

Analysis of financial indicators from leather and leather goods industry: a study on Colombian companies

Análisis de indicadores financieros del sector manufacturero del cuero y marroquinería: un estudio sobre las empresas colombianas

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Abstract

In this work a financial analysis of Colombian leather manufacturing companies is carried out seeking to contribute to the knowledge of the financial performance of this industry and to state reliable information for the strategic planning processes. A descriptive, documentary and exploratory research was used as methodology. The financial information of 57 companies, classified in 4 industries, was collected to obtain 14 financial indicators. Level of liquidity, leverage, asset management, profitability and value of companies were calculated and discriminated by industry and by year. Results highlighted that the number of big companies has diminished, facing challenges as low liquidity, low assets rotation, low profitability and low value generation, but current ratio and leverage are adequate. Differences between financial performances of the 4 sectors that are part of Colombian leather manufacturing industry were found. However, this behavior is not included when this industry is assessed. This work aims to the analysis of financial indicators in a complementary way with sectorial and prospective studies to obtain valuable information for decision-making and strategic planning.

Keywords: Financial analysis; financial indicators; Leather manufacturing industry.

Introduction

The financial indicators are a helpful tool for the decision making (Giner, 1990), to strengthen the actions

that generate positive impacts (Rivera, 2011) and to identify the areas that require taking correctives (Angulo and De la Espriella, 2012; Marr, 2012). It is pertinent for enterprises, guilds and governments to evaluate the financial indicators in the interested sector (Rappaport, 1998), without forgetting that one of the main objectives of the financial management is to maximize the richness of the actionists in the enterprises (De Jaime, 2003; Brigham and Ehrhardt, 2014; Suárez, 2014).

In the field of macroeconomics, it has been reported studies about the capability of the financial indicators to predict the financial stress (Catalán, 2013; Tagkalakis, 2013) as in the case of the Spanish bench (Gutiérrez and Abad, 2014), the relation between financial stability and fiscal politics in twenty countries of the OECD (Adam and Jaroslav, 2008; Tagkalakis, 2014), predicting the recession periods in the American economy (Levanon, 2015), identifying sectorial crisis in Spain, Italy and Germany (De Santis and Stein, 2015), and selecting indicators to establish chronological cycles and the growth of countries like China (Adams *et al.*, 2010).

One of the application fields of the financial indicators is the financial performance evaluation of a determined economical sector, such as the petroleum in Thailand (Wattanatorn and Kanchanapoom, 2012), international enterprises with capital in risk (Gerschewski and Xiao, 2014), the baking sector in Turkey (Merican *et al.*, 2003) and ocean wave energy plants in the Canary Islands - Spain (Guanche *et al.*, 2014). Another research line has focused in the use of financial indicators to evaluate the effect of on external variable in the performance of a determined economic activity, with the impact of the implementation of a Free Trade Agreement in an intensive dairy industry in Mexico (Villegas and Dávalos, 2005), identifying in retrospective if the gas distributing Italian enterprises in Italy that opted in specializing had better results that the one that opted in diversification (Capece *et al.*, 2010), if the privatization impacted in the financial performance in five electric energy distributors in northeast Brazil (Silvestre *et al.*, 2010), the dampening effect upon the financial indicators about the Swedish enterprises responsibilities according to its seniority (Wiklund *et al.*, 2010), the importance of new regulatory policies in the financial performance of Italian enterprises in the gas (Capece *et al.*, 2012), and the performance of Italian energetic companies after the market's liberalization (Capece *et al.*, 2013). We must highlight that these studies were based on collected information from secondary sources.

In Colombia, the analysis of financial indicators has been used to evaluate the financial impact of the capital structure in innovative clothing enterprises in the city of Cali (Rivera and Alarcón, 2012), the financial performance of seventeen innovative enterprises in the food and beverage sectors (Rivera and Ruiz, 2011), thirty one enterprises in the coal (Fontalvo *et al.*, 2012), and forty eight enterprises in the printed media (Rivera and Padilla, 2014), and a hundred sixteen enterprises in the petroleum and gas sector (De la Hoz *et al.*, 2014). It has also been studied the impact of a quality financial performance system implementation in twenty five enterprises in the industrial zone of Mamonal in Cartagena- (Morelos *et al.*, 2013a) the effect of the accreditation in high quality profitability indicators of twenty enterprises in the health sector (Morelos *et al.*, 2013b), a model was evaluated to predict the probability of an enterprise in the risk of bankruptcy (Pérez *et al.*, 2013), it was identified if there is value creation by the industry in the communication (Rivera and Padilla, 2013), the financing sources were analyzed by Pandmes and their relation with financial management (Vera *et al.*, 2014), the development of Colombian producing sectors were evaluated with emphasis in their competitiveness (Castaño and Arias, 2014), the financial performance was analyzed in the six main economic sectors of the country in 2209 (Correa *et al.*, 2010), the improvement of financial indicators was evaluated and the enterprises in the storage sector with related activities with the goal to identify the variables and monitor for the development of the sector (Herrera *et al.*, 2012), and identify the financial panorama for the different sectors in the Colombian economy to compare the 2010 information with the one from (Correa *et al.*, 2011).

