FINANCE AND ECONOMIC GROWTH IN THE "SWITZERLAND OF THE AMERICAS": THE MONTEVIDEO STOCK EXCHANGE, 1875-1945

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Summary: FINANCE AND ECONOMIC GROWTH IN THE "SWITZERLAND OF THE AMERICAS": THE MONTEVIDEO STOCK EXCHANGE, 1875-1945

This paper argues the thesis that Uruguay has a long tradition in the liberalization of its finances, materialized in a little known aspect: The strength of its stock exchange. To demonstrate this, we present several indices of contributions, from its origins up to the end of World War II, and other indicators of the capitalization of the Uruguayan economy. All of them reveal a strong rise of stock market activity until 1913, when control of the exchange fell into the hands of the State, and was from that point onwards financed from abroad.

Key words: Uruguay, financial history, stock market, stock, public debt.

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FINANCE AND ECONOMIC GROWTH IN THE "SWITZERLAND OF THE AMERICAS": THE MONTEVIDEO STOCK EXCHANGE, 1875-1945¹

INTRODUCTION

Until recently, there were no studies on Latin American stock markets. We were unaware of their contribution to economic development and the evolution of their valuations. The hypothesis was that they were modest and dispensable financial intermediaries in the study of capital markets. The large Latin American businesses traded on the European and New York stock exchanges. The domestic ones were the fruit of bourgeoisie zeal but with no tangible results. In fact, historiography has only paid attention to the Ibero-American stock market because of its international repercussions, in reference to the 1890 Argentine Panic, but little more.

Dependence on foreign financing is of course certain. However, the dimensions of the Exchange on the continent are not only far from such assumed smallness, but without their consideration it is entirely impossible to discover two aspects which are of paramount importance in the economic history of Latin America: The debt crisis and the financing of growth by the substitution of imports in the so-called "Golden Age of Capitalism," to cite only two issues on which historiography has placed greater relevance.

Uruguay has not escaped from this disdain. Here the study is even more imperative due to the early birth of this institution (1867) and the development that the capital market took in the country. This article presents a first index of the Montevideo Stock Exchange valuations from 1875 until the end of World War II. Additionally, an attempt is made to prove two hypotheses. The first is that until 1913 it showed an almost amazing vitality, taking into account the dimensions of its economy. However, since then, and this is the second hypothesis, it played a marginal role in the financing of industrialization, since the priority to be dealt was the needs of the public sector. Since then, the acquisition of resources for large companies was carried out on foreign exchanges.

Apart from the quantitative findings that are shown here, the article recalls vital aspects in the interpretation of events in Uruguayan economics, such as the evolution of its foreign debt, the incidence of armed conflicts and the inclusion of Uruguay in the world market. In short, a brief economic history of the country is offered through the kaleidoscope of its little-known stock exchange, which, in consideration, the author is convinced, creates a new interpretive sketch.

It is important to stress the interest in undertaking this study. Uruguay has been distinguished for centuries for the modernization and liberalization of its capital markets,

¹ I would like to thank Laura Gomensoro of the Montevideo Chamber of Commerce Library, as well as to all of the Exchange staff for their support. In this work, I have borrowed the ideas and thesis of Francisco Comín, to whom, along with many other things, I owe this daring incursion into the tempestuous world of finance.

with which it has managed to differ, partly due to the conditions of its insertion into the world market, from its two large neighbouring economies: Brazil and Argentina.

Necessarily -and in a first approximation- calculations were completed using the Uruguayan stock prices on the London Stock Exchange, in order to more accurately measure the perception of the solvency of the Uruguayan economy by foreign investors.

THE CONSTRUCTION OF THE INDEXES

The first available indexes on the quotations of the Montevideo Stock Exchange were developed late and were deficient. In 1981, the Research Department of the Chamber of Commerce published a retrospective one that started in 1930. However, it used only a handful of industrial shares and what is more important is that it did not include a fixed interest index, an omission for which there is no excuse, because in Uruguay, as in the whole of Latin America, the stock exchange was born as a market on which to place public debt.

