KOICA-KAIST Scholarship Program

Stock market and economic growth in Ecuador

Jessica Andrea Bolaños

Graduate School of Finance, Finance MBA

KAIST

2016

Stock market and economic growth in Ecuador

Stock market and economic growth in Ecuador

Advisor   :   Professor Kang, Jangkoo

by

Jessica Andrea Bolaños

Graduate School of Finance, Finance MBA

KAIST

An Independent Research Paper submitted to the faculty of KAIST in partial fulfillment of the requirements for the KOICA-KAIST Scholarship Program. The study was conducted in accordance with Code of Research Ethics[1]

March 21, 2016

Approved by

Professor Kang, Jangkoo

ABSTRACT

This paper investigates the connection between stock market performance and economic growth in Ecuador, by using quarterly data, during the period 2000 – 2014. To determine the right empirical method, I first conduct unit root tests and confirm that variables used in the paper are difference stationary. In addition, I do not find any cointegration relations between variables when I conduct Johansen cointegration test. Thus, I use the VAR (Vector Autoregression) specification to examine the relation between stock market performance and economic growth in Ecuador. My empirical results reveal that the stock market performance Granger-cause the economic growth in Ecuador, but not vice versa.

Table of Contents

List of Tables and Graphs

Chapter 1. Introduction

For a country that wishes to boost its economic growth, it is important to have a sound financial system that is capable of offering quality services in a modern environment with minimum risk. Understanding and analyzing how to stimulate economic growth have been of special concern of economic theory approaches, because it is strongly linked to welfare of the population, as well as expectations that are generated in the domestic and international financial markets, which means that increasing the rate of a country's economic growth would improve the country's economic outlook.

The link between financial development and economic growth is very meaningful. The development of stock markets bring more economic activity, and they accomplish this by providing liquidity to companies, which use those resources to invest in new projects to expand, and, as consequence, they generate more economic activity.

Considering that market capitals in developed countries have been important contributors for economy, it would be possible to support the idea that financial development fosters economy growth or vice versa. In fact, there are several studies that have proved that a well-developed stock market, can foster economic growth in the long run, however, these do not necessarily imply that stock market development is always exogenous for economic growth. . Empirical investigations of the link between financial developments with economy growth have been made, however, there are few studies in developing economies and they have shown mixed results. In addition, there is very few literature about Ecuador on this matter.

The stock market in Ecuador is considered one of the less developed markets in Latin America. For a small market there are two stock exchanges, when the global trend is to unify them. It also exists operational and technological problems, which drive to a less efficient market. Furthermore, there is lack of international standards, which are important to give confidence and credibility to the market. Underdeveloped or poorly functioning capital markets deter foreign investors because the markets are illiquid and trading is expensive.

This paper will describe the current situation of the stock market in Ecuador and explore the connection between the economic growth and stock market performance. It is divided into five chapters. In chapter 2, it

reviews some theoretical and empirical contributions. Then, in chapter 3, it recounts how the Ecuadorian stock market was founded, its participants, and report an up-to-date snap of its main figures.

In chapter 4, with the tools that provides econometrics, the empirical evidence related to the link between the economic growth in Ecuador and the development of its stock market is shown, analyzing quarterly data for the period 2000-2014. Finally, in chapter 5, main conclusions drawn from the results in the previous chapter are presented, and some recommendations that could be considered for a better development of the economy based on the improvement of the stock market.

Chapter 2. Stock market and its relationship with economic growth

The link between financial development and economic growth has been discussed for many years. One of the first contributors was Schumpeter (1911), who agues that the services provided by financial intermediaries, such as mobilizing savings, evaluating projects, managing risk, monitoring managers and facilitating transactions, are essential for technological innovation and economic development. Guha and Mukherjee (2008) believe that the debate on this matter has turned basically into two issues, first, if there is any link between financial development and economic growth, and, second, what is the nature and direction of the causal relationship between these two variables. (López & Rodríguez, 2010)

2.1. Theories

Brianto (2010) exposes that the capital market seeks to provide a cheaper financing and improve efficiency in the distribution of productive resources. The development of capital market is important because it is as a cheaper alternative of investment process to channel resources to economic agents that promote profitable initiatives which, otherwise, would not have access to the financing needed to mobilize resources to increase welfare. Therefore, the economic growth of every country depends heavily on the capacity and efficiency of their capital markets. If a country has an efficient and deep capital markets, it is able to obtain higher growth rates. A stock exchange make it easier to financing investment, improve the allocation of resources, supports a more efficient management of risk and allow more stable consumption and investment. Only those nations that have the highest rates of capital formation, have achieved sustained economic growth, where its coherent plans of social development has brought tangible benefits in terms of welfare for its people. The goal of a primary shares' placement is to call for hundreds or thousands of individual savers to partner with a company through the initial subscription or purchase of shares by paying a sum of money, generating enough resources so the issuing company could make project investments that generate jobs, increase income, rents and wages generating the increase in gross domestic product -GDP- of countries.

Accordign to López & Rodríguez (2010), many countries faced financial constraints, particularly in developing countries, where bank loans were restricted to favor certain groups of investors and companies. This limitation may also reflect restrictions in the credit market. Similarly, efficient capital markets provide guidelines as a means to maintain appropriate monetary policy through the issue and repurchase of government

securities in the money market, which constitutes an important step towards financial liberalization. In the same way, the well-organized equity markets can change the pattern of demand for money, and contribute to creating liquidity which ultimately encourage economic growth. Most liquid markets can create long-term investment and therefore economic growth through lower transaction costs, the liquidity of capital markets positively predicts aggregate economic growth. Classic theorists have believed that there is no correlation between the stock market and economic growth, that markets are not institutions which contiribute to high levels of economic development. Others have seen the capital market as a dangerous agent for economic development because of their susceptibility to market failures, which is often palpable in developing markets. In contrast to the traditional view, there is evidence that supports the hypothesis that there is long-term correlation between the development of capital market and economic growth.

2.2. Evidence

The debate whether or not financial markets influences economic growth has been an interesting topic that has encouraged empirical studies to be carried out on this subject. The view of this relationship has changed over time.

Among the first studies that investigate this important link is that of Fama (1981), in which statistical evidence proves the existence of a positive relationship between stock market performance and future real economic activity, capital expenditure, and, rate of return on capital and production, and he concluded that the growth rate of industrial production was the only real variable that has a strong relationship with the returns of the stock market. (López & Rodríguez, 2010)

Spears (1991) describes that in the early stages of development, financial intermediation induces economic growth. In the same way, Atje and Jovanovic (1993) conclude that stock markets have long-run impacts on economic growth. Paudel (2005) states that stock markets, due to their liquidity, enable firms to acquire much needed capital quickly, hence facilitating capital allocation, investment and growth. Further, Demirgüç-Kunt (1994) and Levine and Zervos (1996) have supported the view that stock markets promote economic growth. Other authors like Rousseau and Wachtel (2000), and, Beck and Levine (2004) conclude that with well-functional financial sector or banking sector, stock markets can give a big boost to economic development.

A study by Levine and Zervos (1998) have suggested a strong statistically significant relationship between stock market development and economic growth. Filer et al. (1999) examined stock market-growth

nexus and exhibited positive causal relationship between stock market development and economic activity. Also, Caporale et al. (2005) advise that investment productivity is the channel through which stock market development enhances economic growth in the long run. Shahbaz et al. (2008) confirmed that there is a long-run relationship between stock market development and economic growth in Pakistan, and, Srinivasan (2014) got the same conclusion for India.

Adjasi and Biekpe (2006) found that stock markets only play an important positive role in the growth of upper middle income African countries and concluded that low income countries and less developed stock markets need to grow more to elicit economy development. Additionally, Vazakidis and Adamopoulos (2011) inferred that stock market development has larger effect on economic growth in United Kingdom. In recent times, Ikikii and Nzomoi (2013) found that stock markets development have had positive impact on economic growth in Kenya.

In contrast, Singh (1997) focused his research on the role of stock markets in developing countries during 1980 and 1990, and concluded that long-term economic growth does not show dependency towards the stock market. Also, Harris (1997) found out that there is no significant relationship between stock market and economic growth, and when he divided the sample into developed and less developed countries, the stock market effect for less developed sample is very week. Evidences from China (Men & Li, 2006), Egypt (Badr, 2015) and Romania (Pece, 2015) also show that there is no causal relationship between stock market development and economic growth.

Boubakari and Jin (2010) explored causality relationship between stock market and economic growth from 5 countries -Belgium, France, Portugal, Netherlands and United Kingdom-, and suggest a positive links between the stock market and economic growth for some countries for which the stock market is liquid and highly active. However, the causality relationship is rejected for the countries in which the stock market is small and less liquid. Furthermore, the empirical studies showed that causality runs in both directions where economic growth causes the stock market development and vice versa (Arestis et al. 2001, Demetriades and Hussein, 1996, Luintel and Khan, 1999).

Considering some studies of other Latin American countries, results are mixed. In Mexico (López & Rodríguez, 2010) and Colombia (Gamez Diaz, 2012), the empirical evidence suggests that stock market has a positive impact on economic growth. However, for Peru (Cortez, 2010), its economic growth is not affected by stock market development, and for Venezuela (Brianto, 2010) stock market development cause a negative

inflence on GDP. Finally, Terceño & Guercio, (2011) present an analysis based on a group of Latin American countries and their findings indicate that as a group there is a big correlation between stock market and the region's growth, but as individual, Argentina fails to prove any correlation between those two variables.