Studies were made in Colombia based on the reported data by the *Cámaras de Comercio* (Commerce Chambers) (González and Bermúdez, 2010), to the *Sistema de Información and Reporte Empresarial SIREM* (Corporate Information and Report System) of the *Superintendencia de Sociedades* (Superintendence of Societies) (Castaño and Arias, 2014; Correa *et al.*, 2010; and Correa *et al.*, 2011; Pérez *et al.*, 2013; Rivera and Ruiz, 2011; Rivera and Padilla, 2013, 2014; Vera *et al.*, 2014), or in both kind of information sources (Fontalvo *et al.*, 2012; De la Hoz *et al.*, 2014; and Morelos *et al.*, 2013a). The *Superintendencia de Salud* (Health Superintendence) only was used as source of one of the consulted studies, by having as study object the enterprises with that economic activity (Morelos *et al.*, 2013b). Using information of secondary sources is a frequent method in the analysis of financial indicators.

The difficulty to access the primary information has been identified in the financial analysis studies: in the first place by the restriction for using the countable information in the interested sections in a proper time (Rivera and Ruiz, 2011), and in second place by practices that look to manipulate the accountability, which distorts the information and affects its reliability (Pérez, 2013). The inaccuracy of the information about the interest sector can affect the decision making, that is why it is waited for the current era of the information and the knowledge management, and this phenomena can be controlled (Tomaszewski et al., 2000).

In the SENA Leather Center of Design and Manufacturing, the innovation culture was boosted as an strategy to improve the competitiveness in the leather and leather goods sector to do a diagnose of this sector and to identify the improving actions (Velásquez and Castro, 2013). It was detected that there was no analysis of financial indicators for this nationwide industry. There are sectorial studies and allusive information to the main challenges of this industry (AKTIVA, 2013; Productive Transformation Program, 2013; ACICAM, 2014), but they don't analyze the sector's financial indicators, although the information is public it can be collected from the webpage of the *Superintendencia de Sociedades* (SIREM, 2014). Two hundred and seventy managers of Mipandmes in Cali, Colombia, revealed that the financial indicators to take into account for the choice making are drawn from their own balances, and are related with liquidity and indebtness (González and Bermúdez, 2010).

A descriptive analysis was done with financial information reported between the years 2008 and 2013 to the *Superintendencia de Sociedades* by the leather and leather goods manufacturing sector. The data was classified by economic activity and year, where the main financial indicators were calculated and this way doing an analysis that presents proper information in a friendly way to the entrepreneurs of the sector. A discussion about the way of how the results can affect in the planning of the organizations was held, and a contrast with the reported studies in the literature.

Methodology

Information was taken from the leather and leather goods sector reported from the 2008 to 2013 period by the *Superintendencia de Sociedades* in the SIREM, hence the study considers the financial information of the classified

companies as big companies. A descriptive documentary and exploratory study was done with the goal to offer a better comprehension of the studied phenomenon, using the methodology explained by other sectorial studies based in financial indicators (Castaño and Arias, 2014; Correa et al., 2011; González and Bermúdez, 2010; Rivera and Padilla, 2014; Vera, 2014).

Companies according the *Clasificación Industrial Internacional Uniforme-CIIU* (Uniform International Industry Classification) were chosen that include the next code of activities: D1910 (Tanning and leather preparation), D1931 (Manufacturing of hand purses, traveling articles and similar articles done in leather), D1932 (Manufacturing of hand purses, traveling articles and similar articles in synthetic materials, plastic and leather imitations) and D1939 (Manufacturing of hand purses, traveling articles and similar articles made with non-previously classified materials). Are analyzed, then, the companies indicators dedicated to the tannery and manufacturing of leather articles different to shoe wear.

The necessary data was collected to calculate fourteen financial indicators in the Chart 1, grouping them in the liquidity categories, rotation, indebtedness, reliability and value construction. These fourteen indicators were chosen from diverse studies, nationally and internationally point out that they are meaningful to diagnose an economical sector (Capece et al., 2010; Capece et al, 2013; Correa et al., 2010; Correa et al., 2011; De la Hoz et al., 2014; Gutiérrez and Abad, 2014; Morelos et al., 2013b; Rivera, 2011; Rivera and Padilla, 2014; Villegas and Dávalos, 2005), and are considered as the key financial indicators for the adequate management (Marr, 2012; Rivera and Padilla, 2014; Sagbini and Bolívar, 2007).

