and capitalize interest on the lease liability to keep it measured at the present value of minimum lease payments; and the cash outflows to settle lease liability were classified in the statement of cash flows as from the financing activity.

Again, in the early 2000s the International Accounting Standards Board (IASB), the organization that superseded the IASC in 2001, was convinced that companies were gaming with the classification of lease arrangements between operating lease and finance lease. By the way, they were pushing the classification of genuine finance lease towards an apparent operating lease, in order to avoid the recognition of lease liabilities. Therefore, in January 2016 the IASB issued the International Financial Reporting Standard (IFRS) 16 – Leases.

Since the reporting period beginning on 01 January 2019, the IFRS 16 became effective and superseded the IAS 17. IFRS 16 introduces a single lease accounting model for lessees; accordingly, the lessee is required to recognize an asset, representing its right to use the underlying asset, and a liability, representing its obligation to make future lease payments (IFRS 16, IN10).

Subsequently, lessees shall depreciate the right-of-use asset and capitalize interest on the lease liability to keep it measured at the present value, more or less any lease liability revaluation; and shall depreciate the right-of-use asset. IFRS 16 accepts only two exemptions; a lessee may elect not to apply such single lease accounting model to: short-term leases (i.e., lease arrangements which lease term is of 12 months or less) and leases for which the underlying asset is of low value (e.g., tablets, personal computers, small items of office furniture and telephones) (IFRS 16, 5 and B6). We believe that lease arrangements to which a lessee may elect to apply the exemption rule are not relevant for valuation; therefore, we do not consider these exemptions in this study.

A global research conducted by KPMG asked executives of 800 companies how prepared are their organization for the policy changes proposed by IFRS 16. Overall, only three percent of them said that their companies had fully implemented IFRS 16 between May and September 2018, while over two thirds said that they were not on track due to the challenges they were encountering (KPMG, 2019). This topic is so relevant that IASB estimate that there were USD 2,18 trillion dollars of liabilities out of books, which will be recognized on the financial statements after IFRS 16 full implementation (IASB, 2016)

After all the adjustments proposed by the IFRS 16, we should expect a change in firms' value drivers, such as the measured operational income, EBITDA and financial leverage (Net Debt). Consequently, IFRS 16 may also impact how analysts perceive how quickly a firm might grow in the future and how efficiently it is generating cash from operating.

The accounting policies introduced by the IFRS 16 converge to what Damodaran defends as a necessary managerial adjustment to calculate the value of firms with lease contracts, since lease is more similar to debt than to equity (Damodaran 2009, 3).

Considering that since 2009 Damodaran suggests a managerial adjustment to analyze the financial position and performance of lessees, what is the benefit of IFRS 16? Would IFRS 16 actually provide a change in lessees' valuation or would it simply promote the recognition of an item that analysts have been doing in their spreadsheets 'since ever'? In theory, a firm can have only one intrinsic value and it should not be influenced by accounting rules (Damodaran 2009, 32).

A study conducted by Horton and Serafeim, analyzed market reactions after companies under UK GAAP disclose reconciliation statements to the IFRS. The findings of such study indicate that firms whose earnings decreased following IFRS adoption experienced negative

abnormal returns at the date of disclosure and an abnormal increase in trading activity (Hortom and Serafeim 2008, 5). Such results indicate that analysts were valuing differently the same companies under different accounting policies.

However, when the accounting policies is only related to lease treatment, other effects could be expected. Fulbier, Silva and Pferdehirt (2008) simulated the impact of lease capitalization in a sample of Germany companies. They found that there is a significant impact in financial ratios for balance sheet relations, but minor effects for profitability ratios and valuation multiples (Fulbir, Silva and Pferdehirt 2008).

How this fact can coexist with Damodaran theory that there is only one intrinsic value of a company despite of which accounting principles it adopts?

This research intends to answer this question by identifying how different analysts calculate value drive ratios (EBITDA and Net Debt), since we cannot preview valuation multiples behavior, of a same hypothetical lessee company under different accounting policies for accounting for leases: the old IAS 17 and the new IFRS 16.

The exclusive focus about the impact on lessee companies, not considering lessors, is because IFRS 16 promoted virtually no change for lessors' accountings policies.

## **II. THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT**

### **Valuation and value measurement ratios**

A firm's value is the present value of the cash flows to firm it is expected to generate, discounted back at a rate that reflects both the risk in the firm and the mix of debt and equity it uses (Damodaran, 2002). The result of this calculation is called Enterprise Value and it is subtracted by the net debt (total debt less cash) to determine the Equity Value, which is the amount of money that would be applied in a M&A transaction.

Beyond this general theory, other metrics are extensively used by financial analyst to relatively value an asset. In relative valuation, the value of an asset is compared to the values assessed by the market for similar or comparable assets under standardized ratios (Damodaran, 2009). Almost 90% of equity research valuations and 50% of acquisition valuations use some sort of multiples (Damodaran, 2002), and EV/EBITDA multiples are the most frequently employed (Fernandez, 2001).

Since most part of valuations are based on multiples and EBITDA is the most common metric, this study set this metric, and the net debt, as a proxy for a comparison about how analysts value a company under different lease accounting rules.

### **Lease accounting changes: IFRS16 x IAS17**

Under the IAS 17 a company had to make distinction between a finance and an operating lease. In the first case, assets were recognized in the balance sheet and so the equivalent debt. In the second case, only a lease rent payment was recognized in the income statement. The new model, IFRS16, requires the recognition of all leases in the balance sheet, except by short-term leases and leases of low-value assets (PWC, 2016).

The new standards became effective in 1<sup>st</sup> January 2019 and is expected to generate profound changes in companies' financial position, financial performance and ratios.

The first major change is regarding the recognition of the right-to-use the leased asset in the balance sheet, increasing the fixed asset, which is an input for liquidity ratios.

The counterpart of the right-to-use will be the recognition of the lease payments obligations in the liabilities, as a debt, which is an input for leverage ratios and liquidity ratios.

Impacts will also be observed in the income statement. The before called lease-rent-payments will be replaced by interest payments related to the lease liability and depreciation of the leased asset. In other words, the EBITDA and Net Profit tends to be impacted since the lease principal amount will be reflected only in the statement of cash flows.

Since IASB issued the IFRS16 in January 2016, many researchers and professionals started to study the effects of this changes in the financial statements and its ratios by capitalizing the existing operating lease contracts. The following table shows the effects measured in a study conducted by EY in 2016.

Table 1: Effects of IFRS 16 on financial ratios

Financial Statement	Financial Ratio	Effect
Income Statement	EBITDA	Up
	Operating Profit	Up
	Finance Cost	Up
	Profit Before Tax	No Effect
Balance Sheet	Lease Assets	Up
	Financial Liabilities	Up
Cash Flow	Cash from operating activities	Up
	Cash from financing activities	Dow
	Total Cash Flow	No Effect

*Note: Adapted from EY – A summary of IFRS 16 and its effects, 2016*

If the effects in financial statements and ratios can be predicted by capitalizing all operating leases, how to predict the effects of those changes on companies' valuations?

Lease capitalization is as a necessary managerial adjustment to calculate the value of firms with lease contracts, since lease is more similar to debt than to equity (Damodaran 2009, 3). In this case, Damodaran suggests analysts adjust financial reports in the same way as IFRS 16 officially requires (to recognize the lease liability and the right-to-use asset in the balance sheet, and substitute rent expenses by interest expense and depreciation charge in the income statement).

In order to do such adjustments, analysts were supported by the disclosure requirements from IAS 17 (paragraph 35), where lessees should describe the nature and characteristic of their lease arrangements (Hendriksen & van Breda 1992, 579), in order to disclose any relevant off-balance sheet liability due in the following periods: no later than one year, later than one year and no later than five years, and later than five years. Specially because some lessee desire would prefer to avoid showing a large payable in their balance sheet (Hendriksen & van Breda 1992, 575).

### **Econs and Humans**

Most of the economics and financial theories are based on assumptions such as efficient markets, symmetric information, rational decisions, etc. The problem is that most of those assumptions does not fit with the reality, which is replete of examples of inefficient markets, asymmetric information and people taking emotional and irrational decisions.

In fact, there are two kinds of thinking, one that is intuitive and automatic, and other that is reflective and rational. The first is the “automatic thinking” -humans- and the second “reflective thinking” -econs- (Thaler & Sustain 2008, 19) and both should be considered when predicting human acts and decisions.

Because people are busy and have limited attention, their choices are influenced in ways that would not be anticipated in a standard economic framework (Thaler & Sustain 2008, 37). In this case, analyst, in general should not work as “econs” like Damodaram or Hendriksen & van Breda must suggest: Rationally analyzing lease accounting implications in order to truly and completely describe its nature and characteristic or making the proper managerial adjustments to calculate the intrinsic and fair value of a firm. It’s expected that most of them would behave like “human”, relying on financial reports to directly extract data to support their decision making.

### **Market reactions under different accounting standards: Intrinsic Value and Value Measured**

This assumption can be attested on how analysts react differently under different accounting standards.

A study conducted by Horton and Serafeim, analyzed market reactions after companies under UK GAAP disclosure reconciliation statements to IFRS. The findings of such study indicate that firms whose earnings decreased following IFRS adoption experienced negative abnormal returns at the date of disclosure and an abnormal increase in trading activity (Horton and Serafeim 2008, 5). Such results indicate that analysts were valuing differently the same companies under different accounting policies, which can lead to the conclusion that the intrinsic value of a firm can be manipulated or, at least, influenced by the adopted accounting practices.

A study conducted by Bianca Checon about how different formats of financial information disclosure should impact analysts, shows that narrative formats does not impact either the investment propensity or the amount of retrieved information from memory in comparison to traditional formats, unless the analyst has less than five years of financial experience, in this case, their investment propensity adjusted to the same level of more experienced investors (Checon 2018, 205).

It’s possible to assume, that analysts, at Checon experiment, with more than five years of financial experience, are more “econs” than “humans”, since their analytical thinking apparently



are not manipulated by narrative informations. But this “econs” propensity were attested by narrative versus traditional financial information disclosure formats. In this case, analysts tend to rationalize more and rely less on the provided information, being more propense to make any necessary managerial adjustment. In this case, IFRS 16 would not have any impact on company’s valuation or analyst’s perception.

But, would Checon’s results be different when tested, not on formats, but on accounting policies? This can explain the different conclusions raised by Checon (2018) versus Horton and Serafeim (2008).

Based on that results, alternatively, it’s possible to assume that analysts are more “humans” than “econs”, since they analyzed differently the same company under different accounting policies. However, to verify if IFRS 16 is a decision-aid, i.e., if it comes to solve a problem providing investors with better information about lessees’ financial position and enabling investors to more accurately calculate the firm’s value, we would need to investigate whether analysts correctly interpret the lessees’ financial information, if financial reports are prepared in accordance with IAS 17 or IFRS 16.

### **Hypotheses**

On the one hand, if accounting information is relevant to capital market, we expect that modifications on accounting standards that promote relevant changes in value driven accounting ratios should be followed by changes in the prices on capital markets.