However, there is an arsenal of primary data to remedy this shortcoming. In 1875, they began to publish the first systematic records of stock quoted in Montevideo, although it was limited to maximum and minimal quotations, without providing figures on the number of quoted values (Artagaveytia, 1941). In 1897, the institution had already, in its annual reports, published detailed information on trading volumes of each regular stock and the amount paid for them².

Thus, a Laspeyres index has been developed here that includes the shares of all listed companies, using the capital of the company as weight between 1875 and 1897, under the implicit (and reasonable) assumption that the greater the capital, the more transactions it would have on the stock exchange. From 1897 onwards, the volume traded per share has been considered, operating with shares negotiated in cash. The value considered excludes dividends. Neitehr long term transactions nor those made *over the counter* have been included due to their insignificant amounts. Given the wealth of information, it is not necessary to make more detailed estimates. Despite the simplicity of the index, I must say that this is the most accurate and rigorously developed one in Latin America to date due to the exceptional nature of the sources. However, have information on dividends is unavailable, the lack of which has been replaced by those perceived by the shareholders of the companies that were quoting in London. In fact, the Uruguayan stock exchange price quotes were drawn up in a similar way.

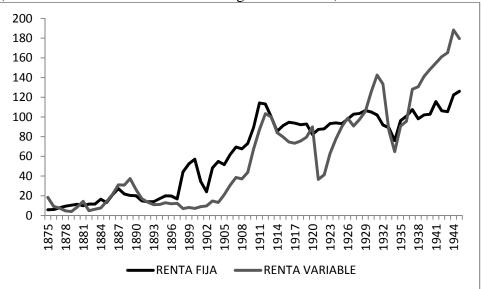
In the same way, an index of fixed-interest securities has been developed, made up almost exclusively by public debt securities. In fact, only rarely did a company (the *Banco Hipotecario* until 1890, and some manufacturing firms in the 1940's) issue bonds and when they did so it was in insignificant quantity in a very irregular way.

In Graph 1, the results of calculations on a logarithmic scale are presented to prevent inflation from concealing the oscillations in the path of the index. The increase

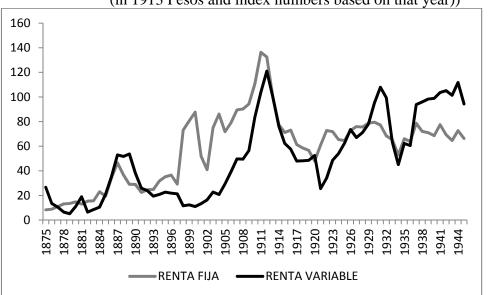
² Reference to information extracted from annual directories has been avoided here in order to streamline the text.

of prices certainly alters the calculations and cannot be omitted in the quantification of contributions. In Graph 2, data in constant 1913 Pesos is offered. The values expressed in cash (in both constant and current terms) are in "old Pesos," ie., prior to the reform of the monetary system in 1993. It must be highlighted that Uruguayan investors were inclined to invest primarily in national debt in the make-up of their portfolios (Graph 3). It is therefore vital to include a comprehensive index that covers all stocks. In this case, it is essential to clarify the evolution of stock market business in an adequate manner. This is the calculation presented in Graph 4.