Since the SIREM reports the information in a text file, the data was exported to spreadsheets, the interest indicators that were not directly reported and were tabulated, classifying the information by year and economic activity were selected.

Chart 1. Financial indicators based on the calculation for the study.

Indicator type	Indicator	Formula	Consideration
Liquidity indicators (producing capacity or cash circulation)	Current Ratio	$R.C = \frac{\text{Current assets}}{\text{Current liability}}$	Capacity to answer for debts in the short term.
	Quick Ratio	$Q.R = \frac{\text{Current assets-inventories}}{\text{Current liability}}$	Capacity to answer the debts in extreme conditions.
Activity and rotation indicators (how efficient an organizations makes its resources)	Inventory rotation	$Inv. Rot = \frac{\text{Inv. bussiness days}}{\text{sold merchandise cost}}$	Production capacity client dispatch.
	Fixed assets rotation	$F.A. Rot. = \frac{\text{Fixed assets-Bussiness days}}{\text{Operational income}}$	Capacity to generate cash in a year in days.
Profitability indicators (allow to identify the company's profitability)	Return on Sales ROS	$ROS = \frac{\text{Operating profits}}{\text{Net sales}}$	Balance in favor of the company after incurring expenses.
	Return on Equitant ROE	$ROE = \frac{\text{Net Income}}{\text{Average Shareholder 's Equity}}$	Inversion reliability.
	Return on Assets ROA	$ROA = \frac{\text{Net Income}}{\text{Total Assets}}$	Inversion return.
Indebtedness indicators(measure the financial proportion made by thirds and the company's capacity to answer its creditors)	Indebtedness index	$Indebtedness = \frac{\text{Current liability}}{\text{Current Assets}}$	Percentage of current assets in the resources of thirds.
	Leverage	$Leverage = \frac{\text{Current liability}}{\text{Average Shareholder 's Equity}}$	Measures how the company is using the indebtedness to obtain more profits
	Short term liabilities	$ST liabilities = \frac{\text{ST liability}}{\text{Current liability}}$	Short term indebtedness grade
	Financial indebtedness concentration	$FIC = \frac{\text{Financial obligations}}{\text{Current liability}}$	Indebtedness grade with financial institutions
Value indicators (allow to know if the companies are building value or not)	Growing Leverage(PDC)	$PDC = \frac{\text{EBITDA}}{\text{KTNO}}$	Measures if the company is building value.
	Financial Contribution	$CF = ROE - ROA$	Contribution that delivers the indebtedness to leverage itself and generate values to the equity profitability.

Results and results analysis

Shows Figure 1 a number of Colombian companies in the leather and leather goods sector monitored by *Superintendencia de Sociedades* in the 2008-2013 period.

It is observed that between the years 2008 and 2011 it did not vary meaningfully the number of monitored enterprises, but in the years 2011 and 2013 the amount decreased in a 32%; a deterioration signal of the leather industry in the country. Is worth to mention that the indicator has not still been taken in account in available

sectorial studies in the (AKTIVA, 2013; *Programa de Transformación Productiva*, 2013; ACICAM, 2014).

Liquidity indicators

The liquidity indicators between the years 2008 and 2012 for enterprises considered in this study are presented in the Figure 2, classifying them by economic activity and year. Between the years 2011 and 2012, the manufacturing of articles with synthetic materials, leather imitations and plastic presented a current ratio meaningfully superior to

the other economic activities. The indicator has improved between the years 2008 and 2012 for the fabrication of articles with non-classified in other categories materials.

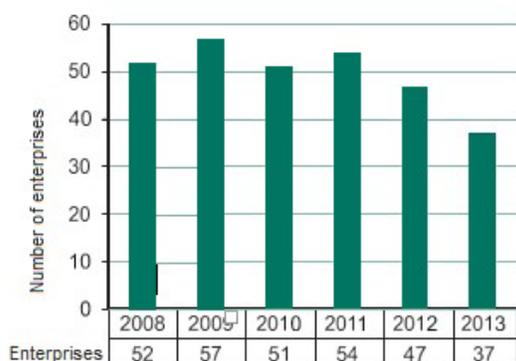


Figure 1. Number of Colombian companies in the leather and leather goods that presented information to the Superintendencia de Sociedades between the years 2008 and 2013.

Source: The authors based in the SIREM system of the Superintendencia de Sociedades.