On the other hand, if IFRS 16 promotes only “pure” accounting changes, with no impact on strategy, operating, cash flow, as some would argue (Mazars 2006), we should not expect any change on valuation of lessees.

Two mutually exclusive hypotheses can be formulated about how analysts treat the information provided:

H<sub>0</sub>: Analysts already do the adjustments recommended by Damodaran, hence the new lease accounting policy will not add any new relevant information to calculate lessees’ value (the samples means do not diverge statistically from each other).

H<sub>1</sub>: Analysts value companies differently under different lease accounting policies. In this case, analysts perceive the lessees’ financial position and performance differently despite the fact

that their operating and business model are the same independently of how they are accounted for IAS 17 or IFRS 16 (the samples means diverge statistically from each other).

In other words, following Thaler & Sustain (2008),  $H_0$  considers analysts are *econs*, while  $H_1$  considers them as *humans*.

In case analysts are *humans* (i.e.,  $H_1$  is not rejected), we will further investigate whether analysts correctly interpret the lessees' financial position and performance, when they receive financial reports prepared in accordance with IAS 17 and IFRS 16. Therefore, we will investigate the following hypothesis:

$H_0$ : Analysts already do the adjustments recommended by Damodaran, hence the new lease accounting policy will not add any new relevant information to calculate lessees' value (the sample mean do not diverge statistically from the expected value – considering IFRS 16 rules).

$H_2$ : Analysts do not adjust lease as recommended by Damodaran, hence the new lease accounting policy will add new relevant information to calculate lessees' value (the sample mean diverge statistically from the expected value – considering IFRS 16 rules).

Before this second test, its necessary to calculate theoretical values for EBITDA, Net Debt and their ratio (Net Debt / EBITDA) with those values assessed by respondents.

Table 2: IFRS 16 EBITDA theoretical formula

Formula	Value
(+) Operating Profit	\$ 749.108
(+) Depreciation and amortization (airplanes)	\$ 136.928
(+) Depreciation and amortization (other fixed assets)	\$ 100.000
<b>(=) EBITDA Theoretical values</b>	<b>\$ 986.036</b>

Table 3: IAS 17 EBITDA theoretical formula

Formula	Value
(+) Operating Profit	\$ 586.036
(+) Lease rent expenses (airplanes)	\$ 300.000
(+) Depreciation and amortization (other fixed assets)	\$ 100.000
<b>(=) EBITDA Theoretical values</b>	<b>\$ 986.036</b>

Table 4: IFRS 16 Net Debt theoretical formula

Formula	Value
(+) Long-term debt (current portion)	\$ 125.000
(+) Long-term debt (no-current portion)	\$ 557.000
(+) Lease contract (current portion)	\$ 275.229
(+) Lease contract (no-current portion)	\$ 2.060.616
(-) Cash and Cash Equivalents	(\$ 716.884)
<b>(=) Net Debt Theoretical values</b>	<b>\$ 2.300.961</b>

Table 5: IAS 17 Net Debt theoretical formula

Formula	Value
(+) Long-term debt (current portion)	\$ 125.000
(+) Long-term debt (no-current portion)	\$ 557.000
(+) Lease contract future payments (present value)	\$ 2.335.845
(-) Cash and Cash Equivalents	(\$ 716.884)
<b>(=) Net Debt Theoretical values</b>	<b>\$ 2.300.961</b>

Based on the formulas demonstrated above the expected of Net Debt/EBITDA ratio is 2,33.

Statics tests applied on the questionnaires data collected in this research intends to conclude which hypothesis can be refused or not refused.

Beyond this mutual exclusive hypothesis, it's possible that exist a middle ground, where some of the effects has been anticipated and another portion not. This view converge to what IASB President, Mr. Hans Hoogervorst, suggests in a video on IFRS 16 release: According to him, more sophisticated analysts have been correctly capitalizing leases to measure companies values; less sophisticated analysts have been capitalizing it using some sort of multiples; and unsophisticated analysts haven't been capitalizing it at all.

Due some issues related to demographic data, which are explained in this paper, and limitations on experiment conduction, this work does not intend to investigate this middle ground, focusing on whether analysts do or don't adjustments, however this middle ground can exist.

### III. METHOD

In order to test if analysts will value differently companies under IFRS16 than IAS17, we collected data from two samples, under different strategies.

First, we conducted a survey in which respondents were required to calculate the EBITDA and Net Debt (valuation proxies) of a hypothetical airline company with a relevant lease contract. The survey was comprised by two tasks, first the airline's financial reports were prepared in accordance with IAS 17, then in accordance with IFRS 16.

Secondly, with another sample of financial analysts, we applied the same tasks by structured as a between-subjects experiment; where we manipulated the accounting standard in accordance to which the airline's financial reports were prepared (IFRS 16 or IAS 17). Both questionnaires had a brief explanation about the relevant accounting standard used to account for the lease arrangements in the financial statements and strongly recommended that respondent should make any necessary adjustment.

Following, the responds were provided with Financial Statements (based on the respective accounting rules) and details of the same lease contract with enough information to make any adjustment, such as full contract value, expiration date, implicit interest rate, present value on the exercise date and asset depreciation table.

The survey was applied to Colombian accountants, during a train-the-trainers workshop about IFRS 16 held on Cartagena, on 22<sup>nd</sup> August 2018. This survey followed a within-subject type methodology. In other words, the same responds performed the task twice. The workshop began with a brief explanation of IAS 17, followed by the application of the first survey (based on IAS 17). Then, there was a 90 min section on IFRS 16; after that the second survey (based on IFRS 16) was applied. Due to the fact that these surveys were hosted on different web questionnaires, answered anonymously, it was not possible to track answers and determine how differently a particular respondent answered the tasks. There was also no collection of demographic data for those respondents. From now on, this data collection will be named as "Colombian survey". In total, 200 professional accountants attended to the workshop. Among them, 83 accountants completely answered the questionnaire based on IFRS 16, and 92 completed it based on IAS 17. The second data collection was an experiment applied in Brazilian professionals between September and December 2018 and followed a between-subject methodology. In other words, the

questionnaire was randomly divided, creating two groups of respondents. One group was requested to calculate the valuation proxies under the IFRS 16, and the other group under the IAS17. For this questionnaire, there were collection of demographic data. From now on, this experiment will be named as “Brazilian experiment”. In total, 153 individuals participated in this experiment, of which 145 auto declared to be a finance or accounting professional. Therefore, 8 participants were eliminated from the sample because they declared themselves as students only or professionals from other fields. Among the 145 qualified respondents, 52 participants answered the full questionnaire, making this the total number of available answers to analyze. All questionnaires for the Brazilian experiment were applied throw internet and the invitations sent by e-mail and social medias such as LinkedIn.

As mentioned above, both data collections employed the same questionnaire, differentiating themselves only by the application methodology, the collection of demographic data and, obviously, the idiom.

## IV. RESULTS

### Outliers

The first step in analyzing the collected data was to detect outliers, which are extreme values that deviate from other observations. The analyze considered an outlier every response that is 1,5 times the length of the box away from either the lower or the upper quartiles.

Whenever an outlier was identified in the sample, the analyze expelled all respondent answers, since for the same participant could have its EBITDA's answer classified as an outlier and its Net Debt's answer not, and vice-versa.

Figure 1: Box Polt (with extreme values)

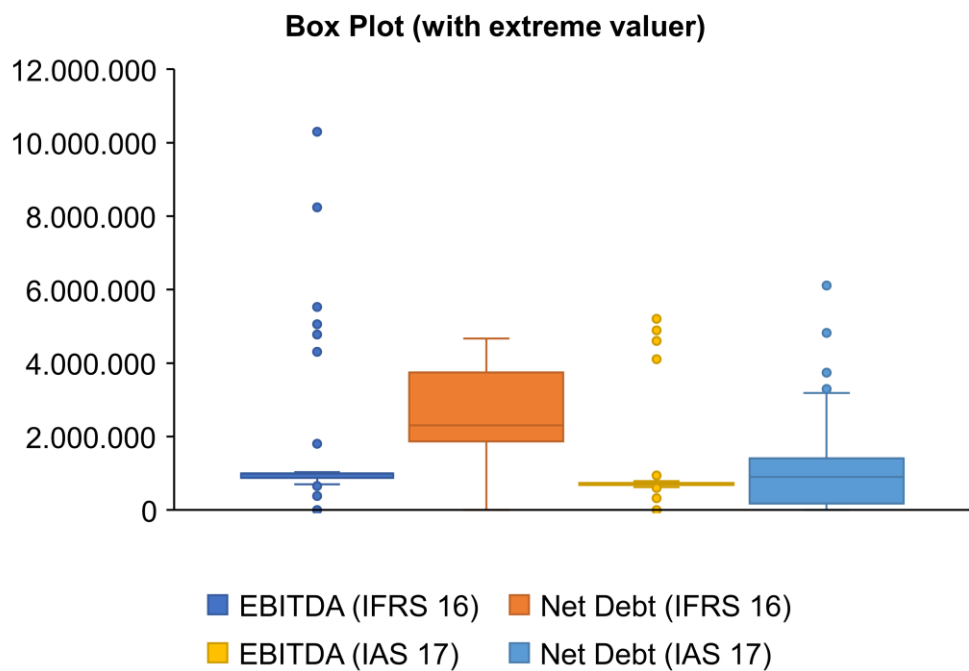
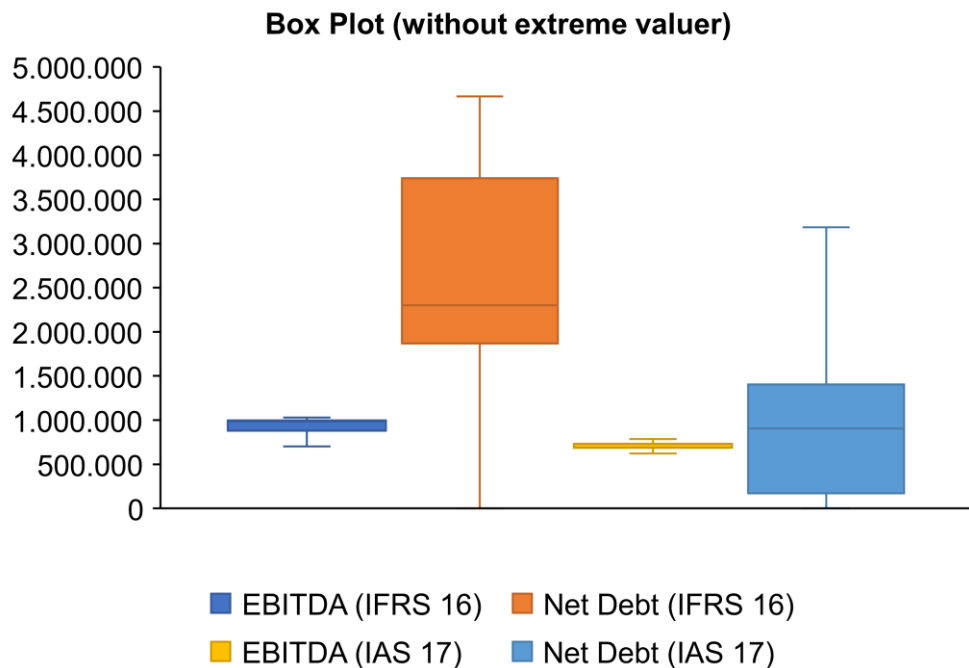


Figure 2: Box Plot (without extreme values)



The outlier analyzes incurred in the exclusion of 14 respondents in the Brazilian experiment and 61 in the Colombian survey, lasting 38 and 114 valid answers to further analyze respectively.