Graph 1. MONTEVIDEO STOCK EXCHANGE QUOTATION INDEXES, 1875-1945 (in 1913 index numbers = 100 and logarithmic scale)



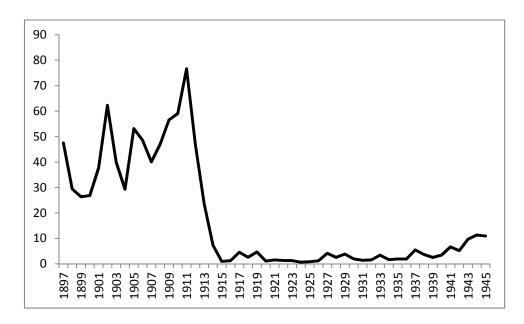
Source: Montevideo Commerce Exchange (1897-1945) and Artagaveytia (1941)



Graph 2. MONTEVIDEO STOCK EXCHANGE QUOTATION INDEXES, 1875-1945 (in 1913 Pesos and index numbers based on that year))

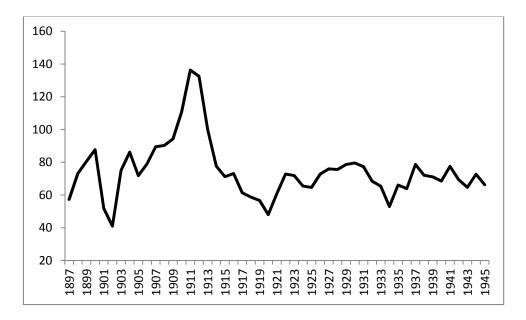
Source: Same as above, Bértola (1998); Bertinio & Tajam (1999).

Graph 3. THE LISTING OF SHARES ON THE MONTEVIDEO STOCK EXCHANGE (in percentages related to total of negotiated values), 1875-1945



Source: Montevideo Commerce Exchange (1897-1945)

Graph 4. MONTEVIDEO GENERAL STOCK EXCHANGE INDEX 1875-1987 (in 1913 Pesos and index numbers based on that year)



Source: Same as Graph 3.

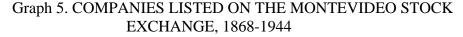
FINANCIAL EUPHORIA AND STOCK MARKET PANIC (1867-1890)

The Montevideo of 1865, after years of sluggishness caused by civil wars and conflicts with Brazil, was enjoying extraordinary mercantile vitality due to the opening up of branches of companies from Manchester and London, working on meat slaughtering in the country as well as in the Argentine province of Entrerríos. In only two years up to five banks had opened, including the Bank of London and *Río de la Plata*, later adding *Banco Mauá* and *Banco Mercantile* after the approval that year of the law regulating the financial system. Uruguay had suddenly reached a highly-valued degree of modernization of its capital market. Only a stock exchange was missing.

The Montevideo Stock Exchange was formally set up in 1867, simultaneously to the adoption of the gold standard, and two years later the law that arranged the financial system was passed. As in other Latin American countries, its birth was due to the government's need to need to place public debt, which had been acquired up to then by *Maua, Mcgregor & Co.* The aim was to prevent submission to Brazilian banker Mauá, which caused great concern among the country's rulers. However, the Montevideo Stock Exchange presented two distinctive peculiarities with respect to those of the rest of the continent: The first rested on its admitted complementarity (not subsidiarity) with that of the Buenos Aires Exchange, created in 1854 (a representative from Argentina even participated in its constitution), and, secondly, the unusual acceptance of mercantile companies with their shares on the Exchange, as a consequence of deliberately permissive legislation in this regard. The same strict conditions as other trading markets were not demanded here. Furthermore, it allowed bidding by foreign investors, something inconceivable on the other Exchanges (*Bolsa de Comercio* 1947, *Baccino Ponce de León* 2000 and *Fernández Saldaña*, 1947).

In fact, in the first year following its creation, the Exchange listed no fewer than thirty-four companies. At the same time, in Buenos Aires there were hardly half a dozen. In the most dynamic Latin American stock exchange, that of Havana, there were sixteen. The Montevideo Stock Exchange attracted meat manufacturing companies, landowners, bankers, and merchants. Its initial strength was all the more exemplary if we note that there were no British railway undertakings listed, neither those operating in the country already nor those planning to do so. From the Stock Exchange point of view, the well-known freedom had germinated with which financial operations were undertaken in Uruguay. On its Exchange, no fewer than 300 brokers were meeting daily.