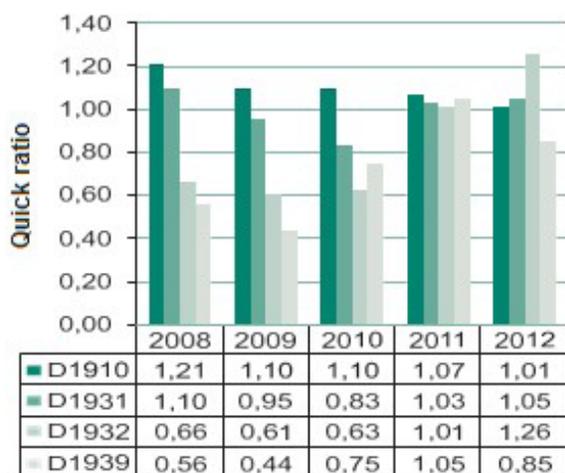
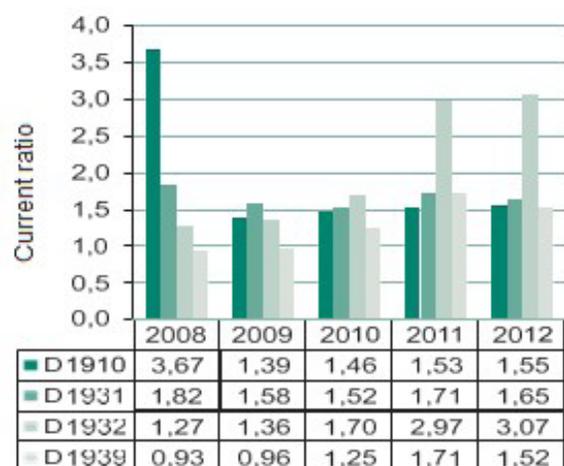


Figure 2. Behavior of the current and quick ratio as liquidity indicators classified by economic activity

Source: The authors based in the SIREM of the Superintendencia de Sociedades.

It is worth to mention that the four economic activities observed the capacity of circulating assets is enough to confront the totality of the indebtedness of the companies. The quick ratio for the companies for the tanning and leather preparation decreased a little in the period; in another hand, the manufacturing of synthetic materials, plastic and leather imitations improved the indicator meaningfully. The liquidity indicators reveal that the cash position of the enterprises in the sector has damaged, in a manner that is classified as fragile (Pérez *et al.*, 2013). A study has already been reported that the sector presented liquidity difficulties, but without detailing the indicators that supported this conclusion (*Programa de Transformación Productiva*, 2013). The lack of liquidity is the most marked for the enterprises dedicated to the tanning and leather preparation, but the indicator has improved for the fabrication of synthetic materials, plastic and leather imitations. The better behavior of the tanning leather sector has already been reported in a sectorial study of AKTIVA (AKTIVA, 2013), but the financial indicators give reliable information to establish the problematic of each sector.

Activity and rotation inventories

The activity and rotation inventories can be appreciated in the Figure 3. The rotation inventories of the sector present high values, which makes more difficult any strategy because it implies to invest under the management work of inventories, a factor that impinges against competitiveness. The only economic activity that improved during the years 2008 and 2012 was the tanning and leather preparation. Some options to evaluate, according to the recommendations have been tested in storage sectors (Herrera *et al.*, 2012) and health (Morelos *et al.*, 2013b), can be supported in the commercial area to know better the sales expectations, identifying demand peaks of their products, implementing methodology just in time, to conduct a storage risk analysis and the production times to determine the minimum required inventory. The indicator of current assets rotation increased between 2008 and 2012 for the 4 economic activities, albeit the best result is given in materials manufactured with non-classified in the other categories. In this aspect has presented a coincidence with reports tendencies in the technological monitoring (Velásquez and Castro, 2013) and in the sectorial studies (AKTIVA, 2013; ACICAM, 2013; ACICAM, 2014), which report that the inventory management should be improved in the companies that

process leather, although without statistics that support this suggestion.