Chapter 3. The Ecuadorian stock market

The financial markets could be classified in two divisions: monetary market and capital market. The monetary market aims to move savings into investments via financial intermediation, which raises funds from the public and provides short-term financing with the participation of banks, finance companies, credit unions and other financial intermediaries. In the other hand, the capital market has the function of collecting savings and finance investments, which is carried out through the stock market and medium-term and long-term credit market. The capital market plays an important role in the allocation of resources and economic growth.

The stock market, using financial disintermediation, allows productive sectors financing in the medium- and long-term, as an alternative to bank loans and at lower cost. Fixed- or variable-income securities are usually issued by private companies or public institutions, and purchased by investors.

The establishment of the stock market in Ecuador has responded to the evolution and nature of economic and commercial processes that have taken place in our country over time. The fundamental point why it was created was the need to provide merchants a suitable and modern mechanism to distribute wealth, promote domestic savings and boost them towards productive activities.

3.1. History[2]

Arauz (2009) relates that the first attempt to create a stock exchange in Guayaquil was made in 1847, following the example of London, the most famous stock market at that time, but the initiative disappeared in a few months. Later, in 1873, Guayaquil Mercantile Exchange was established after the cacao boom, where about 20 companies traded, and it was shut down in the early twentieth century because of instability during the Liberal Revolution. In 1884, the Commercial Exchange was established in Guayaquil. Subsequently, in 1930, the Ecuador Stock and Commodities Exchange was created in Guayaquil.

In the 1950s there were important improvements in terms of stock market regulation with the establishment of the National Securities Commission. The stock exchanges in Quito and Guayaquil were

---

[2] History until year 2000 was taken from the thesis "Micoestructura del Mercado de Valores Ecuatoriano" by Arauz (2009)

stablished in 1969, as joint stock companies under Law 111 that also granted market surveillance to the Superintendency of Companies. The first round of negotiations in the stock exchange was on 2 September 1970.

In 1974, the Round Table on Capital Market was held, supported by the Central Bank of Ecuador, with the participation of representatives of domestic institutions from public and private sectors that are more related to the management of policies and mechanisms with which domestic saving is captured and put it into investment. The roundtable showed many interesting proposals regarding the development of the stock market. The Stock Exchange of Quito presented a comparative study on measures taken by several Latin American countries to boost the capital market.

In 1993, the Securities Market Act was passed as part of a series of reforms of openness, liberalization and deregulation that took place in the first half of the decade, driven by Vice President Alberto Dahik, in the government of Sixto Duran Ballen. The framework of the proposals was linked to significant efforts to complement a market design based on the Chilean model, which included the privatization of social security in the pension field and state-owned enterprises, deregulation of the domestic financial system, and, the liberalization of foreign exchange market.

The new law finally provided a legal platform for the stock market to begin to develop in depth, but it was replaced with a new one in 1998, where the main changes were the creation of new instruments such as securitization and the limitation of banks to participate in trust funds business. The stock market grew substantially until the Ecuadorian financial crisis took place in 1999, when uncertainty, devaluation, and inflation, caused the minimization of private placements, while huge placements by the public sector were used to commit bank bailout.

The stock market suffered a significantly slowdown once the dollarization was implemented in 2000. Market liquidity almost disappeared and the financial position of companies and people did not allow productive financing initiatives. Also, the largest institutional investor had no resources available for investment, because of the macro-devaluation the savings of social security were worthless as they were denominated in "Sucres". It is important to consider that in dollarization, the money supply depends on the results of the balance of payments.

In 2014, a new law on stock market was approved, Ley orgánica para el fortalecimiento y optimización del sector societario y bursatil (2014). One of the main changes it brought was the establishment of a regulatory

body[3] -the Board of Securities Market Regulation- a public entity attached to the Executive Branch, which will be composed by representatives of the Ministry responsible for Economic Policy, who will act as the chairman, Ministry responsible for Production Policy and a representative of the President. Its function is to establish the public policy of the stock market and make rules for regulation and operation. Additional members of the board, which have the right to speak but not to vote, are the Superintendents of Companies; Popular Financial System; and Banking.

Another characteristic of this law is that the state will be able to create and run securities firms, rating agencies, stock exchanges, fund managers and trust funds. One last point is the possibility of creating a public stock exchange, the stock exchanges of Guayaquil and Quito are private institutions, but, with this new law they must be established as public limited companies.

3.2. Stock market participants[4]

3.2.1. Regulatory authorities

✓ *National Securities Council*, is the body assigned to the Superintendency of Companies which establishes the general policy of the stock market and regulates its operation.

✓ *Superintendency of Companies*, is the institution that runs the general policy of the stock market and controls market participants.

✓ *Stock Exchanges*, through their ability of self-regulation they can dictate rules and other internal procedures of general application for all its participants, control its members and impose sanctions within their sphere of competence.

3.2.2. Issuers and Investors

Issuers are public or private institutions which finance their activities through the issuance and placement of securities through the stock market. Investors are those individuals or companies that have the financial resources and use to purchase securities in order to achieve adequate profitability based on the acquired risk. To participate in the stock market it does not require minimum investment amounts. At December 2014, the total number of issuers in Ecuador reached 467, 258 from Guayaquil and 209 from Quito[5].

---

[3] Ley orgánica para el fortalecimiento y optimización del sector societario y bursatil (2014) Art. 5
[4] BVQ (2016)
[5] List of issuers at Appendix 1

Figure 1: Total Issuers in Ecuador by stock exchange, 1994 - 2014
The source of this data is the Superintendency of Companies of Ecuador, Figure 1 clearly shows how the Ecuadorian stock market has gained around 300% more issuers as participants in the last 10 years.

3.2.3. Stock exchanges

They are civil nonprofit corporations that aim to provide the services and mechanisms for trading in conditions of transparency, safety and fair price. Ecuador has a small stock market, however, it has two stock exchanges, one in Quito -BVQ- and other in Guayaquil -BVG-, Arauz (2009) believes that this division exists because is part of the regional political and economical bipolarity characteristics of the country.

3.2.4. Depository trust and clearing house

It is a limited company that is responsible for providing deposit services, safekeeping, settlement and registration of transfer of securities, and it also operates as a clearinghouse. In Ecuador there are two of them, one private (DECEVALE) and one public which is managed by the Central Bank of Ecuador (DCV)

3.2.5. Rating agencies

They are public or private companies which are in charge of qualifying issuers and securities. In Ecuador, there are seven rating agencies, five in Quito and two in Guayaquil, which are associated with international rating agencies.

3.2.6. Brokerage firms

They are limited companies which are authorized members of the stock exchanges, whose primary functions are trading securities, as well as advising on investment, help structure issuance, and serve as dealer manager for the initial transmission agent. Since 2011, the total number of brokerage firms has remained in 39, from Quito 24 and from Guayaquil 15.
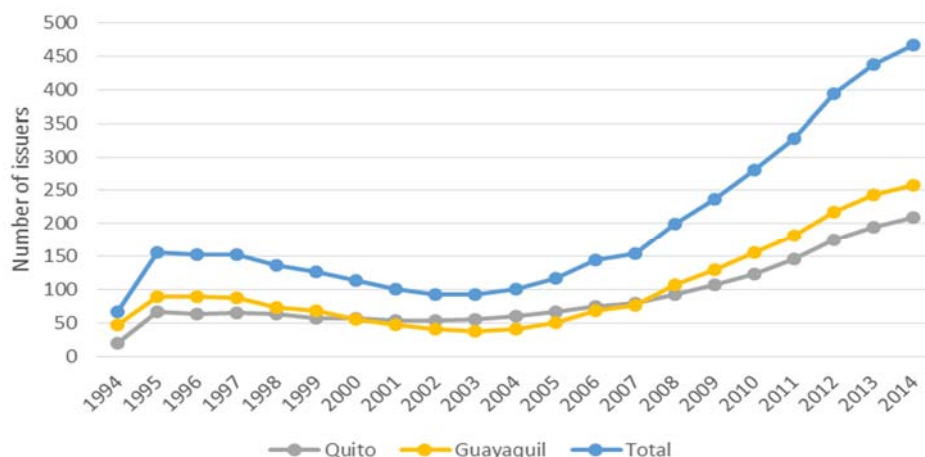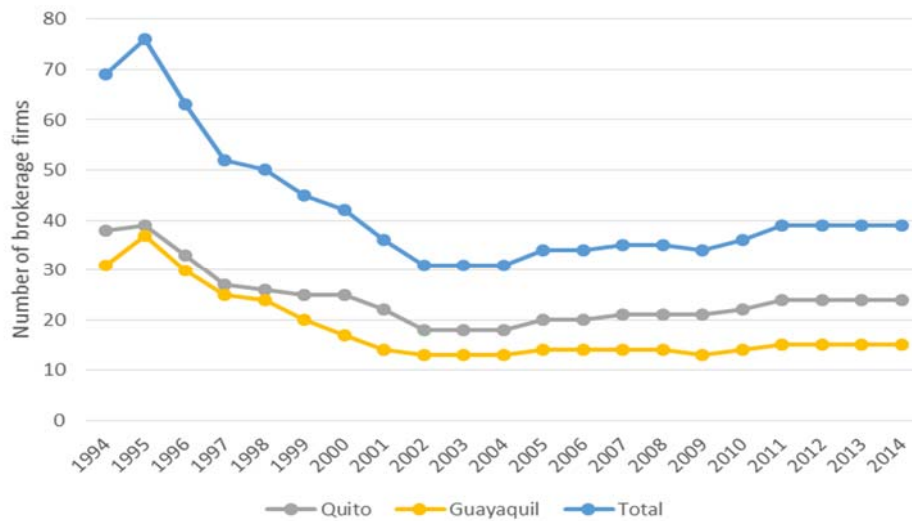
Figure 2: Total brokerage firms in Ecuador by stock exchange, 1994 - 2014
The source of this data is the Superintendency of Companies of Ecuador, Figure 2 shows that the number of brokerage firms has relatively maintained in the last 10 years.