### EBITDA

The first statistic test intends to determine if respondents under different accounting policies will calculate different EBITDA. In this case,  $H_0$  means analysts already do the adjustments on lease values, hence the new lease accounting policy will not add any new relevant information to calculate lessees' value (the samples means do not diverge statistically from each other), and  $H_1$  means analysts do not adjust lease information, so they will value companies differently under different lease accounting policies. In this case, analysts perceive the lessees' financial position and performance differently despite the fact that their operating and business model are the same independently of how they are accounted for IAS 17 or IFRS 16 (the samples mean diverge statistically from each other).

The results of the first statistical test are showing in the below tables:

Table 6: Brazil Experiment EBITDA t-Test: Two samples presuming equivalent variances

	IFRS 16	IAS 17
Means	975.594	691.918
Variance	1.162.155.974	588.235.294
Samples size	21	17
Grouped Variance	907.080.116	
Means difference		
hypothese	0,00	
Degree of Freedom	36,00	
Stat t	28,87	
P(T<=t) one-tailed	0,00	
critical t one-tailed	1,69	
P(T<=t) two-tailed	0,00	
Critical t two-tailed	2,03	

Table 7: Colombiam Survey EBITDA t-Test: Two samples presuming equivalent variances

	IFRS 16	IAS 17
Means	976.964	684.224
Variance	4.656.551.508	7.496.585.768
Samples size	57	57
Grouped Variance	6.076.568.638	
Means difference		
hypothese	0,00	
Degree of Freedom	112,00	
Stat t	20,05	
P(T<=t) one-tailed	0,00	
critical t one-tailed	1,66	
P(T<=t) two-tailed	0,00	
Critical t two-tailed	1,98	

Since the p-value is less than 0,05 in both, the  $H_0$  is rejected, meaning that the means diverge statistically from each other. In this case, it is more likely that the analysts calculate different EBITDA under IFRS 16 or IAS 17.

The second statistic test intends to determine if respondents will calculate EBITDA as the expected value of \$986.036 of the IFRS 16 policy. In this case  $H_0$  means analysts already do the adjustments, hence the new lease accounting policy will not add any new relevant information to calculate lessees' value (the sample mean do not diverge statistically from the expected value – considering IFRS 16 rules) and  $H_2$  means analysts correctly interpret the lessees' financial performance and position when financial reports are prepared in accordance with IFRS 16 (the sample mean diverge statistically from the expected value – considering IFRS 16 rules).

The results of the second statistical test are showing in the below tables.



Table 8: Brazil Experiment EBITDA t-Test: Difference from the expected EBITDA value

Samples	Brazilian Experiment t-Test result	Conclusion
IFRS 16	The t-value is -1.403715. The value of p is .175741. The result is not significant at $p < .05$ .	Do not reject $H_0$
IAS 17	The t-value is -50. The value of p is $< .00001$ . The result is significant at $p < .05$ .	Reject $H_0$

Table 9: Colombian Survey EBITDA t-Test: Difference from the expected EBITDA value

Samples	Colombian Survey t-Test result	Conclusion
IFRS 16	The t-value is -1.003704. The value of p is .319839. The result is not significant at $p < .05$	Do not reject $H_0$
IAS 17	The t-value is -26.317353. The value of p is $< .00001$ . The result is significant at $p < .05$	Reject $H_0$

For IAS 17 group the sample mean diverges statistically from the expected EBITDA of \$986.036, meaning that no adjustments can be identified from IAS 17 accounting policy to the IFRS 16 (expected value).

In the opposite way, for IFRS 16 group the sample mean does not diverge statistically from the expected EBITDA of \$986.036, meaning that no adjustments can be identified from IFRS 16 accounting policy.

Since in IFRS 16 group  $H_0$  is not rejected and in the IAS 17 group  $H_0$  is rejected, it is more likely that the IFRS 16 will bring to market a more realistic view about companies' financial position and influence their value when considering EBITDA as a value proxy.

### Net Debt

The same statistical tests were performed with the Net Debt calculated by the respondents, since adjustments can be verified, or not, in both or in a single financial metric.

The results of the first statistical test are showing in the below tables:

Table 10: Brazil Experiment Net Debt t-Test: Two samples presuming equivalent variances

	IFRS 16	IAS 17
Means	1.743.486	321.254
Variance	1.274.826.493.870	389.717.242.507
Samples size	21	17
Grouped Variance	881.444.604.375	
Means difference hypotheses	0,00	
Degree of Freedom	36,00	
Stat t	4,64	
P(T<=t) one-tailed	0,00	
critical t one-tailed	1,69	
P(T<=t) two-tailed	0,00	
Critical t two-tailed	2,03	

Table 11: Colombian Survey Net Debt t-Test: Two samples presuming equivalent variances

	IFRS 16	IAS 17
Means	2.770.543	888.235
Variance	913.527.563.738	330.628.247.388
Samples size	57	57
Grouped Variance	622.077.905.563	
Means difference hypotheses	0,00	
Degree of Freedom	112,00	
Stat t	12,74	
P(T<=t) one-tailed	0,00	
critical t one-tailed	1,66	
P(T<=t) two-tailed	0,00	
Critical t two-tailed	1,98	

As well as for EBITDA, since the p-value of the first test is less than 0,05 in both cases, the  $H_0$  is rejected, meaning that the means diverge statistically from each other. In this case, it is more likely that the analysts calculate different Net Debt under IFRS 16 or IAS 17.

Table 12: Brazil Experiment Net Debt t-Test: Difference from the expected Net Debt value

Samples	Brazilian Experiment t-Test result	Conclusion
IFRS 16	The $t$ -value is -2.262607. The value of $p$ is .034946. The result is significant at $p < .05$ .	Reject $H_0$
IAS 17	The $t$ -value is -13.075268. The value of $p$ is $< .00001$ . The result is significant at $p < .05$	Reject $H_0$

Table 13: Colombian Survey Net Debt t-Test: Difference from the expected Net Debt value

Samples	Colombian Survey t-Test result	Conclusion
IFRS 16	The $t$ -value is 3.709269. The value of $p$ is .000479. The result is significant at $p < .05$	Reject $H_0$
IAS 17	The $t$ -value is -18.549209. The value of $p$ is $< .00001$ . The result is significant at $p < .05$	Reject $H_0$

The second test brings a different conclusion compared to the EBITDA one.

For IAS 17 group the sample mean diverges statistically from the expected Net Debt of \$2.300.961, meaning that no adjustments can be identified from IAS 17 accounting policy to the IFRS 16 (expected value).

Also, for IFRS 16 group the sample mean diverges statistically from the expected Net Debt of \$2.300.961, meaning that adjustments can be identified even when compared to the expected value of the same accounting policy.

Since both IAS 17 and IFRS 16 group  $H_0$  is rejected, it is not possible to affirm that the IFRS 16 will bring to market a more realistic view about companies' financial position and influence their value when considering Net Debt.

A more detailed look at the data shows that a conceptual issue influenced the statistical analyzes and led to the above conclusion. If EBITDA responses did not show a relevant volatility among respondent's answers, the same could not be observed on Net Debt. The experiment was expecting respondents to calculate Net Debt as the sum of the present value of lease future payments and long term debt (considering both current and no-current portion) less Cash and Cash Equivalents, but what actually happened was a mix of formulas adopted by respondents to calculate Net Debt as showing in the table below.

*Table 14: Respondents Net Debt Formula Mix*

<b>Net Debt Formula</b>	<b>Brazilian Experiment</b>	<b>Colombian Survey</b>
As expected	47,62%	15,79%
Did not deducted Cash and Cash equivalents from the Gross Debt	9,52%	21,05%
Did not considered lease as a debt	23,81%	1,75%
Total liabilities	0,00%	24,56%
Total liabilities less Cash and Cash Equivalents	0,00%	8,77%
Not Identified	19,05%	28,07%
<b>Total</b>	<b>100%</b>	<b>100%</b>

The difference in Net Debt calculation between Brazilian experiment and Colombian survey may be due the fact that the samples have different composition. While Colombian survey is composed mostly by accountants, the Brazilian experiment is composed by a more diversified mix of financial analysts, such as Equity and M&A professionals. Since Brazilian experiment sample better reflect financial report end-users, it's possible to assume that its results reflect better how market is expected to behave. This assumption can be attested by the fact that p-value on

Brazilian experiment almost achieved the significance level to not reject  $H_0$ , such as on EBITDA test.

### **Net Debt/EBITDA ratio**

The Net Debt/EBITDA ratio is a very common financial ratio used in covenants clauses on capital raising. Based on its importance, the same analyzes for EBITDA and Net Debt was performed for the ratio EBITDA/Net Debt.

It's important to underline that the financial ratio EBITDA/Net Debt calculation was not part of the exercise and so was not made directly by respondents, but indirectly since it's a pure consequence of the other financial metrics calculated by respondents.

*Table 15: Brazil Experiment Net Debt/EBITDA t-Test: Two samples presuming equivalent variances*

	<i>IFRS 16</i>	<i>IAS 17</i>
Means	1,80	0,44
Variance	1,35	0,69
Samples size	21	17
Grouped Variance	1	
Means difference hypotheses	0,00	
Degree of Freedom	36,00	
Stat t	4,04	
P(T<=t) one-tailed	0,00	
critical t one-tailed	1,69	
P(T<=t) two-tailed	0,00	
Critical t two-tailed	2,03	

*Table 16: Colombian Survey Net Debt/EBITDA t-Test: Two samples presuming equivalent variances*

	<i>IFRS 16</i>	<i>IAS 17</i>
Means	2,84	1,32
Variance	1,04	0,88
Samples size	57	57
Grouped Variance	1	
Means difference hypotheses	0,00	
Degree of Freedom	112,00	
Stat t	8,28	
P(T<=t) one-tailed	0,00	
critical t one-tailed	1,66	
P(T<=t) two-tailed	0,00	
Critical t two-tailed	1,98	

As well as for EBITDA and Net Debt, since the p-value of the first test is less than 0,05 in both cases, the  $H_0$  is rejected, meaning that the means diverge statistically from each other. In this case, it is more likely that the analysts calculate different Net Debt/EBITDA under IFRS 16 or IAS 17.

Table 17: Brazil Experiment Net Debt/EBITDA t-Test: Difference from the expected Net Debt/EBITDA value

Samples	Brazilian Experiment t-Test result	Conclusion
IFRS 16	The $t$ -value is -2.262607. The value of $p$ is .034946. The result is significant at $p < .05$ .	Reject $H_0$
IAS 17	The $t$ -value is -13.075268. The value of $p$ is $< .00001$ . The result is significant at $p < .05$	Reject $H_0$

Table 18: Colombian Survey Net Debt/EBITDA t-Test: Difference from the expected Net Debt/EBITDA value

Samples	Colombian Survey t-Test result	Conclusion
IFRS 16	The $t$ -value is 3.709269. The value of $p$ is .000479. The result is significant at $p < .05$	Reject $H_0$
IAS 17	The $t$ -value is -18.549209. The value of $p$ is $< .00001$ . The result is significant at $p < .05$	Reject $H_0$

The second test brings the same conclusion of the Net Debt one.