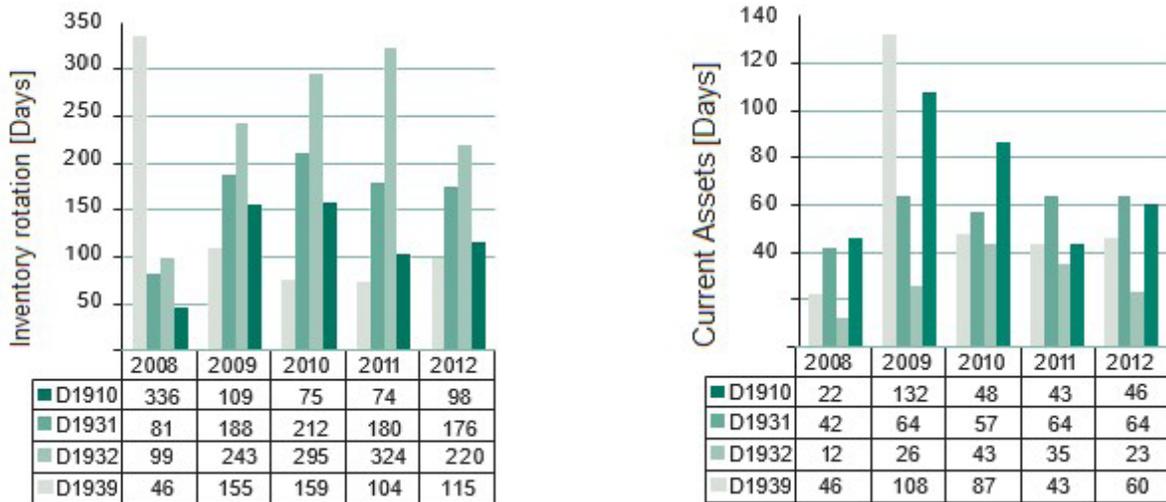
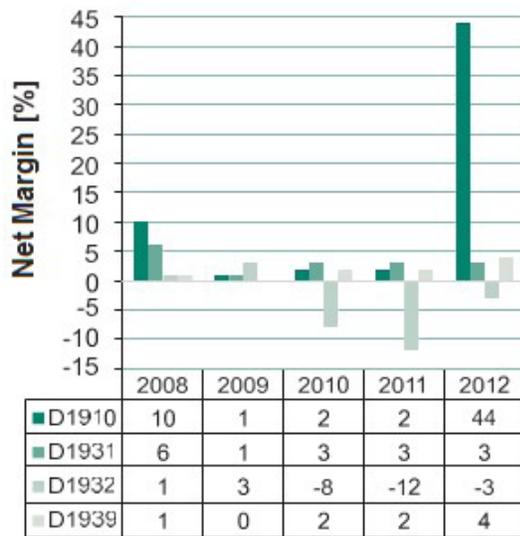


Figure 3. Inventory rotation (left) and current assets (right) classified by economic activity.
Source: The authors based on the SIREM of the Superintendencia de Sociedades.

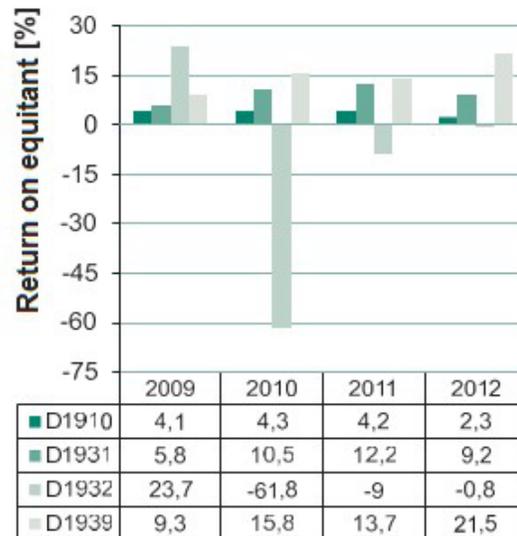
Reliability indicators

The reliability indicators are shown in Figure 4. The companies dedicated to the manufacturing of articles in synthetic materials, plastic and leather imitations presented net margins and negative patrimony reliabilities between the years 2010 and 2012, and is the only one of the four activities with this behavior; its reliability of current assets was also negative between the years 2010 and 2011, it was zero in the year 2012, in a way that any of the reliability indicators have been positive between the years 2010 and 2012 for the manufacturing of articles with

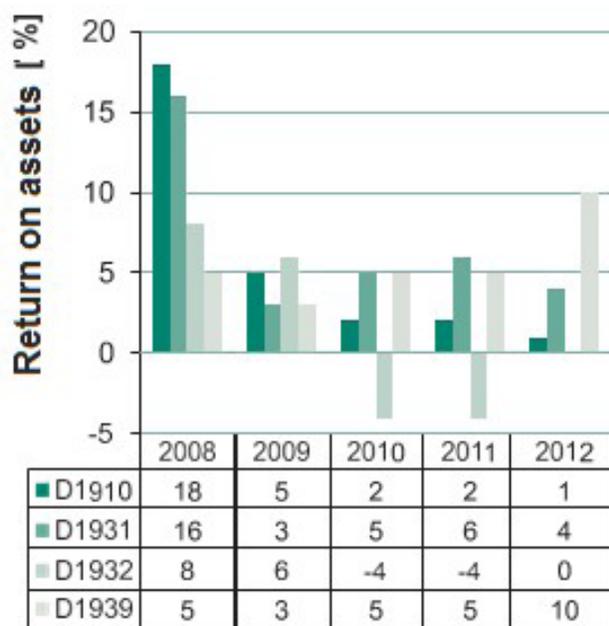
synthetic materials, plastic and leather imitations. In the year 2012 the tanning and leather preparations presented a net margin of 44%, a remarkable amount, but excluding this particular result it is observed that in the years 2010 and 2012 its net margin, of the manufacturing of leather articles and manufacturing of articles different to leather and leather imitations was between the 2% and 4%. The companies with the best net margins and reliability during 2012 were the ones dedicated to the fabrication of articles with materials different to leather, synthetics or plastic.