3.2.7. Fund managers and trusts

They are public companies that manage mutual funds and trust business. At the end of 2014, the total number of fund managers reached 29, the total number of mutual funds were 26, and the total of trust companies completed 771.

3.3. Current situation

The Ecuadorian stock market, even though it has around 45 years of creation, has not evolved so much and has progress at slow paces between the political and economic circumstances and some changes in its regulation. After 6 years of debates and negotiations, a new law was stablished in 2014, which brought clear rules and a new tool that looks for the creation of an appropriate environment along with other factors such as macroeconomic policy, public policy, public-private partnerships and private development to arrange a proper market that could emerge.

The stock market is a potential source of funding for both industrial and service companies as for public sector entities. Catellanos (2013) affirms that this market is a secondary source for raising funds for the financial system, and that there are very few companies that are financed via stock market, until 2007 there were 37,135 companies registered in the Superintendency of Companies, however, only 467 of them were listed as issuers at the end of 2014.

As shown below in Figure 3, after the Ecuadorian crisis of 1999 the stock market suffered a big fall, however, it started to grow and reached a new record in 2009, thanks to the sale of significant equity interests of big companies such as Holcim and the National Brewery -Cervecería Nacional-, leading to a transfer of ownership of both of them, together totaling USD 1,270.0 million. On the other hand, between 2010 and 2013, the total traded went down, due to the fall in the transactions of fixed income securities mainly from the public sector. Moreover, in 2014, a new peak was achieved, as a result of the sale of three companies for a total of USD 982.2 million. In the last 5 years, the total traded in the Ecuadorian stock market only reached an average of 5% of the total GDP.
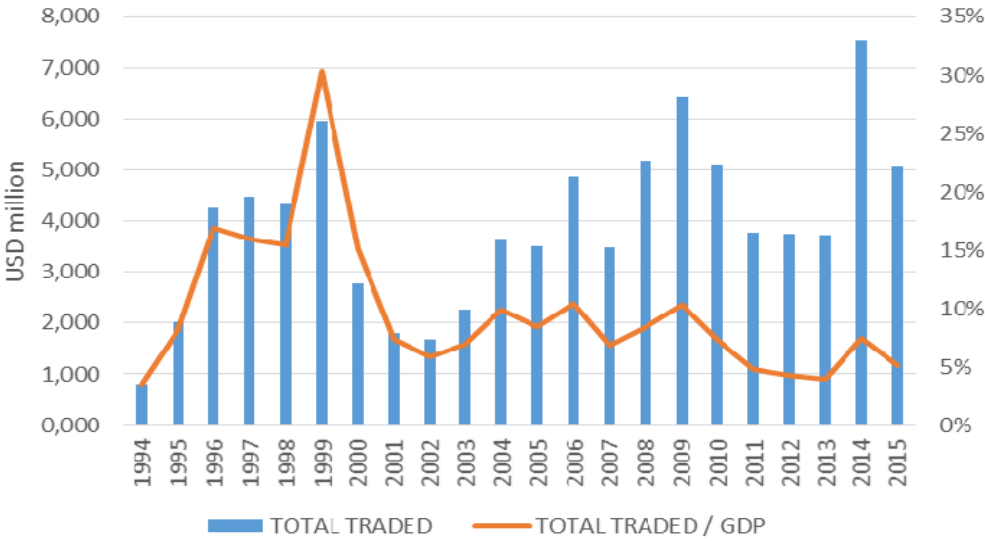
Figure 3: Total traded in the Ecuadorian stock market, 1994 - 2015
The source of this data is the Stock Exchange of Quito, Central Bank of Ecuador and Gestión Economic Magazine. It shows the evolution of total traded value in the Ecuadorian stock market, period 1994-2015. The maximum was reached on 2014 due to an important sell of three big companies.

The market capitalization measures the size of the stock market, in other words, it is the total value of the companies listed in the domestic stock exchanges. In Figure 4 we can see the evolution of market capitalization of Ecuador, how it was affected during the financial crisis, and has an average rate of 8% during the last 10 years.
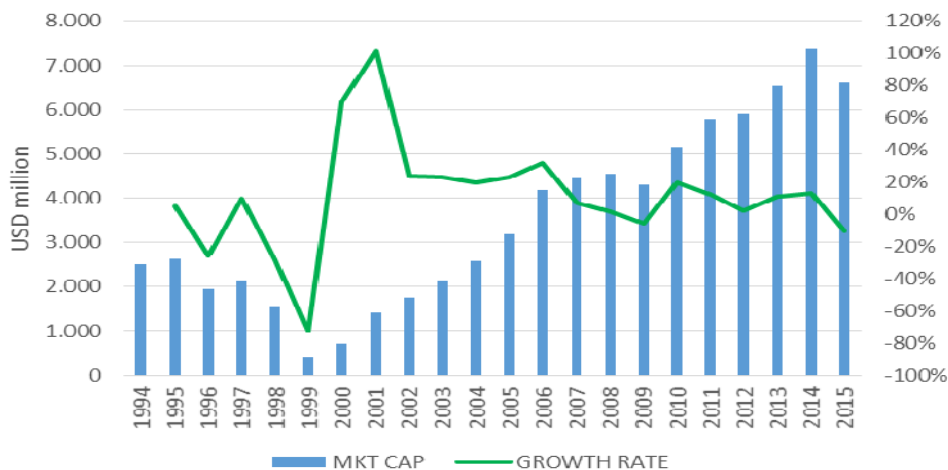
Figure 4: Market capitalization of Ecuador, 1994 - 2015
The source of this data is Stock exchange of Quito, World Bank database and Indexmundi. This figure shows the evolution of the market capitalization of Ecuador from 1994 to 2015, and its growth rate.

In addition, it is worth to mention that the market capitalization of Ecuador was only a 7% of the GDP in 2015, the same percentage if it is measured as an average from 2006 to 2015. In other Latin American countries the participation of market capitalization goes from 20 to 70 percent of their GDP, while in developed countries it is over 80%.

	Ecua dor	Colo mbi a	Chil e	Mex ico	Braz il	Kore a	Japa n	Chin a	USA
MKT CAP:	7,382	146,7	233,2	480,2	843,8	1,212	4,377	6,004	26,33
MKT CAP / GDP	4%	24%	60%	24%	27%	72%	97%	35%	158%
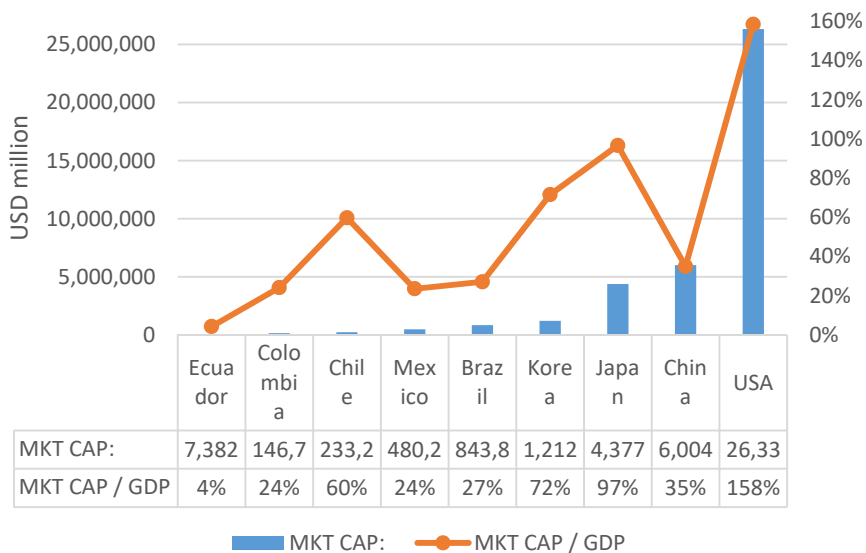
Figure 5: Market capitalization vs GDP by country, 2014
The source of this data is Stock exchange of Quito and World Bank database. This figure shows the ratio market capitalization/GDP of some Latin American countries, and other developed countries to make a comparison.