For IAS 17 group the sample mean diverges statistically from the expected Net Debt of 2,33, meaning that no adjustments can be identified from IAS 17 accounting policy to the IFRS 16 (expected value).

Also, for IFRS 16 group the sample mean diverges statistically from the expected Net Debt of 2,33, meaning that adjustments can be identified even when compared to the expected value of the same accounting policy.

Since both IAS 17 and IFRS 16 group  $H_0$  is rejected, it is not possible to affirm that the IFRS 16 will bring to market a more realistic view about companies' financial position and influence their value when considering Net Debt/EBITDA ratio. In this case, the conceptual issues identified in Net Debt calculation also influenced Net Debt/EBITDA statistical test.

## V. CONCLUSIONS AND FUTURE DIRECTIONS

Both Brazilian experiment and Colombian survey bring the same conclusions: Analyst measure EBITDA and Net Debt (valuation proxies) differently under different lease accounting policies. And the new lease accounting policy will add to market new relevant information to calculate lessees' value regarding EBITDA, but not regarding Net debt, since there is no uniqueness among analysts on how to calculate it or what should be included or not in its formula.

Lease accounting has been questioned for a long time, mainly because companies have been using it to keep relevant amounts of liabilities off-balance sheet. Many authors questioned its practice, as Hendriksen & van Breda since 1992, or even suggested managerial adjustments to capitalize leases in order to estimate the true intrinsic value of a company, as Damodaran. Based on this academic guideline, would be reasonable to expect analysts to adjust lease accounting in its spreadsheets. However, as this study testifies, analysts do not behave as theory guide.

Because people are *humans*, busy and have limited attention, their choices are influenced in ways that would not be anticipated in a standard economic framework (Thaler & Sustain 2008, 37). In this experiment, analysts show a tendency to rely on the accounting information provided and do not proceed with any adjustment, even if many academic authors suggest doing so.

Due a large mix of factors such as nescience, scarce time, interest conflicts etc, financial analysts behave more as “humans” than as “*econs*” and based on that, after the implementation of IFRS 16 we can expect that companies with relevant lease contracts will have its EBITDA and Net Debt higher measured than before, impacting on capital markets and M&A transactions.

It means that IFRS 16 will be a *nudge* and a *decision-aid* to analysts, providing market with better information about the true patrimonial situation of a particular company, enabling analyst to calculate more precisely the intrinsic value of a business, regarding EBITDA, but not Net Debt.

Another conclusion, not related with the main question, but also relevant, is that there is no consensus among analysts on how to calculate Debt and how this measure is composed, due the volatility of the answers provided. This observation may be subject of a further research.

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## APPENDIX A – Colombian Experiment



### Bienvenida

*Estimados Respondientes,*

*Estamos realizando un experimento para evaluar el impacto de una norma contable en el valor de las empresas. Los resultados de este cuestionario servirán de base para una tesis de maestría con este tema.*

*Agradecemos su participación y nos ponemos a disposición para aclarar dudas por los e-mails  
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## NIIF 16

- La empresa en cuestión es una aerolínea cuyas aeronaves (100% de ellas) están bajo contrato de arrendamiento (lease).
- Su tarea, en este experimento, es determinar el EBITDA y la Deuda Neta de la compañía abajo. **Recuerde que usted es un analista y, para determinar la situación real de la empresa, puede realizar los ajustes que considere relevantes.**
- **El reconocimiento del arrendamiento sigue la norma NIIF 16, que determina que:** En la fecha de comienzo, un arrendatario reconocerá un activo por derecho de uso y un pasivo por arrendamiento.

**Contrato de Arrendamiento:** \$2.738.654 (valor presente en 2014, fecha de inicio del contrato)

**Bienes en contrato:** \$2.738.654 (valor presente en 2014, fecha de inicio del contrato)

**Pagos fijos y anuales (intereses incluidos en el valor):** \$300.000

**Plazo de contrato:** 20 años

**Plazo de depreciación:** 20 años

**Tasa de interés implícita del contrato de arrendamiento:** 9% a.a

Tabla de Pagos - Arrendamiento				Tabla de Depreciación			
Año	Saldo Inicial	(-) Parte	Saldo Final	Año	Depreciación	Depreciación acumulada	Valor del derecho de uso
2014	\$2.738.564	(\$300.000)	\$2.685.034	2014	\$136.928	\$136.928	\$2.601.636
2015	\$2.685.034	(\$300.000)	\$2.626.688	2015	\$136.928	\$273.856	\$2.464.707
2016	\$2.626.688	(\$300.000)	\$2.563.089	2016	\$136.928	\$410.785	\$2.327.779
2017	\$2.563.089	(\$300.000)	\$2.493.767	2017	\$136.928	\$547.713	\$2.190.851
2018	\$2.493.767	(\$300.000)	\$2.418.207	2018	\$136.928	\$684.641	\$2.053.923
2019	\$2.418.207	(\$300.000)	\$2.335.845	2019	\$136.928	\$821.569	\$1.916.995
2020	\$2.335.845	(\$300.000)	\$2.246.071	2020	\$136.928	\$958.497	\$1.780.066
2021	\$2.246.071	(\$300.000)	\$2.148.218	2021	\$136.928	\$1.095.425	\$1.643.138
2022	\$2.148.218	(\$300.000)	\$2.041.557	2022	\$136.928	\$1.232.354	\$1.506.210
2023	\$2.041.557	(\$300.000)	\$1.925.297	2023	\$136.928	\$1.369.282	\$1.369.282
2024	\$1.925.297	(\$300.000)	\$1.798.574	2024	\$136.928	\$1.506.210	\$1.232.354
2025	\$1.798.574	(\$300.000)	\$1.660.446	2025	\$136.928	\$1.643.138	\$1.095.425
2026	\$1.660.446	(\$300.000)	\$1.509.886	2026	\$136.928	\$1.780.066	\$958.497
2027	\$1.509.886	(\$300.000)	\$1.345.776	2027	\$136.928	\$1.916.995	\$821.569
2028	\$1.345.776	(\$300.000)	\$1.166.895	2028	\$136.928	\$2.053.923	\$684.641
2029	\$1.166.895	(\$300.000)	\$971.916	2029	\$136.928	\$2.190.851	\$547.713
2030	\$971.916	(\$300.000)	\$759.388	2030	\$136.928	\$2.327.779	\$410.785
2031	\$759.388	(\$300.000)	\$527.733	2031	\$136.928	\$2.464.707	\$273.856
2032	\$527.733	(\$300.000)	\$275.229	2032	\$136.928	\$2.601.636	\$136.928
2033	\$275.229	(\$300.000)	\$0	2033	\$136.928	\$2.738.564	\$0

<b>Estado del resultado integral consolidado</b>		<b>2019</b>
<b>Ingresos netos</b>		
Transporte de pasajeros		\$4.690.149
Otros Ingresos		\$602.617
<b>Total de los Ingresos netos</b>		<b>\$5.292.765</b>
<b>Costos y Gastos</b>		
Combustible de aviación		(\$2.117.956)
Salarios y beneficios		(\$1.156.691)
Tarifas aeroportuarias		(\$340.602)
Comerciales y publicidad		(\$279.252)
Material de mantenimiento y reparación		(\$412.229)
Depreciación y amortización (aeronaves)		(\$136.928)
Depreciación y amortización (otros activos fijos)		(\$100.000)
<b>Total de los costes y gastos</b>		<b>(\$4.543.658)</b>
<b>Resultado de explotación</b>		<b>\$749.108</b>
<b>Resultados Financieros</b>		
Ingresos financieros		\$44.978
Intereses del Contrato de Arrendamiento		(\$217.639)
Intereses de Préstamos y Financiamientos		(\$293.327)
<b>Total de los resultados financieros</b>		<b>(\$465.987)</b>
<b>Resultado antes de impuestos</b>		<b>\$283.120</b>
Impuesto de renta <sup>(1)</sup>		(\$114.814)
<b>Resultado del ejercicio</b>		
<b>Total del resultado del ejercicio</b>		<b>\$168.307</b>

<sup>(1)</sup>De conformidad con las leyes fiscales, la entidad se deriva de la base de cálculo del impuesto sobre la renta el valor pagado o debido al arrendamiento (\$ 300.000), independientemente del modelo contable de los contratos de arrendamiento.

<b>Balance consolidado</b>	<b>2019</b>
<b>Activo</b>	<b>\$4.661.791</b>
<b>Activos corrientes</b>	<b>\$2.144.797</b>
Efectivo y equivalentes al efectivo	\$716.884
Cartera de credito y repases, líquida de provisión	\$708.593
Inventarios	\$719.320
<b>Activos no corrientes</b>	<b>\$2.516.995</b>
Propiedad, planta y equipo (otros Propiedad, planta y equipo )	\$1.000.000
Depreciación acumulada (otros)	(\$400.000)
Derecho de uso (aeronaves arrendamiento)	\$2.738.564
Depreciación acumulada (derecho de uso - aeronaves)	(\$821.569)
<b>Patrimonio neto y pasivos</b>	<b>\$4.661.791</b>
<b>Pasivos corrientes</b>	<b>\$1.123.215</b>
Obligaciones con Instituciones Financieras (corto plazo)	\$125.000
Proveedores y otras cuentas a pagar	\$222.000
Transportes a realizar	\$500.986
Obligaciones con arrendamiento (corto plazo)	\$275.229
<b>Pasivos no corrientes</b>	<b>\$2.617.616</b>
Obligaciones con Instituciones Financieras (largo plazo)	\$557.000
Obligaciones con arrendamiento (largo plazo)	\$2.060.616
<b>Patrimonio líquido</b>	<b>\$920.961</b>
Capital ordinario	\$500.000
Ganancias acumuladas	\$420.961

<b>Estado de flujos de efectivo consolidado</b>	<b>2019</b>
<b>Flujos de efectivo de actividades de explotación</b>	
Resultado del ejercicio	\$168.307
(+) Depreciaciones	\$236.928
(+) Resultados Financieros	\$465.987
(+/-) Capital de trabajo	(\$166.538)
<b>Total de los flujos de efectivo de actividades de explotación</b>	<b>\$704.685</b>
<b>Flujos de efectivo de actividades de inversión</b>	
(+/-) Var. Propiedad, planta y equipo (otros)	\$0
(+/-) Var. Derecho de uso (aeronaves)	\$0
<b>Total de los flujos de efectivo de actividades de inversión</b>	<b>\$0</b>
<b>Flujos de efectivo de actividades de financiación</b>	
(-) Resultados Financieros	(\$465.987)
(+/-) Obligaciones con Instituciones Financieras	(\$125.000)
(+/-) Obligaciones con arrendamiento	(\$82.361)
<b>Total de los flujos de efectivo de actividades de financiación</b>	<b>(\$673.349)</b>
<b>Efectivo y equivalentes al efectivo al final del ejercicio</b>	<b>\$31.336</b>