However, this unusual euphoria that enriched Uruguayan, Argentine and European investors, thanks to *"illicit illegal maneuvering,"* coupled with the erratic monetary policy on Uruguayan currency convertibility (the Peso), the growth of foreign debt and the contagion of what happened on European stock exchanges in 1873, generated a financial bubble which burst in 1875 (Buzzety, 1969). The information presented in the graph is indicative of the magnitude of the Stock Exchange collapse. It is precisely in that year that the calculations here begin.

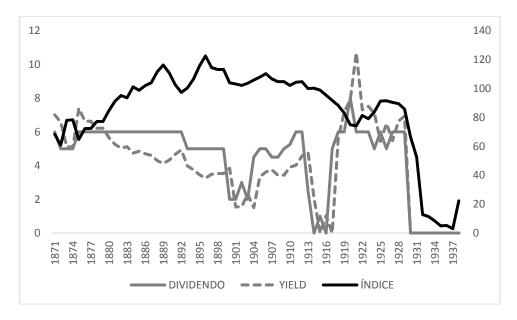




Source: Montevideo Stock Exchange (1868-1944).

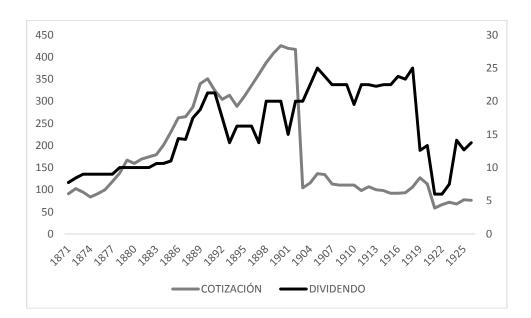
Uruguayan companies listed on European exchanges, both public and private, also went through a difficult period (graphs 6, 7, and 8). Investors now distrusted the solvency of the bonds they had previously valued so much. They also avoided the largest industrial company in the country, *Liebig's Extract of Meat Ltd*, set up in 1865 in Fray Bentos, and also the most powerful global company producing processed foods.

Graph 6. QUOTATION AND REMUNERATION OF SHARES OF URUGUAYAN RAILWAY COMPANIES TRADED ON THE LONDON STOCK EXCHANGE (1913 nominal index as a percentage)



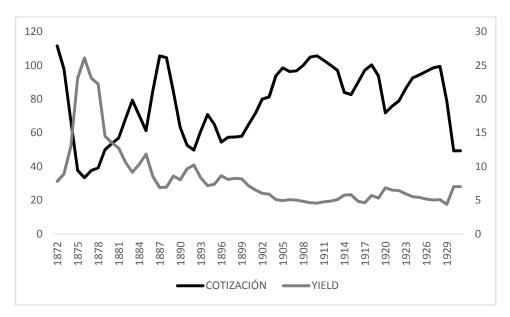
Source: The Inversor's Monthly Manual, London, 1871-1926.

Graph 7. QUOTATION AND DIVIDEND OF SHARES OF LIEBIG'S EXTRACT OF MEAT CO. LTD. ON THE LONDON STOCK EXCHANGE (1871-1926) (1913 nominal index numbers as a percentage)



Source: The Inversor's Monthly Manual, London, 1871-1926.

Graph 8. QUOTATION AND YIELD OF URUGUAYAN FOREIGN DEBT ON THE LONDON EXCHANGE, 1872-1929 (1913 nominal index numbers as a percentage)



Source: The Inversor's Monthly Manual, London, 1871-1937

In fact, the fall of shares lasted until the beginning of the 1880s due to the suspension of debt interest payment in 1876 and its unilateral reduction in 1878. It was also influenced by a hesitant foreign exchange policy. Montevideo now shared the same evils besetting other exchanges, Buenos Aires in particular.