Secondary markets provide liquidity, because an asset can be converted into a means of payment. So, we can measure the liquidity of a stock market by checking the traded value by type of market. In Figure 5, the total traded by type of market is shown, between 2012 and 2015 the secondary market participation is in average

only a 25% of the total market, which means that most transactions are traded in the primary market, where they are bought and sold in the first issue and placement, and the investor holds it until its settlement. This results shows a lack of liquidity in the Ecuadorian stock market.
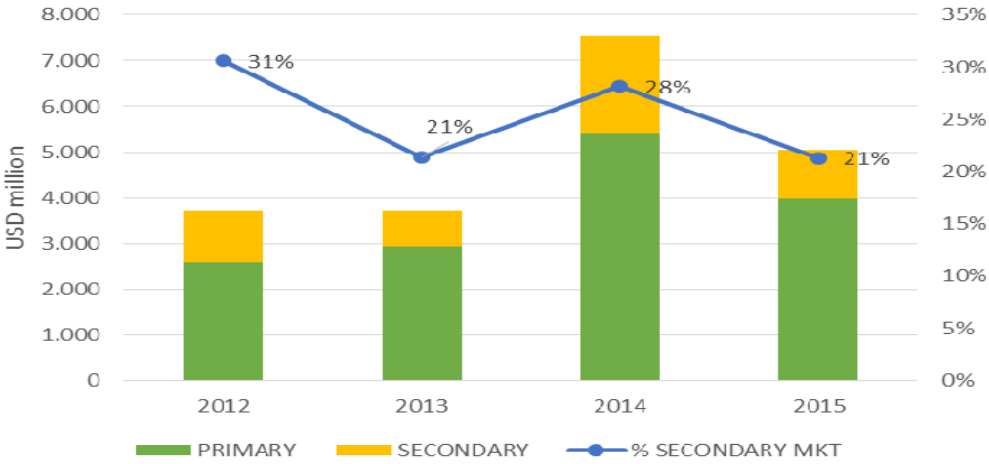
Figure 6: Total traded by type of market, 2012 - 2015
The source of this data is the Stock Exchange of Quito and the Superintendency of Companies. This figure shows the total value traded in the Ecuadorian market by type of market from 2012 to 2015, where the Primary market is the favorite among Ecuadorians.

In Figure 6, it easily noticed that the public sector has been the largest issuer and buyer of securities for a long time. The Ministry of Finance and the National Financial Corporation are the main issuers and sellers, while the Institute of Ecuadorian Social Security -IESS- is the main buyer. From 2009 and 2014, the private sector took advantage in the total traded, while in the last three years it has started to lose participation.
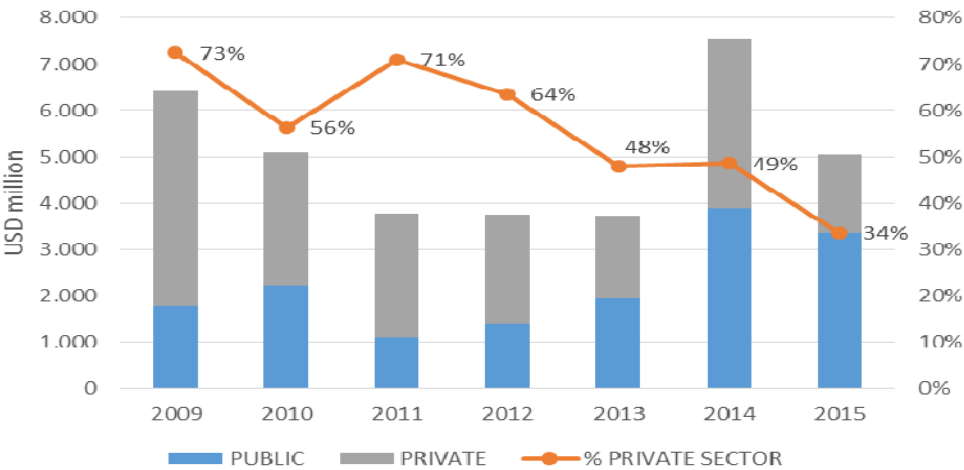
Figure 7: Total traded by sector market, 2012 - 2015
The source of this data is Stock exchange of Quito and Superintendency of Companies. This figure shows the evolution of the total value traded by sector, private or public.

Chapter 4. Contribution of stock market on economic growth in Ecuador

For this part of the independent research paper I followed the empirical study made by Pece (2015) in which she examined the connection between economic growth and stock market performance of Romania and uses prices of the Bucharest Stock Exchange as the proxy of stock market performance and gross domestic product as the proxy of economic growth.

4.1. Data and methodology

The data used in this study contains quarterly prices of the Ecu Index, which is the Ecuadorian stock index price, and real gross domestic product of Ecuador, during the period Q1 2000 – Q4 2014. The analysis was made by using logarithmic values. The variables are denoted as "l_index" for logarithmic value of the Ecu Index quarterly prices, and, "l_gdp" for logarithmic value of the real value of all finished goods and services produce in Ecuador in quarterly basis. The main source of data was the Stock Exchange of Quito and the Central Bank of Ecuador.

In order to capture a possible connection between the economic growth and the development of the stock market, I have applied Johansen test. In addition, with the purpose of establish the appropriate number of lags, I use a Vector Autoregression Estimates –VAR- by taking into consideration the characteristics of time series.

I start by examining the time series stationarity, using a unit root test, Augmented Dickey-Fuller, employing the following model:

$$\Delta x_t = a_0 + b_0\, x_{t-1} + \sum_{j=1}^{k} c_0\, \Delta x_{t-1} + \varepsilon_1 \quad (1)$$

Then, I apply Johansen cointegration test for identification of the number of cointegration vectors between the analyzed variables. Then, with the aim of testing the existence of a causality relation between economic growth and stock market development, I use the Granger causality test, that can be estimated based on the following bivariate model:

$$\Delta l\_gdp_t = \sum_{j=1}^{m} a_j\, \Delta l\_gdp_{t-1} + \sum_{j=1}^{m} b_j\, \Delta l\_index_{t-1} + \varepsilon_1 \quad (2)$$

$$\Delta l\_index_t = \sum_{j=1}^{m} c_j\, \Delta l\_gdp_{t-1} + \sum_{j=1}^{m} d_j\, \Delta l\_index_{t-1} + \eta_1 \quad (3)$$

Δ is the first difference level

ε and η represent two uncorrelated residual series

m is the optimal lag order

4.2. Results

4.2.1. Stationarity test

The first step is to conduct the stationarity test (unit root) on the variables, I use the Augmented Dickey Fuller (ADF) test. The null hypothesis is that the variable X is a non-stationary series and is rejected when b is significantly negative, so rejection of the hypothesis implies there is stationarity, in other words, this tests the null hypothesis that l_index and l_gdp follow a unit root process.

Table 1: Augmented Dickey-Fuller Test results for unit roots

Variables	Level				1st difference			
	ADF-statistic	1% CV	5% CV	10% CV	ADF-statistic	1% CV	5% CV	10% CV
L_INDEX	-2.52475	-3.5504	-2.91355	-2.59452	-6.32601*	-3.54821	-2.91263	-2.59403
L_GDP	-0.51935	-3.5461	-2.91173	-2.59355	-5.87165*	-3.54821	-2.91263	-2.59403

The table reports the results of the stationarity tests using ADF conducted in Eviews 8. All data items are quarterly logarithmic values covering Q1 2000 – Q4 2014. CV stands for test critical value levels. The lag length is automatically calculated based on SIC. * significant at all levels

For both variables, I fail to reject the null at level, but, at first difference, in all levels of significance, indicates that it is stationary. The results obtained indicate that the analyzed time series are integrated of first order I (1).

4.2.2. Cointegration test

Johansen test is used to observe the presence of the cointegrated vectors. As Johansen cointegration tests are very sensitive to the choice of lag length, a VAR model must be done first in order to find an appropriate lag structure. The optimal lags are determined by the Akaike Information Criteria -AIC-, which shows an optimal VAR with 5 lags.

Table 2: Johansen cointegration test

GDP and stock market performance	Trace Stat	5% CV	Prob.	Max Stat	5% CV	Prob.
None	9.830266	15.49471	0.294	9.404647	14.2646	0.254
At most 1	0.425619	3.841466	0.5141	0.425619	3.841466	0.5141

The table reports results from Johansen cointegration test, using 5 lags, conducting in Eviews 8. Data covers quarterly logarithmic values for Q1 2000 – Q4 2014. CV stands for test critical value levels.

The Johansen method applies the maximum likelihood procedure to determine the presence of cointegrated vectors in nonstationary time series, is tested using 5 lags, which is the optimal number after running the VAR model. The results of Johansen test show that the null hypothesis could not be rejected, which means that there is no cointegration between economic growth and stock market in Ecuador.

4.2.3. Vector Autoregressive Model

As there is no cointegration between the two variables, to analyze if there is a long-term relationship between Ecuadorian's economy growth and stock market performance, I employed VAR model. The optimal lags are determined by the Akaike Information Criteria -AIC-, which shows an optimal VAR with 5 lags. Table 2 shows that l_gdp is statistically affected by the first lag period of l_gdp and the fourth and fifth lag of l_index; while l_index is statistically affected by the fifth lag of l_gdp.