**\* 9. ¿Cual es el EBITDA de la compañía?**

(introduzca sólo los números)

**\* 10. A continuación, seleccione todas las cuentas del resultado integral y del estado financiero consolidado que ha utilizado para determinar el EBITDA de la compañía.**

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Resultado - Ingresos transporte de pasajeros                  | <input type="checkbox"/> Resultado - Intereses del Contrato de Arrendamiento                                  | <input type="checkbox"/> Posición Financiera - Obligaciones con Instituciones Financieras (corto plazo) |
| <input type="checkbox"/> Resultado - Otros ingresos                                    | <input type="checkbox"/> Resultado - Intereses de Préstamos y Financiamientos                                 | <input type="checkbox"/> Posición Financiera - Proveedores y otras cuentas a pagar                      |
| <input type="checkbox"/> Resultado - Combustible de aviación                           | <input type="checkbox"/> Resultado - Impuesto de renta  | <input type="checkbox"/> Posición Financiera - Transportes a realizar                                   |
| <input type="checkbox"/> Resultado - Salarios y beneficios                             | <input type="checkbox"/> Posición Financiera - Efectivo y equivalentes al efectivo                            | <input type="checkbox"/> Posición Financiera - Obligaciones con arrendamiento (corto plazo)             |
| <input type="checkbox"/> Resultado - Tarifas aeroportuarias                            | <input type="checkbox"/> Posición Financiera - Cartera de credito y repases, líquida de provisión             | <input type="checkbox"/> Posición Financiera - Obligaciones con Instituciones Financieras (largo plazo) |
| <input type="checkbox"/> Resultado - Comerciales y publicidad                          | <input type="checkbox"/> Posición Financiera - Inventarios  | <input type="checkbox"/> Posición Financiera - Obligaciones con arrendamiento (largo plazo)             |
| <input type="checkbox"/> Resultado - Material de mantenimiento y reparación            | <input type="checkbox"/> Posición Financiera - Propiedad, planta y equipo (otros Propiedad, planta y equipo ) | <input type="checkbox"/> Posición Financiera - Capital ordinario  |
| <input type="checkbox"/> Resultado - Depreciación y amortización (aeronaves)           | <input type="checkbox"/> Posición Financiera - Depreciación de PPyE (otros)                                   | <input type="checkbox"/> Posición Financiera - Ganancias acumuladas                                     |
| <input type="checkbox"/> Resultado - Depreciación y amortización (otros activos fijos) | <input type="checkbox"/> Posición Financiera - Derecho de uso (aeronaves arrendamiento)                       |   |
| <input type="checkbox"/> Resultado - Ingresos financieros                              | <input type="checkbox"/> Posición Financiera - Depreciación del derecho de uso (arrendamiento)                |   |

**\* 11. ¿Cual es la Deuda Neta de la compañía?**

(introduzca sólo los números)

**\* 12. A continuación, seleccione todas las cuentas del resultado integral y del estado financiero consolidado que ha utilizado para determinar la Deuda Neta de la compañía.**

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Resultado - Ingresos transporte de pasajeros                  | <input type="checkbox"/> Resultado - Intereses del Contrato de Arrendamiento                                  | <input type="checkbox"/> Posición Financiera - Obligaciones con Instituciones Financieras (corto plazo) |
| <input type="checkbox"/> Resultado - Otros ingresos                                    | <input type="checkbox"/> Resultado - Intereses de Préstamos y Financiamientos                                 | <input type="checkbox"/> Posición Financiera - Proveedores y otras cuentas a pagar                      |
| <input type="checkbox"/> Resultado - Combustible de aviación                           | <input type="checkbox"/> Resultado - Impuesto de renta  | <input type="checkbox"/> Posición Financiera - Transportes a realizar                                   |
| <input type="checkbox"/> Resultado - Salarios y beneficios                             | <input type="checkbox"/> Posición Financiera - Efectivo y equivalentes al efectivo                            | <input type="checkbox"/> Posición Financiera - Obligaciones con arrendamiento (corto plazo)             |
| <input type="checkbox"/> Resultado - Tarifas aeroportuarias                            | <input type="checkbox"/> Posición Financiera - Cartera de credito y repases, líquida de provisión             | <input type="checkbox"/> Posición Financiera - Obligaciones con Instituciones Financieras (largo plazo) |
| <input type="checkbox"/> Resultado - Comerciales y publicidad                          | <input type="checkbox"/> Posición Financiera - Inventarios  | <input type="checkbox"/> Posición Financiera - Obligaciones con arrendamiento (largo plazo)             |
| <input type="checkbox"/> Resultado - Material de mantenimiento y reparación            | <input type="checkbox"/> Posición Financiera - Propiedad, planta y equipo (otros Propiedad, planta y equipo ) | <input type="checkbox"/> Posición Financiera - Capital ordinario  |
| <input type="checkbox"/> Resultado - Depreciación y amortización (aeronaves)           | <input type="checkbox"/> Posición Financiera - Depreciación de PPyE (otros)                                   | <input type="checkbox"/> Posición Financiera - Ganancias acumuladas                                     |
| <input type="checkbox"/> Resultado - Depreciación y amortización (otros activos fijos) | <input type="checkbox"/> Posición Financiera - Derecho de uso (aeronaves arrendamiento)                       |   |
| <input type="checkbox"/> Resultado - Ingresos financieros                              | <input type="checkbox"/> Posición Financiera - Depreciación del derecho de uso (arrendamiento)                |   |



## NIC 17

- La empresa en cuestión es una aerolínea cuyas aeronaves (100% de ellas) están bajo contrato de Lease.
- Su tarea, en este experimento, es determinar el EBITDA y la Deuda Neta de la Compañía abajo. **Recuerde que usted es un analista y, para determinar la situación real de la empresa, puede realizar los ajustes que considere relevantes.**
- **El reconocimiento del arrendamiento sigue la NIC 17.**
- **La compañía clasifica los arrendamientos de aeronaves como Arrendamientos Operativos.** Por lo tanto, ninguna aeronave o pasivo de arrendamiento es reconocido.



**Contrato de Arrendamiento:** \$2.738.654 (valor presente en 2014, fecha de inicio del contrato)

**Bienes en contrato:** \$2.738.654 (valor presente en 2014, fecha de inicio del contrato)

**Pagos fijos y anuales (intereses incluidos en el valor):** \$300.000

**Plazo de contrato:** 20 años

**Plazo de depreciación:** 20 años

**Tasa de interés implícita del contrato de arrendamiento:** 9% a a

Tabla de Pagos - Arrendamiento				Tabla de Depreciación			
Año	Saldo Inicial	(-) Parte	Saldo Final	Año	Depreciación	Depreciación acumulada	Valor del derecho de uso
2014	\$2.738.564	(\$300.000)	\$2.685.034	2014	\$136.928	\$136.928	\$2.601.636
2015	\$2.685.034	(\$300.000)	\$2.626.688	2015	\$136.928	\$273.856	\$2.464.707
2016	\$2.626.688	(\$300.000)	\$2.563.089	2016	\$136.928	\$410.785	\$2.327.779
2017	\$2.563.089	(\$300.000)	\$2.493.767	2017	\$136.928	\$547.713	\$2.190.851
2018	\$2.493.767	(\$300.000)	\$2.418.207	2018	\$136.928	\$684.641	\$2.053.923
2019	\$2.418.207	(\$300.000)	\$2.335.845	2019	\$136.928	\$821.569	\$1.916.995
2020	\$2.335.845	(\$300.000)	\$2.246.071	2020	\$136.928	\$958.497	\$1.780.066
2021	\$2.246.071	(\$300.000)	\$2.148.218	2021	\$136.928	\$1.095.425	\$1.643.138
2022	\$2.148.218	(\$300.000)	\$2.041.557	2022	\$136.928	\$1.232.354	\$1.506.210
2023	\$2.041.557	(\$300.000)	\$1.925.297	2023	\$136.928	\$1.369.282	\$1.369.282
2024	\$1.925.297	(\$300.000)	\$1.798.574	2024	\$136.928	\$1.506.210	\$1.232.354
2025	\$1.798.574	(\$300.000)	\$1.660.446	2025	\$136.928	\$1.643.138	\$1.095.425
2026	\$1.660.446	(\$300.000)	\$1.509.886	2026	\$136.928	\$1.780.066	\$958.497
2027	\$1.509.886	(\$300.000)	\$1.345.776	2027	\$136.928	\$1.916.995	\$821.569
2028	\$1.345.776	(\$300.000)	\$1.166.895	2028	\$136.928	\$2.053.923	\$684.641
2029	\$1.166.895	(\$300.000)	\$971.916	2029	\$136.928	\$2.190.851	\$547.713
2030	\$971.916	(\$300.000)	\$759.388	2030	\$136.928	\$2.327.779	\$410.785
2031	\$759.388	(\$300.000)	\$527.733	2031	\$136.928	\$2.464.707	\$273.856
2032	\$527.733	(\$300.000)	\$275.229	2032	\$136.928	\$2.601.636	\$136.928
2033	\$275.229	(\$300.000)	\$0	2033	\$136.928	\$2.738.564	\$0



Estado del resultado integral consolidado		2019
<b>Ingresos netos</b>		
Transporte de pasajeros		\$4.690.149
Otros Ingresos		\$602.617
<b>Total de los Ingresos netos</b>		<b>\$5.292.765</b>
<b>Costos y Gastos</b>		
Combustible de aviación		(\$2.117.956)
Salarios y beneficios		(\$1.156.691)
Tarifas aeroportuarias		(\$340.602)
Comerciales y publicidad		(\$279.252)
Material de mantenimiento y reparación		(\$412.229)
Gastos de arrendamiento (aeronaves)		(\$300.000)
Depreciación y amortización (otros activos fijos)		(\$100.000)
<b>Total dos costos e despesas</b>		<b>(\$4.706.729)</b>
<b>Resultado de explotación</b>		<b>\$586.036</b>
<b>Resultados Financieros</b>		
Ingresos financieros		\$44.978
Intereses de Préstamos y Financiamientos		(\$293.327)
<b>Total de los resultados financieros</b>		<b>(\$248.349)</b>
<b>Resultado antes de impuestos</b>		<b>\$337.687</b>
Impuesto de renta		(\$114.814)
<b>Resultado del ejercicio</b>		
<b>Total del resultado del ejercicio</b>		<b>\$222.874</b>

Balance consolidado	2019
<b>Activo</b>	<b>\$2.744.797</b>
<b>Activos corrientes</b>	<b>\$2.144.797</b>
Efectivo y equivalentes al efectivo	\$716.884
Cartera de credito y repases, líquida de provisión	\$708.593
Inventarios	\$719.320
<b>Activos no corrientes</b>	<b>\$600.000</b>
Propiedad, planta y equipo (otros Propiedad, planta y equipo )	\$1.000.000
Depreciación acumulada (otros)	(\$400.000)
<b>Patrimonio neto y pasivos</b>	<b>\$2.744.797</b>
<b>Pasivos corrientes</b>	<b>\$847.986</b>
Obligaciones con Instituciones Financieras (corto plazo)	\$125.000
Proveedores y otras cuentas a pagar	\$222.000
Transportes a realizar	\$500.986
<b>Pasivos no corrientes</b>	<b>\$557.000</b>
Obligaciones con Instituciones Financieras (largo plazo)	\$557.000
<b>Patrimonio líquido</b>	<b>\$1.339.811</b>
Capital ordinario	\$500.000
Ganancias acumuladas	\$839.811