(a) Net margin



(b) Return on equitant - ROE



(c) Return on assets - ROA

Figure 4. Reliability indicators classified by economic activity.
Source: The authors based on the SIREM of the Superintendencia de Sociedades.

Next in reliability indicators of the companies dedicated to the leather articles, while the tanning and leather preparations show a lesser reliability in the activities that generate benefits. For the leather industry, so affected by the Chinese imports at very low prices, a possible strategy is to increase the selling incomes to develop a new management model focused towards the client, more detailed information in the sectorial studies and prospectives can be found in (AKTIVA, 2013; ACICAM, 2014, Velásquez and Castro, 2013).

Indebtedness indicators

Figure 5 shows the indebtedness indicators. The values reported through the years 2009 and 2012 are high, because the indebtedness reason for all the economic activities was found between the 45% and 70%. It is highlighted how this indicator has decreased for the manufacturing of articles with synthetic materials, plastic and leather materials, like the article manufacturing with materials different to leather, its imitations, synthetics or plastic. To reduce the indebtedness it must be aimed to increase the current and fixed assets, without falling in the mistake of having idle assets, simultaneously with the decrease of total liabilities, short term financial obligations, labour obligations and the leverage by partners.

It must be considered that the access to the financing sources also seems to be affected by other indicators such as reliability, that in some sectors is negative; and option is to lever empowering the patrimony. It is appropriate to test the state of the companies to identify the best strategy that allows to decrease the indebtedness indicators, because the partners and financial entities roles depend if the company is in an initial, expansion and growing, ripeness or decadency stage. The information reported by the *Superintendencia de Sociedades* does not allow to identify in which stage are the companies in, and it corresponds to them to adapt these suggestion to their particular situation.