Table 3: Vector Autoregression Estimates

	ΔL_GDP	ΔL_INDEX		ΔL_GDP	ΔL_INDEX
ΔL_GDP(-1)	0.362971*	0.294958	ΔL_INDEX(-1)	0.019631	0.189612
	[2.67528]	[0.28835]		[1.06743]	[1.36753]
ΔL_GDP(-2)	-0.05272	0.363274	ΔL_INDEX(-2)	-0.01459	-0.14058
	[-0.41032]	[0.37502]		[-0.79777]	[-1.01989]
ΔL_GDP(-3)	-0.04222	-0.46826	ΔL_INDEX(-3)	0.021663	0.038157
	[-0.32924]	[-0.48433]		[1.16963]	[0.27326]
ΔL_GDP(-4)	-0.07442	1.350553	ΔL_INDEX(-4)	-0.05722*	0.19203
	[-0.55828]	[1.34391]		[-3.15095]	[1.40263]
ΔL_GDP(-5)	-0.19942	-2.70203*	ΔL_INDEX(-5)	0.066116*	0.234275
	[-1.55917]	[-2.80207]		[3.39739]	[1.59675]
C	0.025853	0.010153			
	[1.16103]	[3.43752]			

The table reports estimates of the VAR conducted in Eviews 8. Data (adjusted) covers quarterly logarithmic values for Q1 2000 – Q4 2014. Observation after adjustment 54. T-statistic is in [ ]. * significant at 5%. Δ is the first difference level.

4.2.3. Causality test

The Granger (1969) approach to question of whether X causes Y is to see how much of the current Y can be explained by past values of Y and then to see whether adding lagged values of X can improve the explanation. Y is said to be Granger-caused by X if X helps in the prediction of Y, or equivalently if the coefficients on the lagged X's are statistically significant.

The results of Granger method show that the coefficients are statistically significant only in one direction, from stock market performance to economic growth, but, GDP growth does not contribute a major impact on the stock market performance in Ecuador.

Table 4: Granger causality

Granger Test hypothesis	F-Statistic	Prob.
l_index does not Granger cause l_gdp	4.5138	0.0021*
l_gdp does not Granger cause l_index	1.90835	0.1127

The table reports results from Granger causality test with 5 lags, conducted in Eviews 8. Data covers quarterly logarithmic values covering for Q1 2000 – Q4 2014. * significant at all levels.

Chapter 5: Conclusions and recommendations

This paper presents a snap about the current situation of the Stock Market in Ecuador and examines the relationship between the economic growth and the stock market performance of the Latin American country. For obtaining the empirical results I used the following statistical methods such as Augmented Dickey Fuller test, Johansen test, and Granger causality test, with quarterly data from Q1 2000 to Q4 2014. I used as variable to measure the stock market performance the logarithmic value of the Ecuadorian Index stock price and for economic growth I used the logarithmic value of real gross domestic product. This study followed the procedure used by Pece (2015).

The statistical tests showed that time series are non-stationary, they are integrated of first order I (1). There is no cointegration between economic growth and stock market development for Ecuador. This results are similar with the findings of Men & Li (2006) and Badr (2015). Furthermore, according to Boubakari & Jin (2010), this research deduces that the Ecuadorian stock market is weak, indefficient and does not contribute in a substantial way to the economic growth process.

In addition, a unidirectional link between these two variables was found in the causality test, where the stock market performance have a positive impact on economic growth. The need for further research is obvious in order to get more evidence about the impact of the stock market on economic growth in Ecuador, using other variables that measure stock market evolution, such as, market capitalization, traded value, and, turnover ratio, unfortunately, the data was not available in quarterly basis to be conducted during this study.

Considering that the stock market has a certain impact on the economic growth of Ecuador, the government should continue implementing tools that contribute to turn the stock market into a more active place where private and public institutions get funds. There has been some efforts in the last years from the government, stock exchanges and industries. One important was the constitution of the new law. Moreover, there must be an organizational culture change, because most of the private companies in Ecuador comes from families, and there is only participation from the bigger companies in the capital market, because smaller companies are reluctant to develop a corporate governance plan and disclosure financial information.

To conclude, I want to point out that there is a limited range of securities that the investors are offered, it is a very limited market, where most investments are placed as fixed incomes which are stable during time. There is a lack of volatility and speculation, which could be considered as an advantage. Another deficiency is that the dominant commercial banking industry weaken the role played by the stock market. I also believe, that there should be integration of the two stock exchanges, it is not a big market and it causes market segmentation and higher costs. It is important that all participants join efforts, and, that all understand and be clear about the development policies that are needed to be implemented and fulfilled to achieve a more active and strong stock market.

References

[1] Adjasi, C. K., & Biekpe, N. B. (2006). "Stock Market Development and Economic Growth: The Case of Selected African Countries". *African Development Review*, 144-161.

[2] Arauz, A. (2009). "Microestructura del Mercado de Valores Ecuatoriano". *Mater's Thesis*. Ecuador: Facultad Latinoamericana de Ciencias Sociales.

[3] Arestis, P., Demetriades, P., & Luintel, K. (2001). "Financial Development and Economic Growth: The Role of Stock Markets". *Journal of Money, Credit and Banking, 33*(1), 158-168.

[4] Atje, R., & Jovanovic, B. (1993). "Stock markets and development". *European Economic Review*, 632-640.

[5] Badr, O. M. (2015). "Stock Market Development and Economic Growth: Evidences from Egypt". *International Journal of Trade, Economics and Finance, 6*(2), 96-101.

[6] *Banco Central del Ecuador*. (2016). (Subgerencia de Programación y Regulación) Obtenido de Cuentas Nacionales: http://www.bce.fin.ec/index.php/component/k2/item/763

[7] Beck, T., & Levine, R. (2004). "Stock markets, banks, and growth: Panel evidence". *Journal of Banking and Finance*(28), 423-442.

[8] Boubakari, A., & Jin, D. (2010). "The Role of Stock Market Development in Economic Growth: Evidence from Some Euronext Countries". *International Journal of Financial Research*(1), 14-20.

[9] Brianto, M. (2010). "Mercado de capitales y crecimiento económico: caso Venezuela". En *Serie Documentos de Trabajo, Gerencia de Investigaciones Económicas* (Colección Economía y Finanzas ed.). Caracas: Banco Central de Venezuela.

[10] BVQ. (2016). "*El mercado de valores*". Obtenido de Bolsa de Valores Quito:

http://www.bolsadequito.info/inicio/conozca-el-mercado/el-mercado-de-valores/

[11] Caporale, G. M., Howells, P. G., & Soliman, A. M. (2003). "Endogenous Growth Models and Stock Market Development: Evidence from Four Countries". *Review of Development Economics, 9*(2), 166-"176.

[12] Catellanos, M. L. (July de 2013). "Historia, coyuntura y estructura del mercado bursatil". *Gestión*, págs. 18-29.

[13] Cortez, G. (2010). "Mercado de capitales, intermediación financiera y crecimiento económico en el Perú: 1998-2008". *Pensamiento Crítico*(13), págs. 43-55.

[14] Demetriades, P., & Hussein, K. (1996). "Does Financial Development Cause Economic Growth? Time-series Evidence from 16 Countries". *Journal of Development Economics, 51*(2), 387-411.

[15] Demirgüç-Kunt, A. (1992). "Developing Country Capital Structures and Emerging Stock Markets". *Policy Research Working Papers* (Vol. 933). World Bank.

[16] Fama, E. F. (1981). "Stock Returns, Real Activity, Inflation and Money". *The American Economic Review*, 545-565.

[17] Filer, R. K., Hanousek, J., & Campos, N. F. (1999). "Do Stock Markets Promote Economic Growth?" *William Davidson Institute Working Papers Series* (Vol. 267). William Davidson Institute at the University of Michigan.

[18] Gamez Diaz, S. (2012). "Eficiencia del mercado de capitales y su relacion con el crecimiento económico: el caso Colombia (2001-2011)". En *Undergraduate Thesis.*

[19] Harris, R. D. (1997). "Stock market and development: A re-assessment". *European Economic Review*(41), 139-146.

[20] Ikikii, S. M., & Nzomoi, J. N. (2013). "An Analysis of the Effects of Stock Market Development on

Economic Growth in Kenya". *International Journal of Economics and Finance, 5*(11), 145-151.

[21] Levine , R., & Zervos, S. (1998). "Stock Markets, Banks, and Economic Growth". *The American Economic Review, 88*(3), 537-558.

[22] Levine, R., & Zervos, S. (1996). "Stock Market Development and Long-Run Growth". *The World Bank Economic Review, 10*(2), 323-339.

[23] "Ley orgánica para el fortalecimiento y optimización del sector societario y bursatil". (May de 2014). *Registro Oficial(249)*.

[24] López, F., & Rodríguez, D. (2010). "¿El desarrollo del mercado accionario genera crecimiento económico en México? Un análisis de series de tiempo". *Economía: Teoría y Práctica*(32), págs. 33-54.

[25] Luintel, K., & Khan, M. (1999). "A Quantitative Reassessment of the Finance-Growth Nexus: Evidence from a Multivariate VAR". *Journal of Development Economics, 60*(2), 381-405.

[26] Men, M., & Li, R. (2006). "An Empirical Study on the Relationship between Stock Index and the National Economy: The Case of China". *WTO, China, and the Asian Economies, IV: Economic Integration and Economic Development.* Beijing.

[27] Paudel, N. P. (2005). "Financial System and Economic Development". *Nepal Rastra Bank in Fifty Years* (págs. 176-201). Nepal Rastra Bank.

[28] Pece, A. M. (2015). "The connection between economic growth and stock markets". *SEA - Practical Application of Science, III*(7), 445-450.

[29] Rousseau, P. L., & Wachtel, P. (2000). "Equity markets and growth: Cross country evidence on timing and outcomes". *Journal of Banking and Finance*(24), 1933-1957.