Estado de flujos de efectivo consolidado	2019
<b>Flujos de efectivo de actividades de explotación</b>	
Resultado del ejercicio	\$222.874
(+) Depreciaciones	\$100.000
(+) Resultados Financieros	\$248.349
(+/-) Capital de trabajo	(\$166.538)
<b>Total de los flujos de efectivo de actividades de explotación</b>	<b>\$404.685</b>
<b>Flujos de efectivo de actividades de inversión</b>	
(+/-) Var. Propiedad, planta y equipo (otros)	\$0
(+/-) Var. Derecho de uso (aeronaves)	\$0
<b>Total de los flujos de efectivo de actividades de inversión</b>	<b>\$0</b>
<b>Flujos de efectivo de actividades de financiación</b>	
(-) Resultados Financieros	(\$248.349)
(+/-) Obligaciones con Instituciones Financieras	(\$125.000)
<b>Total de los flujos de efectivo de actividades de financiación</b>	<b>(\$373.349)</b>
<b>Efectivo y equivalentes al efectivo al final del ejercicio</b>	<b>\$31.336</b>

\* 13. ¿Cual es el EBITDA de la compañía?

(introduzca sólo los números)

**\* 14. A continuación, seleccione todas las cuentas del resultado integral y del estado financiero consolidado que ha utilizado para determinar el EBITDA de la compañía.**

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Resultado - Ingresos de transporte de pasajeros    | <input type="checkbox"/> Resultado - Depreciación y amortización (otros activos fijos)                        | <input type="checkbox"/> Posición financiera - Depreciación de PPyE (otros)                             |
| <input type="checkbox"/> Resultado - Otros ingresos                         | <input type="checkbox"/> Resultado - Ingresos financieros   | <input type="checkbox"/> Posición financiera - Obligaciones con Instituciones Financieras (corto plazo) |
| <input type="checkbox"/> Resultado - Combustible de aviación                | <input type="checkbox"/> Resultado - Intereses de Préstamos y Financiamientos                                 | <input type="checkbox"/> Posición financiera - Proveedores y otras cuentas a pagar                      |
| <input type="checkbox"/> Resultado - Salarios y beneficios                  | <input type="checkbox"/> Resultado - Impuesto de renta  | <input type="checkbox"/> Posición financiera - Transportes a realizar                                   |
| <input type="checkbox"/> Resultado - Tarifas aeroportuarias                 | <input type="checkbox"/> Posición financiera - Efectivo y equivalentes al efectivo                            | <input type="checkbox"/> Posición financiera - Obligaciones con Instituciones Financieras (largo plazo) |
| <input type="checkbox"/> Resultado - Comerciales y publicidad               | <input type="checkbox"/> Posición financiera - Cartera de crédito y repases, líquida de provisión             | <input type="checkbox"/> Posición financiera - Capital ordinario  |
| <input type="checkbox"/> Resultado - Material de mantenimiento y reparación | <input type="checkbox"/> Posición financiera - Inventarios  | <input type="checkbox"/> Posición financiera - Ganancias acumuladas                                     |
| <input type="checkbox"/> Resultado - Gastos de arrendamiento (aeronaves)    | <input type="checkbox"/> Posición financiera - Propiedad, planta y equipo (otros Propiedad, planta y equipo ) |   |

**\* 15. ¿Cual es la Deuda Neta de la compañía?**

(introduzca sólo los números)

**\* 16. A continuación, seleccione todas las cuentas del resultado integral y del estado financiero consolidado que ha utilizado para determinar la Deuda Neta de la compañía.**

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Resultado - Ingresos de transporte de pasajeros    | <input type="checkbox"/> Resultado - Depreciación y amortización (otros activos fijos)                        | <input type="checkbox"/> Posición financiera - Depreciación de PPyE (otros)                             |
| <input type="checkbox"/> Resultado - Otros ingresos                         | <input type="checkbox"/> Resultado - Ingresos financieros   | <input type="checkbox"/> Posición financiera - Obligaciones con Instituciones Financieras (corto plazo) |
| <input type="checkbox"/> Resultado - Combustible de aviación                | <input type="checkbox"/> Resultado - Intereses de Préstamos y Financiamientos                                 | <input type="checkbox"/> Posición financiera - Proveedores y otras cuentas a pagar                      |
| <input type="checkbox"/> Resultado - Salarios y beneficios                  | <input type="checkbox"/> Resultado - Impuesto de renta  | <input type="checkbox"/> Posición financiera - Transportes a realizar                                   |
| <input type="checkbox"/> Resultado - Tarifas aeroportuarias                 | <input type="checkbox"/> Posición financiera - Efectivo y equivalentes al efectivo                            | <input type="checkbox"/> Posición financiera - Obligaciones con Instituciones Financieras (largo plazo) |
| <input type="checkbox"/> Resultado - Comerciales y publicidad               | <input type="checkbox"/> Posición financiera - Cartera de crédito y repases, líquida de provisión             | <input type="checkbox"/> Posición financiera - Capital ordinario  |
| <input type="checkbox"/> Resultado - Material de mantenimiento y reparación | <input type="checkbox"/> Posición financiera - Inventarios  | <input type="checkbox"/> Posición financiera - Ganancias acumuladas                                     |
| <input type="checkbox"/> Resultado - Gastos de arrendamiento (aeronaves)    | <input type="checkbox"/> Posición financiera - Propiedad, planta y equipo (otros Propiedad, planta y equipo ) |   |




¡Muchas gracias!

Agradecemos el tiempo reservado para el evento.

Resaltamos el secreto de las respuestas garantizado por el anonimato del cuestionario.

¡Muchas gracias!

## APPENDIX B – Brazilian Experiment

  
**F U N D A Ç Ã O  
GETULIO VARGAS**

**Avaliação do impacto de normas contábeis na valoração de empresas**

**Boas-vindas**

Caros Respondentes,

Estamos realizando um experimento para avaliar o impacto de uma norma contábil no valor das empresas. Os resultados deste questionário servirão de base para uma tese de mestrado com este tema.

Agradecemos a sua participação e nos colocamos à disposição para esclarecer dúvidas pelos e-mails [ricardo.cardoso@fgv.br](mailto:ricardo.cardoso@fgv.br) ou [carlosricci.jr@gmail.com](mailto:carlosricci.jr@gmail.com)

**Ricardo Lopes Cardoso (professor orientador)**  
FGV-EBAPE

**Carlos Alberto Ricci Junior (aluno orientando)**  
FGV-EAESP

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## Avaliação do impacto de normas contábeis na valoração de empresas

### Informações gerais

\* 1. Qual o seu gênero?

- ☐ Homem
- ☐ Mulher

\* 2. Qual a sua idade? Quantos anos você tem?

*Digite a sua idade em anos (digite apenas números)*

\* 3. Qual a sua nacionalidade?

- ☐ Brasileira
- ☐ Outro (especifique)

\* 4. Qual o nível de escolaridade mais alto que você completou?

\* 5. Finanças, contabilidade, economia ou administração são a sua área de especialização acadêmica ou profissional?

- ☐ Sim
- ☐ Não

\* 6. Qual o seu tempo de experiência profissional?

*Em anos (digite apenas números)*

\* 7. Qual o segmento da sua principal área de atuação profissional?

**\* 8. Você possui alguma certificação profissional?**  
(CFA, CPA, ACCA, etc)

☐ Sim

☐ Não



## Avaliação do impacto de normas contábeis na valoração de empresas

### Apresentação do Experimento

Nesta seção, você fará o papel de um analista e apurará o endividamento acerca de uma companhia aérea.

**Para tanto, levará em consideração as informações contábeis que serão apresentadas e os julgamentos que achar relevante para obter o resultado que melhor exprime a real situação patrimonial da empresa.**

Buscando reduzir a quantidade de perguntas que você responderá, dividimos o questionário em blocos e sortearmos qual bloco de questões lhe serão apresentadas a seguir. Nesse sentido, por favor, responda qual a imagem você observa abaixo.



A 50.0% MAÇÃ



B 50.0% BANANA



\* 9. Qual fruta você vê na imagem acima?

- ☐ Maçã
- ☐ Banana



## Avaliação do impacto de normas contábeis na valoração de empresas

### Experimento IFRS 16

- A empresa em questão é uma cia aérea cujas aeronaves (100% delas) estão sob contrato de Lease.

- A sua tarefa, neste experimento, é apurar o EBITDA e a Dívida Líquida da Companhia abaixo.

**Lembre-se que você é um analista e, para apurar a real situação patrimonial da empresa, pode realizar os ajustes que julgar relevantes.**

- **A contabilização do Lease segue a norma IFRS 16, que determina que:** O arrendatário deve reconhecer o valor presente do arrendamento a pagar no passivo, em contrapartida no ativo (direito de uso). Subsequentemente, o arrendatário deve depreciar o direito de uso, em contrapartida de despesa de depreciação na DRE; e deve ajustar o saldo do passivo a valor presente, em contrapartida da despesa financeira na DRE. Os pagamentos efetuados devem ser apresentados na DFC como fluxo de caixa consumido pela atividade de financiamento.