With the restructuring of debt, both domestic and foriegn, agreed to by bondholders, the Montevideo Stock Exchange was spared from this scourge, while the Uruguayan bond appreciated abroad (graph 7). In addition, the adoption of the gold standard and the freedom to operate in any convertible currency, measures both enacted in 1876, allowed the Uruguayan capital to once again become an authentic financial paradise in Latin America. Nothing to do then with what was happening in Buenos Aires, with two currencies in circulation (one convertible and the other not convertible) and a scarcity of cash such that merchants had to use old colonial currencies for transactions, even those circulating in Bolivia. The end of military rule in 1886 further encouraged investors and Uruguay was a rara avis, from both the political and economic as well as the financial points of view. Additionally, Uruguay had extraordinary natural resources, which had remained untapped because of ongoing civil wars. In this in mind, 26 banks and 150 corporations were created between 1887 and 1889 (Cámara Nacional de Comercio s.f., p. 7). The banks included Banco Nacional, authorized to issue and founded by Spaniard Emilo Reus and a group of Argentine investors, with grain exporter Bunge as its head (Visca, 1963, Winn, 2010). Reus also created the second company, Crédito Nacional, specialising in offering mortgage loans to settlers coming from Spain and Italy, with which they could acquire real estate that he was building himself, as well as to

finance great railroad and port infrastructure works in Uruguay, Argentina, and Bolivia. His passion for investing, supported by big London financiers and Britons who had settled in Buenos Aires, gave amazing vitality to the Stock Exchange. Its quotations followed an upward growth path like that of meat prices and meat exports, on the rise in those years. British-owned railway companies seduced savers as did *Liebig's Extract of Meat*, in this case thanks to very generous dividend policies (graphs 7 and 8).

The State also fell captive to this euphoria. Between 1880 and 1890 it subscribed debt with *Baring* of London (which replaced *Thomson & Bonar*) of some 4.2 million pounds Sterling to finance public works.³ Given the competition among debtor countries, it had to do so at rates of between 8.5% and 9.5%, in spite of the deflation the country was already suffering; it was above the 8% at which the Cuban bond was issued, the reference in Latin America, because of its full support in gold (*Acevedo* 1903, *William* 1984, pp. 220-230, *Winn* 2010, pp. 178-201 and *Díaz* 2003, pp. 203-10).

The economic agents did not perceive the danger of this speculative bubble. There was nothing to indicate that it would explode. Exports and prices of agricultural products grew from year to year, as did immigration and the resourses demanded by that increase. The English investors counted on generating fantastic profits in the construction and operation of the railroad (graph 6). Montevideo became a modern city of European appearance, with exemplary port infrastructure.

The fatal combination of excessive State debt and the excessive dimension of the financial system, which, in turn, stimulated private debt (especially that of immigrants, who became indebted when purchasing housing), in an almost deserted young republic lead to a stock market crash. Uruguay went through the same difficulties that Argentina had suffered after the 1890 Stock Exchange panic. The unification in practice of the Buenos Aires and Montevideo Stock Exchanges in February of that year (an exceptional milestone in the financial history of Latin America), on having allowed the brokers of each to bid in both, turned out to be lethal for the Uruguayan Exchange. However, the crash was influenced by the unique attribute of its observance of the gold standard, in contrast to Argentina, the composition of its exports and the speculative maneuvers of *Banco Nacional*. To speak of it as merely the transmission from the bigger to the smaller Exchange would be a mistake.

In effect, Uruguay had been suffering for some time from the deterioration of its terms of exchange, very harmful in a single-export economy, due to a reduction in the price of beef, the decline of sales to Cuba, supplemented by fresh meat and live animals from the United States and the signing of the trade agreement with Spain, in effect since 1886. In 1889, Emilio Reus, the spark of this euphoria, went broke. However, investors did not heed this call of caution.