[30] Shahbaz, M., Ahmed, N., & Liaquat, A. (2008). "Stock Market Development and Economic Growth:

ARDL Causality in Pakistan". *International Research Journal of Finance and Economics*(14), 182-195.

[31] Singh, A. (1997). "Financial Liberalization, Stock Markets and Economic development". *The Economic Journal*(107), 771-782.

[32] Spears, A. (1991). "Financial Development and Economic Growth-Causality Tests". *Atlantic Economic Journal*, 66.

[33] Srinivasan, P. (2014). "*Stock Market Development and Economic growth in India: An Empirical Analysis".* Munich: MPRA Paper.

[34] *Superintendencia de Compañías y Seguros*. (2016). Obtenido de Mercado de Valores: http://www.supercias.gob.ec/portal/

[35] Terceño, A., & Guercio, M. (2011)." El crecimiento económico y el desarrollo del sistema financiero, un analisis comparativo". *Investigaciones Europeas de Dirección y Economía de la Empresa, 17*(2), 33-46.

[36] Vazakidis, A., & Adamopoulos, A. (2011). "Financial Development and Economic Growth: An Empirical Analysis for the UK". *European Research Studies*, 135-148.

Appendix 1. Issuers of the Ecuadorian stock market

National market portfolio (USD) at December/2014

	QUITO	GUAYAQUIL	TOTAL	PART. %
PRODUCTION SECTOR				
CORPORACION EL ROSADO S. A.	536,989.20	10,015,325.52	10,552,314.72	4.6%
REYBANPAC REY BANANO DEL PACIFICO C.A.	378,593.73	3,777,992.93	4,156,586.66	1.8%
FIDEICOMISO MERCANTIL PRIMERA TITULARIZACION DE FLUJOS QUIFATEX S.A.	0.00	3,724,769.56	3,724,769.56	1.6%
LA FABRIL S. A.	49,043.52	3,230,761.33	3,279,804.85	1.4%
SEGUNDA TITULARIZACION DE FLUJOS FUTUROS DE FONDOS LA FABRIL	144,999.71	2,895,849.60	3,040,849.31	1.3%
DISTRIBUIDORA FARMACEUTICA ECUATORIANA 'DIFARE' S.A.	882,156.35	2,149,459.20	3,031,615.55	1.3%
TELCONET S.A.	790,339.75	2,105,338.37	2,895,678.12	1.3%
INMOBILIARIA DEL SOL S. A MOBILSOL	758,418.60	2,133,985.73	2,892,404.33	1.2%
PRIMERA TITULARIZACION DE FLUJOS FUTUROS DE FONDOS CONTECON	0.00	2,709,117.51	2,709,117.51	1.2%
ALIMENTOS ECUATORIANOS S.A. ALIMEC	2,543,269.31	0.00	2,543,269.31	1.1%
PRODUCTORA CARTONERA S. A.	361,881.72	1,989,970.95	2,351,852.67	1.0%
NOVACERO S.A	239,131.03	1,996,541.26	2,235,672.29	1.0%
COMPAÑIA AZUCARERA VALDEZ S.A.	0.00	2,187,362.63	2,187,362.63	0.9%
TIENDAS INDUSTRIALES ASOCIADAS (TIA) S. A.	590,709.04	1,449,821.01	2,040,530.05	0.9%
INTEROC S.A.	64,884.79	1,967,542.40	2,032,427.19	0.9%
AUTOMOTORES Y ANEXOS S.A. AYASA	194,902.53	1,637,580.43	1,832,482.96	0.8%
EXPALSA EXPORTADORA DE ALIMENTOS S. A.	379,301.76	1,386,457.26	1,765,759.02	0.8%
EUROFISH S.A.	99,557.32	1,643,957.61	1,743,514.93	0.8%
FIDEICOMISO TITULARIZACION PRIMERA EMISION DE FLUJOS FUTUROS ICESA	1,723,409.20	0.00	1,723,409.20	0.7%
TERCERA TITULARIZACION DE FLUJOS AGRIPAC	0.00	1,705,084.02	1,705,084.02	0.7%
FIDEICOMISO SEGUNDA TITULARIZACION DE FLUJOS FUTUROS TECOPESCA	0.00	1,702,303.54	1,702,303.54	0.7%
PLASTICOS DEL LITORAL PLASTLIT S.A.	391,441.30	1,309,578.68	1,701,019.98	0.7%
UNIVERSAL SWEET INDUSTRIES S.A.	651,373.07	1,019,477.84	1,670,850.91	0.7%
DECIMO CUARTA TITULARIZACION CARTERA COMERCIAL COMANDATO	1,360,996.01	44,949.27	1,405,945.28	0.6%
INDUAUTO S.A.	400,786.85	897,222.21	1,298,009.06	0.6%
FIDEICOMISO PRIMERA TITULARIZACION DE FLUJOS FYBECA	0.00	1,267,968.28	1,267,968.28	0.5%
CRECOSCORP S. A.	223,335.14	988,508.65	1,211,843.79	0.5%
LABORATORIOS INDUSTRIALES FARMACEUTICOS ECUATORIANOS LIFE C.A.	198,668.38	913,855.82	1,112,524.20	0.5%
MAREAUTO S.A.	1,090,117.93	0.00	1,090,117.93	0.5%
AGROINDUSTRIAS DAJAHU S.A.	1,053,586.38	0.00	1,053,586.38	0.5%
ALMACENES BOYACA S. A.	169,553.73	846,155.32	1,015,709.05	0.4%
MOLINOS CHAMPION S.A. MOCHASA	0.00	1,003,379.20	1,003,379.20	0.4%
HOTEL CASAGANGOTENA S.A.	998,911.00	0.00	998,911.00	0.4%
SIMED S.A.	383,919.12	607,895.50	991,814.62	0.4%
AVICOLA FERNANDEZ S. A.	140,184.25	839,231.45	979,415.70	0.4%

AUTOMOTORES DE LA SIERRA S.A.	337,662.86	603,572.80	941,235.66	0.4%
CUARTA TITULARIZACION FLUJOS-TARJETA DE CREDITO DE PRATI	0.00	939,531.28	939,531.28	0.4%
PICA PLASTICOS INDUSTRIALES C. A.	0.00	922,042.85	922,042.85	0.4%
MAMUT ANDINO CA	166,600.88	693,366.35	859,967.23	0.4%
FIDEICOMISO DE TITULARIZACIÓN DE CARTERA MARCIMEX	321,337.80	525,827.18	847,164.98	0.4%
EMPRESA DURINI INDUSTRIA DE MADERA C.A. EDIMCA	0.00	791,197.31	791,197.31	0.3%
ENVASES DEL LITORAL S. A.	651,485.53	60,011.76	711,497.29	0.3%
FECORSA INDUSTRIAL Y COMERCIAL S.A.	141,900.01	562,328.43	704,228.44	0.3%
TERMINAL AEROPORTUARIA DE GUAYAQUIL S. A.	10,673.63	677,724.90	688,398.53	0.3%
INPROEL S.A.	0.00	688,102.37	688,102.37	0.3%
PRIMERA TITULARIZACION DE FLUJOS FUTUROS NOVACERO	189,015.21	494,380.84	683,396.05	0.3%
IMBAUTO S.A.	51,364.43	615,259.28	666,623.71	0.3%
GRIFINE S.A.	395,781.95	252,427.23	648,209.18	0.3%
INDUSUR INDUSTRIAL DEL SUR S. A.	79,279.53	564,592.49	643,872.02	0.3%
INDUSTRIA ECUATORIANA DE CABLES INCABLE S. A.	274,972.17	344,660.29	619,632.46	0.3%
FERRO TORRE S.A.	0.00	594,745.20	594,745.20	0.3%
QUIMIPAC S. A.	0.00	572,352.33	572,352.33	0.2%
LIRIS S.A.	216,273.12	352,018.62	568,291.74	0.2%
PYCCA S.A.	547,464.90	0.00	547,464.90	0.2%
AGENCIA NAVIERA AGNAMAR S. A.	536,416.03	0.00	536,416.03	0.2%
EXTRACTORA AGRICOLA RIO MANSO EXA S.A.	530,972.81	0.00	530,972.81	0.2%
PRIMERA TITULARIZACION DE FLUJOS TECOPESCA	0.00	525,142.67	525,142.67	0.2%
TERCERA TITULARIZACION DE FLUJOS FUTUROS ARTEFACTA	0.00	508,945.52	508,945.52	0.2%
FIDEICOMISO TITULARIZACIÓN DE FLUJOS JAHER	483,389.58	0.00	483,389.58	0.2%
CONCERROAZUL S.A.	20,406.97	458,228.17	478,635.14	0.2%
DECIMO TERCERA TITULARIZACION CARTERA COMERCIAL COMANDATO	475,682.93	0.00	475,682.93	0.2%
COMPUTADORES Y EQUIPOS COMPUEQUIP DOS S.A.	470,343.28	0.00	470,343.28	0.2%
DUODECIMA TITULARIZACION CARTERA COMERCIAL COMANDATO	433,039.10	0.00	433,039.10	0.2%
ESCULAPIO S. A.	137,738.61	288,593.46	426,332.07	0.2%
MEGAPROFER S.A.	419,973.47	0.00	419,973.47	0.2%
DISMARKLUB S.A.	407,841.15	0.00	407,841.15	0.2%
ARTES GRAFICAS SENEFELDER C.A.	44,274.77	358,888.43	403,163.20	0.2%
FIDEICOMISO DE TITULARIZACION INCUBANDINA	401,903.09	0.00	401,903.09	0.2%
TERCERA TITULARIZACION DE FLUJOS DE PRATI	48,434.23	350,865.42	399,299.65	0.2%
LA GANGA R.C.A. S.A.	0.00	399,251.27	399,251.27	0.2%
SOLVESA ECUADOR S.A.	52,060.97	338,389.80	390,450.77	0.2%
CONFITECA C.A.	0.00	381,601.31	381,601.31	0.2%
CASA MOELLER MARTINEZ C.A.	278,549.74	101,365.19	379,914.93	0.2%
DITECA S.A.	366,992.10	0.00	366,992.10	0.2%
CIALCO S.A.	366,471.30	0.00	366,471.30	0.2%
PRIMERA TITULARIZACIÓN DE FLUJOS - AZENDE	0.00	355,680.22	355,680.22	0.2%
FIDEICOMISO DE TITULARIZACION DE FLUJOS-EBC	0.00	346,537.85	346,537.85	0.1%