**Contrato de Lease:** \$2.738.654 (a valor presente em 2014, data do início do contrato)

**Ativos em contrato:** \$2.738.654 (a valor presente em 2014, data do início do contrato)

**Pagamentos fixos e anuais (juros embutidos no valor):** \$300.000

**Tempo de contrato:** 20 anos

**Tempo de depreciação:** 20 anos

**Taxa de juros implícita do contrato de Lease:** 9% a.a

Tabela de Pagamentos - Lease				Tabela de Depreciação			
Ano	Saldo Inicial	(-) Parcela	Saldo Final	Ano	Depreciação	Depreciação Acumulada	Valor do direito de uso
2014	\$2.738.564	(\$300.000)	\$2.685.034	2014	\$136.928	\$136.928	\$2.601.636
2015	\$2.685.034	(\$300.000)	\$2.626.688	2015	\$136.928	\$273.856	\$2.464.707
2016	\$2.626.688	(\$300.000)	\$2.563.089	2016	\$136.928	\$410.785	\$2.327.779
2017	\$2.563.089	(\$300.000)	\$2.493.767	2017	\$136.928	\$547.713	\$2.190.851
2018	\$2.493.767	(\$300.000)	\$2.418.207	2018	\$136.928	\$684.641	\$2.053.923
2019	\$2.418.207	(\$300.000)	\$2.335.845	2019	\$136.928	\$821.569	\$1.916.995
2020	\$2.335.845	(\$300.000)	\$2.246.071	2020	\$136.928	\$958.497	\$1.780.066
2021	\$2.246.071	(\$300.000)	\$2.148.218	2021	\$136.928	\$1.095.425	\$1.643.138
2022	\$2.148.218	(\$300.000)	\$2.041.557	2022	\$136.928	\$1.232.354	\$1.506.210
2023	\$2.041.557	(\$300.000)	\$1.925.297	2023	\$136.928	\$1.369.282	\$1.369.282
2024	\$1.925.297	(\$300.000)	\$1.798.574	2024	\$136.928	\$1.506.210	\$1.232.354
2025	\$1.798.574	(\$300.000)	\$1.660.446	2025	\$136.928	\$1.643.138	\$1.095.425
2026	\$1.660.446	(\$300.000)	\$1.509.886	2026	\$136.928	\$1.780.066	\$958.497
2027	\$1.509.886	(\$300.000)	\$1.345.776	2027	\$136.928	\$1.916.995	\$821.569
2028	\$1.345.776	(\$300.000)	\$1.166.895	2028	\$136.928	\$2.053.923	\$684.641
2029	\$1.166.895	(\$300.000)	\$971.916	2029	\$136.928	\$2.190.851	\$547.713
2030	\$971.916	(\$300.000)	\$759.388	2030	\$136.928	\$2.327.779	\$410.785
2031	\$759.388	(\$300.000)	\$527.733	2031	\$136.928	\$2.464.707	\$273.856
2032	\$527.733	(\$300.000)	\$275.229	2032	\$136.928	\$2.601.636	\$136.928
2033	\$275.229	(\$300.000)	\$0	2033	\$136.928	\$2.738.564	\$0

DRE	2019
<b>Receita líquida</b>	
Transporte de passageiros	\$4.690.149
Outras receitas	\$602.617
<b>Total receita líquida</b>	<b>\$5.292.765</b>
<b>Custos e Despesas</b>	
Combustível de aviação	(\$2.117.956)
Salários e benefícios	(\$1.156.691)
Tarifas aeroportuárias	(\$340.602)
Comerciais e publicidade	(\$279.252)
Material de manutenção e reparo	(\$412.229)
Depreciação e amortização (aeronaves)	(\$136.928)
Depreciação e amortização (outros imobilizados)	(\$100.000)
<b>Total dos custos e despesas</b>	<b>(\$4.543.658)</b>
<b>Lucro Operacional</b>	<b>\$749.108</b>
<b>Resultado Financeiro</b>	
Receita financeira	\$44.978
Juros s/ Contrato de Lease	(\$217.639)
Juros s/ Empréstimos e Financiamentos	(\$293.327)
<b>Total dos resultado financeiro</b>	<b>(\$465.987)</b>
<b>Lucro Antes do Imposto</b>	<b>\$283.120</b>
IR e CSLL <sup>(1)</sup>	(\$114.814)
<b>Lucro Líquido</b>	
<b>Total do Lucro Líquido</b>	<b>\$168.307</b>

<sup>(1)</sup>Em conformidade com a legislação tributária, a entidade deduz da base de cálculo de IR e CSLL o valor pago ou devido a título de arrendamento (\$300.000), independentemente do modelo contábil dos contratos de arrendamento mercantil.

Balanço Patrimonial		2019
<b>Ativo</b>		<b>\$4.661.791</b>
<b>Ativo circulante</b>		<b>\$2.144.797</b>
Caixa e equivalentes de caixa		\$716.884
Contas a receber, líquido		\$708.593
Estoques		\$719.320
<b>Ativo não circulante</b>		<b>\$2.516.995</b>
Imobilizado (outros imobilizados)		\$1.000.000
Depreciação Acumulada (outros ativos)		(\$400.000)
Direito de uso (aeronaves lease)		\$2.738.564
Depreciação Acumulada (direito de uso - aeronaves)		(\$821.569)
<b>Passivo &amp; PL</b>		<b>\$4.661.791</b>
<b>Passivo circulante</b>		<b>\$1.123.215</b>
Empréstimos e financiamentos de curto prazo		\$125.000
Fornecedores		\$222.000
Transportes a executar		\$500.986
Lease a pagar (curto prazo)		\$275.229
<b>Passivo não circulante</b>		<b>\$2.617.616</b>
Empréstimos e financiamentos de longo prazo		\$557.000
Lease a pagar (longo prazo)		\$2.060.616
<b>Patrimônio líquido</b>		<b>\$920.961</b>
Capital social		\$500.000
Lucros Acumulados		\$420.961
Demonstração dos Fluxos de Caixa		2019
<b>Fluxos de caixa das operações</b>		
Lucro Líquido		\$168.307
(+) Depreciações		\$236.928
(+) Resultado Financeiro		\$465.987
(+/-) Capital de Giro		(\$166.538)
<b>Total dos fluxos de caixa das operações</b>		<b>\$704.685</b>
<b>Fluxos de caixa dos investimentos</b>		
(+/-) Var. Imobilizado (outros)		\$0
(+/-) Var. Imobilizado (aeronaves)		\$0
<b>Total dos fluxos de caixa dos investimentos</b>		<b>\$0</b>
<b>Fluxos de caixa dos financiamentos</b>		
(-) Resultado Financeiro		(\$465.987)
(+/-) Empréstimos e financiamentos		(\$125.000)
(+/-) Lease		(\$82.361)
<b>Total dos fluxos de caixa dos financiamentos</b>		<b>(\$673.349)</b>
<b>Fluxos de caixa total</b>		<b>\$31.336</b>
* 10. Apure o EBITDA da companhia.		

**\* 11. Selecione, abaixo, todas as contas do DRE e do Balanço Patrimonial que você utilizou para apurar o EBITDA da companhia**

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> DRE - Receita líquida                                 | <input type="checkbox"/> DRE - Juros s/ Contrato de Lease                      | <input type="checkbox"/> Balanço - Fornecedores                                |
| <input type="checkbox"/> DRE - Combustível de aviação                          | <input type="checkbox"/> DRE - Juros s/ Empréstimos e Financiamentos           | <input type="checkbox"/> Balanço - Transportes a executar                      |
| <input type="checkbox"/> DRE - Salários e benefícios                           | <input type="checkbox"/> DRE - IR e CSLL                                       | <input type="checkbox"/> Balanço - Lease a pagar (curto prazo)                 |
| <input type="checkbox"/> DRE - Tarifas aeroportuárias                          | <input type="checkbox"/> Balanço - Caixa e equivalentes de caixa               | <input type="checkbox"/> Balanço - Empréstimos e financiamentos de longo prazo |
| <input type="checkbox"/> DRE - Comerciais e publicidade                        | <input type="checkbox"/> Balanço - Contas a receber, líquido                   | <input type="checkbox"/> Balanço - Lease a pagar (longo prazo)                 |
| <input type="checkbox"/> DRE - Material de manutenção e reparo                 | <input type="checkbox"/> Balanço - Estoques                                    | <input type="checkbox"/> Balanço - Capital social                              |
| <input type="checkbox"/> DRE - Depreciação e amortização (aeronaves)           | <input type="checkbox"/> Balanço - Imobilizado (outros imobilizados)           | <input type="checkbox"/> Balanço - Lucros Acumulados                           |
| <input type="checkbox"/> DRE - Depreciação e amortização (outros imobilizados) | <input type="checkbox"/> Balanço - Direito de uso (aeronaves lease)            |  |
| <input type="checkbox"/> DRE - Receita financeira                              | <input type="checkbox"/> Balanço - Empréstimos e financiamentos de curto prazo |  |

**\* 12. Apure o Dívida Líquida da companhia.**

**\* 13. Selecione, abaixo, todas as contas do DRE e do Balanço Patrimonial que você utilizou para apurar a Dívida Líquida da companhia**

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> DRE - Receita líquida                                 | <input type="checkbox"/> DRE - Juros s/ Contrato de Lease                      | <input type="checkbox"/> Balanço - Fornecedores                                |
| <input type="checkbox"/> DRE - Combustível de aviação                          | <input type="checkbox"/> DRE - Juros s/ Empréstimos e Financiamentos           | <input type="checkbox"/> Balanço - Transportes a executar                      |
| <input type="checkbox"/> DRE - Salários e benefícios                           | <input type="checkbox"/> DRE - IR e CSLL                                       | <input type="checkbox"/> Balanço - Lease a pagar (curto prazo)                 |
| <input type="checkbox"/> DRE - Tarifas aeroportuárias                          | <input type="checkbox"/> Balanço - Caixa e equivalentes de caixa               | <input type="checkbox"/> Balanço - Empréstimos e financiamentos de longo prazo |
| <input type="checkbox"/> DRE - Comerciais e publicidade                        | <input type="checkbox"/> Balanço - Contas a receber, líquido                   | <input type="checkbox"/> Balanço - Lease a pagar (longo prazo)                 |
| <input type="checkbox"/> DRE - Material de manutenção e reparo                 | <input type="checkbox"/> Balanço - Estoques                                    | <input type="checkbox"/> Balanço - Capital social                              |
| <input type="checkbox"/> DRE - Depreciação e amortização (aeronaves)           | <input type="checkbox"/> Balanço - Imobilizado (outros imobilizados)           | <input type="checkbox"/> Balanço - Lucros Acumulados                           |
| <input type="checkbox"/> DRE - Depreciação e amortização (outros imobilizados) | <input type="checkbox"/> Balanço - Direito de uso (aeronaves lease)            |  |
| <input type="checkbox"/> DRE - Receita financeira                              | <input type="checkbox"/> Balanço - Empréstimos e financiamentos de curto prazo |  |



## Avaliação do impacto de normas contábeis na valoração de empresas

### Experimento IAS 17

- A empresa em questão é uma cia aérea cujas aeronaves (100% delas) estão sob contrato de Lease.

- A sua tarefa, neste experimento, é apurar o EBITDA e a Dívida Líquida da Companhia abaixo.

**Lembre-se que você é um analista e, para apurar a real situação patrimonial da empresa, pode realizar os ajustes que julgar relevantes.**

- **A contabilização do Lease segue a norma IAS 17, que determina que:** Os pagamentos da prestação do Lease Operacional, devem ser reconhecidos como despesa numa base linear durante o prazo do contrato, exceto se outra base sistemática for mais representativa do padrão temporal do benefício do usuário. Consequentemente, o arrendatário não reconhece nenhum ativo ou passivo decorrente de contrato de arrendamento operacional.