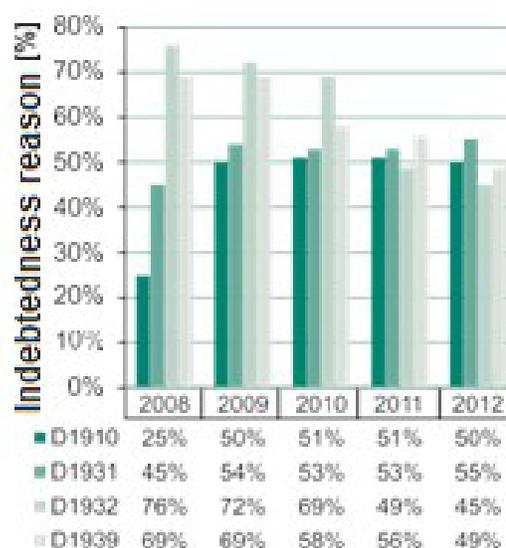


Figure 5a. Indebtedness reason

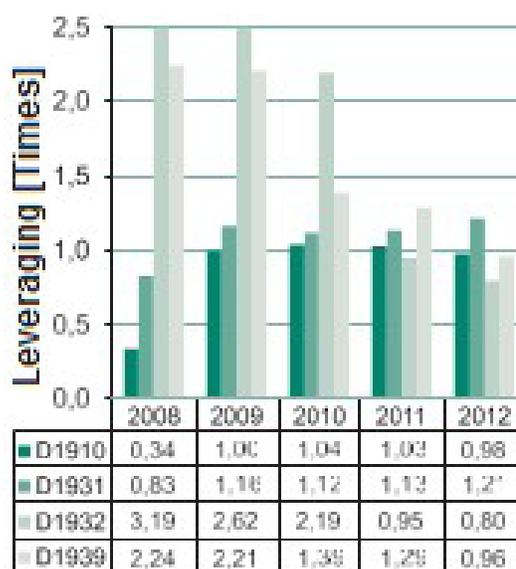


Figure 5b. Leveraging

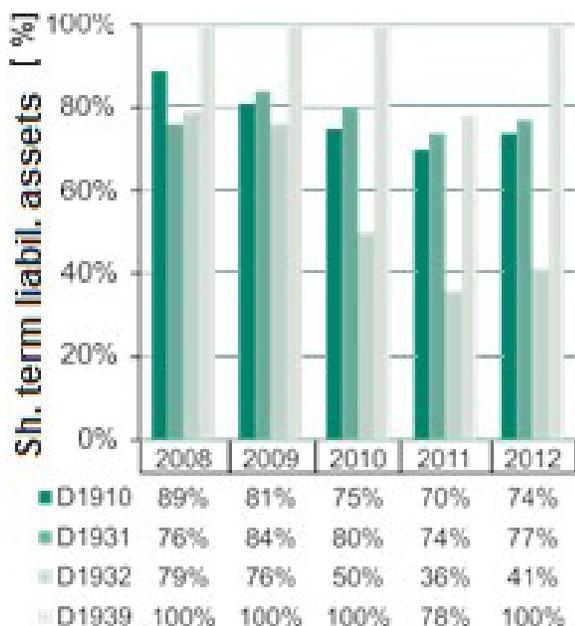


Figure 5c. Short term liability assets

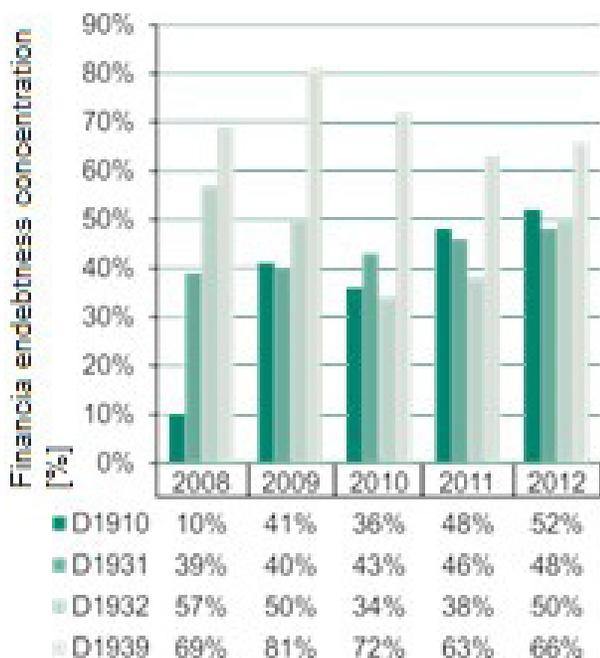


Figure 5d. Financial Indebtedness concentration

Figure 5. Indebtedness classified by economic activity. Source: The authors based with the SIREM system of the Superintendencia de Sociedades.

According to Figure 5b, the four economical activities in the leather sector leverage an average of 1.39 times a year and indicating that the collection of funds coming from loans is productive. The synthetic materials, plastics and leather imitations fabrication has been the economic activity with the highest decrease in the presented leverage; the manufacturing of leather articles, on the contrary, increased its leverage in the years 2008 and 2012, becoming the activity with the best value in this indicator. This behavior difference in each economic activity has not been reported until now in the published studies about the sector (AKTIVA, 2013; ACICAM, 2013; ACICAM, 2014). In this aspect, the sector is considered as non-fragile according to a study done about the indicators associated to the companies' risk (Pérez *et al.*, 2013).

The concentration of short term liability assets observed in the Figure 5c shows that the leather companies put themselves in short term debts in an average of 73%, where the manufacturing activity of articles in materials different to leather, its limitations, synthetics or plastics that represent the highest values of short term liability assets concentration (a 96% in average throughout the five years). The manufacturing of articles with leather imitation, synthetics and plastics materials is the activity with less values of short term liability assets concentration, between the 36% and 41% for the years 2011 and 2012. According to the results of the financial indebtedness that is shown in Figure 5d the sector companies possess a medium level of financing with financial institutions. The manufacturing of articles with materials different to leather, its imitations, synthetics or plastics is the economic activity with the highest concentration level with the financial sector, but it has maintained itself in the same levels since the year 2008, while in the other three activities their financial indebtedness levels increased between the years 2011 and 2012. These results match with the sectorial studies developed AKTIVA for the general sector (AKTIVA, 2013), but given the difference in the behavior in the four types for economic activities considered in this study, it is pertinent for each economic activity to establish their strategies separately.

Value indicators

The growth lever values -GLV- presented in the Figure 6a, evidence that no activity of the sector is generating value in a meaningful way.