HELADOSA S. A.	0.00	328,393.49	328,393.49	0.1%
FRUTERA DEL LITORAL CIA. LTDA.	325,118.41	0.00	325,118.41	0.1%
FACTOR L.O.G.R.O.S. DE ECUADOR S.A.	314,861.45	0.00	314,861.45	0.1%
FIDEICOMISO TITULARIZACION FLUJOS GRUPO ANHALZER - CERO UNO	0.00	305,652.47	305,652.47	0.1%
FIDEICOMISO SEGUNDA TITULARIZACIÓN DE FLUJOS NESTLE ECUADOR	0.00	304,915.04	304,915.04	0.1%
DUPOCSA PROTECTORES QUIMICOS PARA EL CAMPO S:A.	300,951.70	0.00	300,951.70	0.1%
TEOJAMA COMERCIAL S.A.	0.00	291,655.64	291,655.64	0.1%
INDUSTRIA LOJANA DE ESPECERIAS ILE C.A.	0.00	287,455.45	287,455.45	0.1%
PRIMERA TITULARIZACION DE FLUJOS FUTUROS GENERADOS EN DERECHOS DE COBRO INTERAGU	88,738.56	190,615.58	279,354.14	0.1%
ALIMENTSA DIETAS Y ALIMENTOS S.A.	0.00	276,363.12	276,363.12	0.1%
ECUATRAN S.A.	271,437.19	0.00	271,437.19	0.1%
DEXICORP S.A.	265,378.13	0.00	265,378.13	0.1%
PRIMERA TITUALRIZACION DE FLUJOS ENLIT	265,190.40	0.00	265,190.40	0.1%
ZAIMELLA DEL ECUADOR SOCIEDAD ANONIMA	0.00	263,222.40	263,222.40	0.1%
IMPORTADORA INDUSTRIAL AGRICOLA DEL MONTE SOCIEDAD ANONIMA	40,080.00	222,167.52	262,247.52	0.1%
CARRO SEGURO CARSEG S. A.	0.00	250,226.45	250,226.45	0.1%
ENERGY & PALMA ENERGYPALMA S.A.	248,041.66	0.00	248,041.66	0.1%
FERMAGRI S.A.	0.00	245,064.59	245,064.59	0.1%
ADITIVOS Y ALIMENTOS S. A. ADILISA	57,311.32	187,359.28	244,670.60	0.1%
SEGUNDA TITULARIZACION DE FLUJOS FUTUROS GENERADOS EN DERECHOS DE COBRO EXISTENT	240,678.70	0.00	240,678.70	0.1%
FIDEICOMISO SEGUNDA TITULARIZACIÓN DE FLUJOS INDUSTRIAS ALES	0.00	234,484.02	234,484.02	0.1%
CENTURIOSA S.A.	0.00	232,963.23	232,963.23	0.1%
TUVAL S.A.	64,447.31	162,475.72	226,923.03	0.1%
CORPORACION AZENDE S.A.	30,391.65	192,891.66	223,283.31	0.1%
EDESA S.A.	219,996.54	0.00	219,996.54	0.1%
DISTRIBUIDORA IMPORTDORA DIPOR S.A.	0.00	209,511.95	209,511.95	0.1%
CAMPOSANTOS DEL ECUADOR S. A. CAMPOECUADOR	0.00	203,339.45	203,339.45	0.1%
PROMOTORES INMOBILIARIOS PRONOBIS S.A.	198,463.24	0.00	198,463.24	0.1%
FERREMUNDO S. A.	197,592.17	0.00	197,592.17	0.1%
FIDEICOMISO DE TITULARIZACION SECOHI	191,921.84	0.00	191,921.84	0.1%
EMPRESA PROVEEDORA DE MOTORES EMPROMOTOR CIA. LTDA.	56,461.35	134,490.99	190,952.34	0.1%
UNDECIMA TITULARIZACION CARTERA COMERCIAL COMANDATO	67,943.91	122,416.64	190,360.55	0.1%
CEPSA S.A.	0.00	187,008.72	187,008.72	0.1%
ELECTRONICA SIGLO XXI ELECTROSIGLO S. A.	0.00	174,477.16	174,477.16	0.1%
FIDEICOMISO PRIMERA TITULARIZACION DE CARTERA DE MICRO CREDITO FUNDACION ESPOIR	170,539.12	0.00	170,539.12	0.1%
RED MANGOVREINN S..A.	165,860.78	0.00	165,860.78	0.1%
FIDEICOMISO DE TITULARIZACION DE FLUJOS - TECFOOD	160,594.31	0.00	160,594.31	0.1%
NOVENA TITULARIZACION CARTERA COMERCIAL COMANDATO	75,615.57	84,385.10	160,000.67	0.1%
FIDEICOMISO PRIMERA TITULARIZACION DE CARTERA COMERCIAL PYMES PROCREDIT	149,979.44	0.00	149,979.44	0.1%
AUDIOVISION ELECTRONICA AUDIOELEC S.A.	149,245.80	0.00	149,245.80	0.1%

ECUATORIANA DE GRANOS S. A. ECUAGRAN	148,300.50	0.00	148,300.50	0.1%
FIDEICOMISO SEGUNDA TITULARIZACION DE CARTERA DE MICRO CREDITO FUNDACION ESPOIR	147,520.18	0.00	147,520.18	0.1%
CORPORACION ECUATORIANA DE ALUMINIO S.A. CEDAL	146,371.49	0.00	146,371.49	0.1%
MEMORIAL FUNER ASESORA DE SERVICIOS FUNERARIOS S.A.	139,097.34	6,219.01	145,316.35	0.1%
PETROLRIOS C.A. PETROLEOS DE LOS RIOS	142,235.52	0.00	142,235.52	0.1%
FIDEICOMISO DE LA SEGUNDA TITULARIZACION DE FLUJOS DELI - INTERNACIONAL	136,634.44	0.00	136,634.44	0.1%
PLASTIGOMEZ S.A.	0.00	133,175.03	133,175.03	0.1%
IMPORPOINT S. A.	29,006.83	103,553.51	132,560.34	0.1%
FIDEICOMISO DE TITULARIZACION DE FLUJOS URBANO	126,685.27	0.00	126,685.27	0.1%
METALES INYECTADOS METAIN S.A.	126,631.86	0.00	126,631.86	0.1%
ATU ARTICULOS DE ACERO S.A.	124,064.36	0.00	124,064.36	0.1%
INTELEQ S.A.	120,346.50	0.00	120,346.50	0.1%
INDUSTRIAS ALES C.A.	0.00	119,265.55	119,265.55	0.1%
ECUANAVE C.A.	0.00	117,128.85	117,128.85	0.1%
PRIMERA TITULARIZACION DE FLUJOS EDUCACIONALES - CPU / USFQ	117,128.10	0.00	117,128.10	0.1%
CONTINENTAL TIRE ANDINA S.A.	114,871.11	0.00	114,871.11	0.0%
MAXDRIVE S.A.	113,590.60	0.00	113,590.60	0.0%
DECIMA QUINTA TITULARIZACION CARTERA COMERCIAL COMANDATO	110,045.75	0.00	110,045.75	0.0%
NEDERAGRO S.A.	108,607.63	0.00	108,607.63	0.0%
INSTALACIONES ELECTROMECANICAS S. A INESA	105,534.81	0.00	105,534.81	0.0%
SEGUNDA TITULARIZACION DE FLUJOS AGRIPAC	0.00	103,555.30	103,555.30	0.0%
FLORALP S.A.	0.00	102,973.76	102,973.76	0.0%
TEXTILES INDUSTRIALES AMBATEÑOS S.A. TEIMSA	102,670.68	0.00	102,670.68	0.0%
CHOCOLATES FINOS NACIONALES COFINA S:A.	99,350.00	0.00	99,350.00	0.0%
FUROIANI OBRAS Y PROYECTOS S. A.	98,198.95	0.00	98,198.95	0.0%
COMERCIALIZADORA JUAN CARLOS ESPINOZA VINTIMILLA CIA LTDA.	95,705.13	0.00	95,705.13	0.0%
INDUSTRIAL PAPELERA ECUATORIANA S.A: INPAECSA	93,689.09	0.00	93,689.09	0.0%
FUNDAMETZ S.A.	91,474.77	0.00	91,474.77	0.0%
PRODUCTOS DEL AGRO SYLVIA MARIA S. A. AGROSYLMA	87,280.13	0.00	87,280.13	0.0%
BASESURCORP S.A.	82,005.71	0.00	82,005.71	0.0%
DIPAC MANTA S.A.	0.00	81,282.64	81,282.64	0.0%
AUTOMOTORES LATINOAMERICANOS S.A. AUTOLASA	75,000.03	0.00	75,000.03	0.0%
EUROFERT S.A.	75,000.00	0.00	75,000.00	0.0%
SOLUCIONES PARA HOTELERIA Y GASTRONOMIA EQUINDECA C. LTDA.	69,781.98	0.00	69,781.98	0.0%
PRODUCTORA MAR VIVO S.A. PROMARVI	69,352.22	0.00	69,352.22	0.0%
PRIMERA TITULARIZACION CARTERA COMERCIAL COMANDATO	0.00	67,880.38	67,880.38	0.0%
TERCERA TITULARIZACION DE FLUJOS FADESA	0.00	67,434.35	67,434.35	0.0%
FIDEICOMISO PRIMERA TITULARIZACIÓN DE FLUJOS FUTUROS DE FONDOS INT. FOOD SERVICE	0.00	66,765.38	66,765.38	0.0%
FIDEICOMISO DE TITULARIZACION DE FLUJOS ESEICO	64,093.74	0.00	64,093.74	0.0%