**Contrato de Lease:** \$2.738.654 (a valor presente em 2014, data do início do contrato)

**Ativos em contrato:** \$2.738.654 (a valor presente em 2014, data do início do contrato)

**Pagamentos fixos e anuais (juros embutidos no valor):** \$300.000

**Tempo de contrato:** 20 anos

**Tempo de depreciação:** 20 anos

**Taxa de juros implícita do contrato de Lease:** 9% a.a

Tabela de Pagamentos - Lease				Tabela de Depreciação			
Ano	Saldo Inicial	(-) Parcela	Saldo Final	Ano	Depreciação	Depreciação Acumulada	Valor do direito de uso
2014	\$2.738.564	(\$300.000)	\$2.685.034	2014	\$136.928	\$136.928	\$2.601.636
2015	\$2.685.034	(\$300.000)	\$2.626.688	2015	\$136.928	\$273.856	\$2.464.707
2016	\$2.626.688	(\$300.000)	\$2.563.089	2016	\$136.928	\$410.785	\$2.327.779
2017	\$2.563.089	(\$300.000)	\$2.493.767	2017	\$136.928	\$547.713	\$2.190.851
2018	\$2.493.767	(\$300.000)	\$2.418.207	2018	\$136.928	\$684.641	\$2.053.923
2019	\$2.418.207	(\$300.000)	\$2.335.845	2019	\$136.928	\$821.569	\$1.916.995
2020	\$2.335.845	(\$300.000)	\$2.246.071	2020	\$136.928	\$958.497	\$1.780.066
2021	\$2.246.071	(\$300.000)	\$2.148.218	2021	\$136.928	\$1.095.425	\$1.643.138
2022	\$2.148.218	(\$300.000)	\$2.041.557	2022	\$136.928	\$1.232.354	\$1.506.210
2023	\$2.041.557	(\$300.000)	\$1.925.297	2023	\$136.928	\$1.369.282	\$1.369.282
2024	\$1.925.297	(\$300.000)	\$1.798.574	2024	\$136.928	\$1.506.210	\$1.232.354
2025	\$1.798.574	(\$300.000)	\$1.660.446	2025	\$136.928	\$1.643.138	\$1.095.425
2026	\$1.660.446	(\$300.000)	\$1.509.886	2026	\$136.928	\$1.780.066	\$958.497
2027	\$1.509.886	(\$300.000)	\$1.345.776	2027	\$136.928	\$1.916.995	\$821.569
2028	\$1.345.776	(\$300.000)	\$1.166.895	2028	\$136.928	\$2.053.923	\$684.641
2029	\$1.166.895	(\$300.000)	\$971.916	2029	\$136.928	\$2.190.851	\$547.713
2030	\$971.916	(\$300.000)	\$759.388	2030	\$136.928	\$2.327.779	\$410.785
2031	\$759.388	(\$300.000)	\$527.733	2031	\$136.928	\$2.464.707	\$273.856
2032	\$527.733	(\$300.000)	\$275.229	2032	\$136.928	\$2.601.636	\$136.928
2033	\$275.229	(\$300.000)	\$0	2033	\$136.928	\$2.738.564	\$0



DRE		2019
<b>Receita líquida</b>		
Transporte de passageiros		\$4.690.149
Outras receitas		\$602.617
<b>Total receita líquida</b>		<b>\$5.292.765</b>
<b>Custos e Despesas</b>		
Combustível de aviação		(\$2.117.956)
Salários e benefícios		(\$1.156.691)
Tarifas aeroportuárias		(\$340.602)
Comerciais e publicidade		(\$279.252)
Material de manutenção e reparo		(\$412.229)
Despesa com Lease (aeronaves)		(\$300.000)
Depreciação e amortização (outros imobilizados)		(\$100.000)
<b>Total dos custos e despesas</b>		<b>(\$4.706.729)</b>
<b>Lucro Operacional</b>		<b>\$586.036</b>
<b>Resultado Financeiro</b>		
Receita financeira		\$44.978
Juros s/ Empréstimos e Financiamentos		(\$293.327)
<b>Total do resultado financeiro</b>		<b>(\$248.349)</b>
<b>Lucro Antes do Imposto</b>		<b>\$337.687</b>
IR e CSLL		(\$114.814)
<b>Lucro Líquido</b>		
<b>Total do Lucro Líquido</b>		<b>\$222.874</b>

<b>Balanco Patrimonial</b>	<b>2019</b>
<b>Ativo</b>	<b>\$2.744.797</b>
<b>Ativo circulante</b>	<b>\$2.144.797</b>
Caixa e equivalentes de caixa	\$716.884
Contas a receber, líquido	\$708.593
Estoques	\$719.320
<b>Ativo não circulante</b>	<b>\$600.000</b>
Imobilizado (outros imobilizados)	\$1.000.000
Depreciação Acumulada (outros ativos)	(\$400.000)
<b>Passivo &amp; PL</b>	<b>\$2.744.797</b>
<b>Passivo circulante</b>	<b>\$847.986</b>
Empréstimos e financiamentos de curto prazo	\$125.000
Fornecedores	\$222.000
Transportes a executar	\$500.986
<b>Passivo não circulante</b>	<b>\$557.000</b>
Empréstimos e financiamentos de longo prazo	\$557.000
<b>Patrimônio líquido</b>	<b>\$1.339.811</b>
Capital social	\$500.000
Lucros Acumulados	\$839.811

<b>Demonstração dos Fluxos de Caixa</b>	<b>2019</b>
<b>Fluxos de caixa das operações</b>	
Lucro Líquido	\$222.874
(+) Depreciações	\$100.000
(+) Resultado Financeiro	\$248.349
(+/-) Capital de Giro	(\$166.538)
<b>Total dos fluxos de caixa das operações</b>	<b>\$404.685</b>
<b>Fluxos de caixa dos investimentos</b>	
(+/-) Var. Imobilizado (outros)	\$0
(+/-) Var. Imobilizado (aeronaves)	\$0
<b>Total dos fluxos de caixa dos investimentos</b>	<b>\$0</b>
<b>Fluxos de caixa dos financiamentos</b>	
(-) Resultado Financeiro	(\$248.349)
(+/-) Empréstimos e financiamentos	(\$125.000)
<b>Total dos fluxos de caixa dos financiamentos</b>	<b>(\$373.349)</b>
<b>Fluxos de caixa total</b>	<b>\$31.336</b>

\* 14. Apure o EBITDA da companhia.

**\* 15. Selecione, abaixo, todas as contas do DRE e do Balanço Patrimonial que você utilizou para apurar o EBITDA da companhia**

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> DRE - Receita líquida                 | <input type="checkbox"/> DRE - Depreciação e amortização (outros imobilizados) | <input type="checkbox"/> Balanço - Imobilizado (outros imobilizados)           |
| <input type="checkbox"/> DRE - Combustível de aviação          | <input type="checkbox"/> DRE - Receita financeira                              | <input type="checkbox"/> Balanço - Empréstimos e financiamentos de curto prazo |
| <input type="checkbox"/> DRE - Salários e benefícios           | <input type="checkbox"/> DRE - Juros s/ Empréstimos e Financiamentos           | <input type="checkbox"/> Balanço - Fornecedores                                |
| <input type="checkbox"/> DRE - Tarifas aeroportuárias          | <input type="checkbox"/> DRE - IR e CSLL                                       | <input type="checkbox"/> Balanço - Transportes a executar                      |
| <input type="checkbox"/> DRE - Comerciais e publicidade        | <input type="checkbox"/> Balanço - Caixa e equivalentes de caixa               | <input type="checkbox"/> Balanço - Empréstimos e financiamentos de longo prazo |
| <input type="checkbox"/> DRE - Material de manutenção e reparo | <input type="checkbox"/> Balanço - Contas a receber, líquido                   | <input type="checkbox"/> Balanço - Capital social                              |
| <input type="checkbox"/> DRE - Despesa com Lease (aeronaves)   | <input type="checkbox"/> Balanço - Estoques                                    | <input type="checkbox"/> Balanço - Lucros Acumulados                           |

**\* 16. Apure a Dívida Líquida da companhia.**

**\* 17. Selecione, abaixo, todas as contas do DRE e do Balanço Patrimonial que você utilizou para apurar a Dívida Líquida da companhia**

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> DRE - Receita líquida                 | <input type="checkbox"/> DRE - Depreciação e amortização (outros imobilizados) | <input type="checkbox"/> Balanço - Imobilizado (outros imobilizados)           |
| <input type="checkbox"/> DRE - Combustível de aviação          | <input type="checkbox"/> DRE - Receita financeira                              | <input type="checkbox"/> Balanço - Empréstimos e financiamentos de curto prazo |
| <input type="checkbox"/> DRE - Salários e benefícios           | <input type="checkbox"/> DRE - Juros s/ Empréstimos e Financiamentos           | <input type="checkbox"/> Balanço - Fornecedores                                |
| <input type="checkbox"/> DRE - Tarifas aeroportuárias          | <input type="checkbox"/> DRE - IR e CSLL                                       | <input type="checkbox"/> Balanço - Transportes a executar                      |
| <input type="checkbox"/> DRE - Comerciais e publicidade        | <input type="checkbox"/> Balanço - Caixa e equivalentes de caixa               | <input type="checkbox"/> Balanço - Empréstimos e financiamentos de longo prazo |
| <input type="checkbox"/> DRE - Material de manutenção e reparo | <input type="checkbox"/> Balanço - Contas a receber, líquido                   | <input type="checkbox"/> Balanço - Capital social                              |
| <input type="checkbox"/> DRE - Despesa com Lease (aeronaves)   | <input type="checkbox"/> Balanço - Estoques                                    | <input type="checkbox"/> Balanço - Lucros Acumulados                           |



## Avaliação do impacto de normas contábeis na valoração de empresas

### Seu processo de decisão

#### Está é a última página deste questionário!

Agora, o objetivo é saber um pouco sobre o seu processo de decisão.  
Pedimos que responda com atenção.

**\* 18. Nas últimas questões os demonstrativos financeiros estavam elaborados de acordo com qual norma contábil?**

☐ IAS 17

☐ Não foi especificada qualquer norma contábil

☐ IFRS 16

**\* 19. Se João pode beber 1 barril de água em 6 dias, e Maria pode beber 1 barril de água em 12 dias, quantos dias levaria para que juntos bebessem 1 barril de água?**

*(informa apenas o número)*

**\* 20. José recebeu ao mesmo tempo a 15ª melhor nota e a 15ª pior nota da turma em um mesmo teste. Quantos estudantes tem nessa turma?**

*(informa apenas o número)*

**\* 21. Simão decidiu investir \$8.000 no mercado de ações, em 16 de janeiro. Seis meses depois, em 17 de julho, os preços das ações que ele comprou caíram 50%. Felizmente para Simão, de 17 de julho à 17 de outubro, os preços das ações que ele comprou subiram 75%. Neste momento, Simão:**

☐ Empatou no mercado de ações

☐ Está perdendo dinheiro

☐ Está ganhando dinheiro

**\* 22. O pai de Emílio tem três filhos. Os dois primeiros se chamam Junho e Julho. Qual o nome do terceiro filho?**

*(informa apenas o nome)*

**\* 23. Dentre as quatro questões acima, quantas você acha que respondeu corretamente?**

☐ Nenhuma

☐ 3

☐ 1

☐ Todas as 4

☐ 2



## **Avaliação do impacto de normas contábeis na valoração de empresas**

### **Agradecimento**

Agradecemos você por ter reservado parte do seu tempo para participar deste experimento.  
Ressaltamos o sigilo das respostas garantido pelo anonimato do questionário.

Caso tenha interesse pelo tema e deseje receber uma cópia do resultado final da pesquisa, envie um e-mail para [carlosricci.jr@gmail.com](mailto:carlosricci.jr@gmail.com) com esta solicitação que lhe encaminharemos uma cópia do material produzido assim que o mesmo for finalizado.

Muito Obrigado!