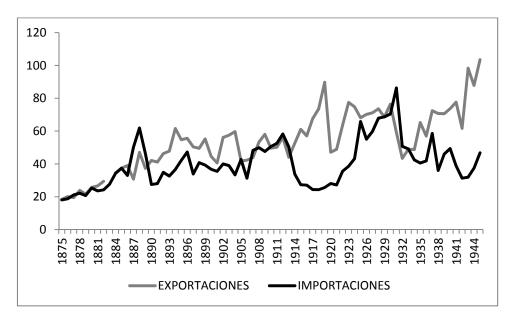
Nor did the State. This fall in exports (graphs 9 and 10) led to government reservations that it be addressed by signing a new agreement of debt issuance with *Baring* to the value of 2 million pounds Sterling. However, it was not formalized. This led to a decrease in the money supply that moved deflation, not exportable goods. On 4th July

³ References on emissions, conversions, and the repudition of foriegn debt comes from the memoirs of the Corporation of Foreign Bondsholders and the work of Bertino and Bertoni (2006).

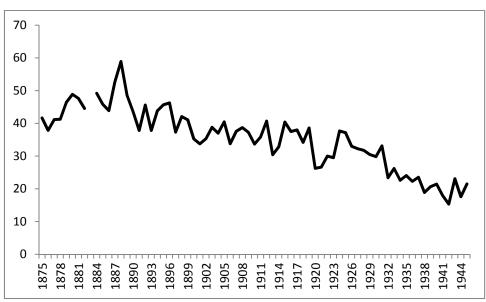
1890, *Banco Nacional*, mortally wounded by the increase in mortgage defaults by farmers and ranchers, mortgages which had been awarded so generously, suspended the convertibility of the Peso. Hundreds of depositors received no more than paper on withdrawing their savings in companies like *Banco Transatlántico*, created by Reus shortly before for the purpose of resuming his real estate business (*Díaz*, 2003).

On 5th July 1890, stock prices on the market collapsed (graphs 1, 2, 3, and 4). Soon afterwards, the government, compelled by the decline of reserves and collection of export taxes, stopped servicing its debt. Panic took hold of Montevideo and the Stock Exchange became a "*true battlefield*" (*Cámara Nacional de Comercio* 1983, p.7 and *Academia Nacional de Economía*, 1984). European investors fled from Uruguayan ventures, particularly public debt, the value of which was halved (graphs 6, 7, and 8).

Graph 9. URUGUAYAN FOREIGN TRADE, 1875-1945 (In millions of constant 1913 Pesos)



Source: Department of Economic Studies (1983).



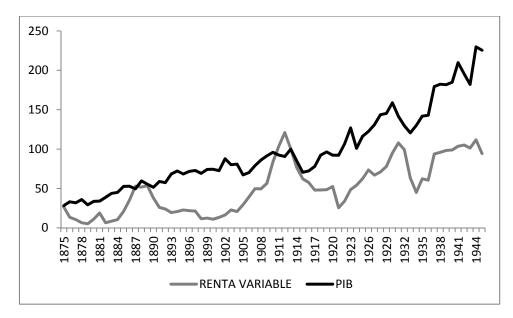
Graph 10. DEGREE OF OPENESS OF THE URUGUAYAN ECONOMY, 1875-1945 (in percentage of GDP)

Source: Departament of Economic Studies (1983) and Bonino, Román & Willelbad (2012)

STATE INVOLVEMENT AND THE NEW STOCK MARKET FEVER (1891-1913)