SEGUNDA TITULARIZACION DE FLUJOS DE PRATI TARJETAS DE CREDITO TERCERAS	0.00	63,643.73	63,643.73	0.0%
ECUATORIANA DE SERVICIOS, INMOBILIARIA Y CONSTRUCCION ESEICO S.A.	63,281.55	0.00	63,281.55	0.0%
ECUAFONTES S.A.	61,833.56	0.00	61,833.56	0.0%
IMPORTADORA VEGA S.A.	60,000.00	0.00	60,000.00	0.0%
EQUINDECA C. LTDA. - SOLUCIONES PARA HOTELERIA Y GASTRONOMIA	52,967.62	0.00	52,967.62	0.0%
FARMAENLACE CIA. LTDA.	52,507.00	0.00	52,507.00	0.0%
DECIMA TITULARIZACION CARTERA COMERCIAL COMANDATO	7,220.40	44,443.13	51,663.53	0.0%
AZULEC S.A.	49,597.50	0.00	49,597.50	0.0%
SUMESA S.A	49,322.36	0.00	49,322.36	0.0%
PRIMERA TITULARIZACION DE FLUJOS LATIENVASES	0.00	43,649.55	43,649.55	0.0%
ARTEFACTOS ECUATORIANOS PARA EL HOGAR	39,365.84	0.00	39,365.84	0.0%
CIA IMPORTADORA REGALADO S.A. (COMIRSA)	38,797.30	0.00	38,797.30	0.0%
ESLIVE S.A.	35,016.42	0.00	35,016.42	0.0%
CONSTRUCCIONES Y SERVICIOS DE MINERIA CONSERMIN S.A.	32,448.46	0.00	32,448.46	0.0%
CONSTRUCTORA E INMOBILIARIA VALERO CONSTRUVALERO S.A.	31,971.20	0.00	31,971.20	0.0%
CONSTRUCTORA HIDROBO ESTRADA S.A.	31,383.03	0.00	31,383.03	0.0%
SURFER S.A.	25,115.35	0.00	25,115.35	0.0%
FIDEICOMISO SEGUNDA TITULARIZACIÓN DE FLUJOS FUTUROS DE INT.FOOD SERVICES CORP	0.00	25,037.02	25,037.02	0.0%
CALBAQ S.A.	24,018.80	0.00	24,018.80	0.0%
EXOFRUT S.A.	22,309.67	0.00	22,309.67	0.0%
STOREOCEAN S.A.	22,255.40	0.00	22,255.40	0.0%
SUPERMERCADO DE COMPUTADORAS COMPUBUSSINES CIA. LTDA.	20,534.21	0.00	20,534.21	0.0%
PRIMERA TITULARIZACION DE FLUJOS ECUAVEGETAL	0.00	20,506.48	20,506.48	0.0%
INTERVISATRADE S..A.	13,055.28	0.00	13,055.28	0.0%
OPTICA LOS ANDES CIA. LTDA.	12,414.19	0.00	12,414.19	0.0%
ANGLO AUTOMOTRIZ SOCIEDAD ANONIMA (ANAUTO)	0.00	10,277.38	10,277.38	0.0%
FISA FUNDICIONES INDUSTRIALES S. A.	0.00	8,608.52	8,608.52	0.0%
SOROA S. A.	0.00	7,721.28	7,721.28	0.0%
DICHEM DEL ECUADOR S.A.	5,635.77	0.00	5,635.77	0.0%
AUTO IMPORTADORA GALARZA S. A.	5,198.55	0.00	5,198.55	0.0%
MAQUINAS Y SUMINISTROS MAQSUM C. LTDA.	0.00	5,066.41	5,066.41	0.0%
FERTILIZANTES Y AGROQUIMICOS EUROPEOS EUROFERT S.A.	4,171.42	0.00	4,171.42	0.0%
FIDEICOMISO SEGUNDA TITULARIZACIÓN CARTERA AUTOMOTRIZ - CFC	0.00	904.43	904.43	0.0%
TOTAL PRODUCTION SECTOR	**33,896,299.02**	**81,105,701.26**	**115,002,000.28**	**49.7%**
FINANCIAL SECTOR				
BANCO DE GUAYAQUIL S.A.	9,060,648.13	4,556,609.69	13,617,257.82	5.9%
BANCO PICHINCHA COMPAÑÍA ANONIMA	2,599,743.66	10,271,978.31	12,871,721.97	5.6%
BANCO INTERNACIONAL S.A.	9,675,389.24	2,716,404.46	12,391,793.70	5.4%
BANCO DE LA PRODUCCION S.A. PRODUBANCO	7,632,601.75	320,570.47	7,953,172.22	3.4%
BANCO DEL PACIFICO S.A.	7,281,542.64	0.00	7,281,542.64	3.1%
BANCO GENERAL RUMIÑAHUI S.A.	4,730,314.72	87,117.64	4,817,432.36	2.1%
BANCO PROMERICA S.A.	1,862,014.60	2,226,316.89	4,088,331.49	1.8%

ASOCIACION MUTUALISTA DE AHORRO Y CREDITO PARA LA VIVIENDA PICHINCHA	4,009,265.81	0.00	4,009,265.81	1.7%
DINERS CLUB DEL ECUADOR S.A. SOCIEDAD FINANCIERA	2,666,536.40	523,913.42	3,190,449.82	1.4%
BANCO DE LOJA S.A.	3,030,253.24	0.00	3,030,253.24	1.3%
BANCO AMAZONAS S.A.	2,593,774.01	0.00	2,593,774.01	1.1%
BANCO PROCREDIT S.A.	2,235,498.14	0.00	2,235,498.14	1.0%
SEGUNDO FIDEICOMISO MERCANTIL DE TITULARIZACION DE FLUJOS DINERS	0.00	1,998,022.46	1,998,022.46	0.9%
COOPERATIVA DE AHORRO Y CREDITO COOPROGRESO LTDA.	1,558,300.97	0.00	1,558,300.97	0.7%
BANCO BOLIVARIANO C. A.	1,249,188.60	100,554.58	1,349,743.18	0.6%
BANCO SOLIDARIO S.A.	1,249,424.61	21,099.79	1,270,524.40	0.5%
UNION FINANCIERA CENTRAL UNIFINSA	356,100.00	0.00	356,100.00	0.2%
TITULARIZACION DE CARTERA DE VIVIENDA 29 DE OCTUBRE	339,519.37	0.00	339,519.37	0.1%
SOCIEDAD FINANCIERA INTERAMERICANA S. A.	92.00	180,000.00	180,092.00	0.1%
COOPERATIVA DE AHORRO Y CREDITO 29 DE OCTUBRE LTDA	128,014.31	0.00	128,014.31	0.1%
SEPTIMA TITULARIZACION CARTERA AUTOMOTRIZ AMAZONAS	104,500.00	0.00	104,500.00	0.0%
BANCO DEL AUSTRO S.A.	68,563.12	0.00	68,563.12	0.0%
BANCO CAPITAL S.A.	0.00	41,622.29	41,622.29	0.0%
BANCO DE MACHALA S.A.	37,154.94	0.00	37,154.94	0.0%
TOTAL FINANCIAL SECTOR	**62,468,440.26**	**23,044,210.00**	**85,512,650.26**	**36.9%**
GOVERNMENT SECTOR				
FINANCE MINISTRY	1,623,193.93	29,319,398.32	30,942,592.25	13.4%
TERCERA TITULARIZACIÓN DE FLUJOS PORTAFOLIO CFN	9,450.36	0.00	9,450.36	0.0%
TOTAL GOVERNMENT SECTOR	**1,632,644.29**	**29,319,398.32**	**30,952,042.61**	**13.4%**
TOTAL	**97,997,383.57**	**133,469,309.58**	**231,466,693.15**	**100.0%**