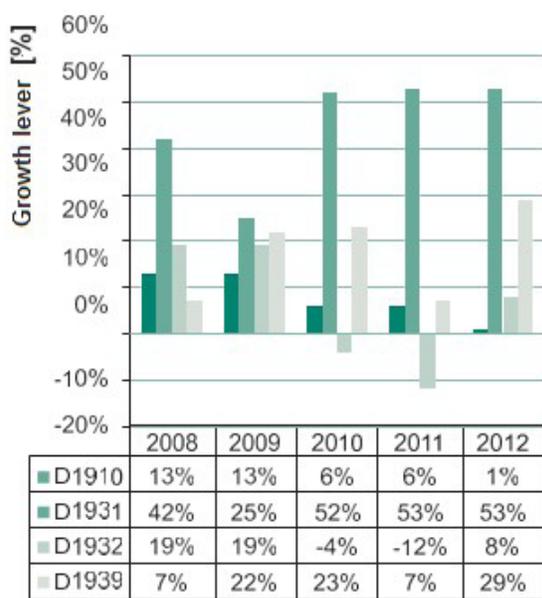


Figure 6a. Indebtedness reason

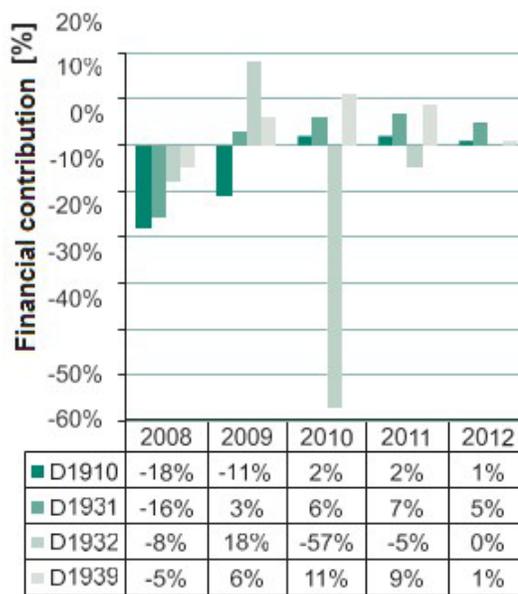


Figure 6b. Leveraging

Figure 6. Value indicators classified by economic activity.

Source: The authors based in the SIREM of the Superintendencia de Sociedades (Society Superintendence).

The fabrication of leather articles is the activity that presents the best amounts, while the fabrication with leather imitations, synthetics and plastics presented even negative values between the years 2012 and 2011. The companies of the sector presented a 19% average in the lever growth, demonstrating that they are consuming the cash from previous periods, and a unbalancing in the cash flow is configured, a big challenge must be faced. The sectorial and prospective studies have overlapped in indicating that a sector must generate (ACICAM, 2014; Velásquez and Castro, 2013), but if this strategy has been implemented, it has not been reflected in the financial indicators.

According with the financial contribution indicator, shown in the Figure 6b, the leather tanning passed from generating negative contributions in the 2008 to low but positive in the year 2012, the panorama was more hopeful for the manufacturing of leather, materials different from leather, and its imitations, synthetic and plastic articles. The companies dedicated to the manufacturing of articles that imitate leather, synthetic or plastics presented a positive financial contribution for the year 2009, meanwhile in the years 2008, 2010 and 2011 its financial was negative, in the year 2012 it was 0%.

Conclusions

- The financial indicators for the period 2008- 2013 of the Colombian leather and leather goods companies are required to present reports to the Superintendencia de Industria y Comercio (Industry and Commerce Superintendence), allowing to identify the related with *financial performance* the main challenges that face this industrial sector, as well as their strengths. The financial information complements the reported in the sectorial and prospective studies, generating valuable information for the companies, guilds, and promotion entities to identify the best strategies for the sector's development. It was detected that it decreased the number of leather and leather goods companies with enough assets to present reports to the Superintendence, a signal of the sector's capacity loss. The four economic activities that make part of the sector share the same difficulties such as low liquidity low reliability margins, specially due to the increase of costs and expenses, the low inventory rotation, hence improving these indicators is one of the main challenges, besides because an improvements in these indicators will impact in an operational way the business, of the permanency possibilities, growth and value generation. The companies present positive leveraging levels, and the capacity of the current assets have demonstrated to be enough to make front to the totality of their debts, which

indicates the pertinence to consolidate the strategies that have generated these positive results.

- There are some meaningful differences in some of the financial indicators of the four economic activities that make part of the leather and leather goods sector. The fabrication of traveling articles, hand bags and similar articles, elaborated in synthetic materials, plastic and leather imitations, is the activity with the lowest reliability indicators and value creation, just like the highest difficulties in lever growth and indebtedness difficulties, which is contradictory with the prospective results, that are seen in the use of synthetic materials a key factor for the future of the sector. The tanning and leather preparation, on other hand, present higher financial indicators that the other activities. The strategies for each one of the studied economic activities, then, must be different due to its problems and strengths are also different. It is recommendable to implement the sectorial studies published by the guilds and entities with the analysis of financial indicators, because the first ones do not detail the information by economic activity.

The sectorial and perspective studies match in recommending that the leather and leather goods materials must generate values through the design and offer of products with high technical specifications, but the financial contribution indicators, that associate with the value creation, are low for the studied period, and they even decreased since the year 2010. This contradiction can be considered in the companies' strategies and in the encouraging programs.

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