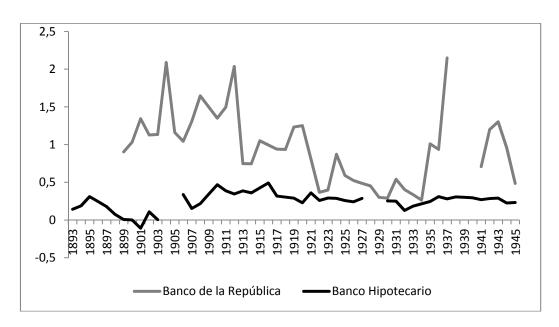
Investors again began to have confidence in Uruguay following the restructuring of its debt in 1891 (graphs 3 and 10). However, this was not the case with its shares, the listing of which suffered from the spillover effect of the 1893 New York Stock Exchange crash (graph 2). In 1896, only shares of six commercial companies were lsited, as many Uruguayan companies as there were on the London Stock Exchange. Apathy gripped the Stock Exchange and the whole of the Uruguayan economy, as is revealed by the evolution of GDP. This macro data suggests a slow recovery outside the stock market (graph 11). The same thing happened in banking, on the basis of the return obtained by *Banco Hipotecario*, which was closely linked to the agricultural business (graph 12). However, two changes of enormous importance were brewing in Uruguayan finance that would give it new impetus.

Graph 11. QUOTATION OF EQUITIES ON THE MONTEVIDEO STOCK EXCHANGE AND URUGUAYAN GDP (In millions of constant 1913 Pesos and index numbers based on that year)



Source: Same as Graph 1. Bonino, Román and Willelbad (2012).





Source: Annual Reports of Banco de la República and Banco Hipotecario.

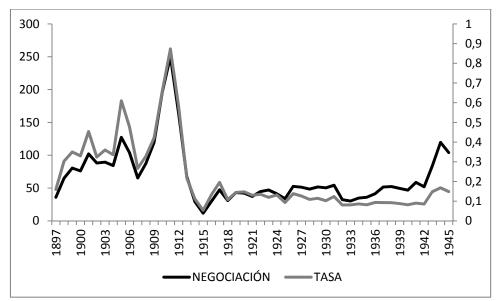
In 1895, *Banco de la República Oriental del Uruguay* (BROU) was set up, the first public bank with an issuance monopoly in Latin America. Its capital was constituted with a loan of 1.6 million pounds Sterling at a rate of 7.5% from the English company

Glyn, Currie, Mills and Co. At the same time, the first savings banks were born. Therefore, a banking system, similar to that of the more advanced countries of continental Europe, was formed. While monetary chaos and the disintegration of the capital markets was the norm on the rest of the continent, Uruguay, faithful to the gold standard and monetary orthodoxy, had achieved a praiseworthy grade of banking. Additionally, with respect to the stock market, Montevideo looked in the mirror of Buenos Aires, so as not to follow in its footsteps but precisely in order to avoid its mistakes. The Montevideo Stock Exchange did not establish new entry barriers either, nor did it organically separate from the Chamber of Commerce, in order to avoid creating distortions in information and to defend the interests of shareholders. In sum, Uruguay achieved -by trial and error- a definition of property rights in respect to unusual and paradigmatic financial matters, according to the tenets of Harber, Razo and Maurer (2003).

Furthermore, the implementation of an orthodox fiscal policy allowed Uruguay to ease the burden of its debt, particularly foreign debt, something similarly unusual in Latin America at the time, making investment in equities more attractive. The country was solvent and its currency solid.

These reforms materialized in a revitalisation of the negotiation of shares on the stock market and especially in their greater inclusion in the Uruguayan economy (graph 8). However, the changes in monetary and fiscal policy that gave so much certainty to investors were not accompanied by the performance of exports in accordance to its interests (graph 5). The appreciation of shares did not have any real means of support. The bubble burst after the 1899 crash of the New York Stock Exchange (graphs 1 and 2). Brokers now received orders to buy debt in fear of a repetition of the events of 1890. The outbreak of the Boer War in 1899 allieviated the effects of the crisis, thanks to shipment of meat to the British Army, in view of the volume of trading (graph 13). It was only a brief respite. In 1902 the conflict ended, and worse, in 1904, Uruaguy itself was facing civil war.

Graph 14. MONTEVIDEO STOCK EXCHANGE TRADING VOLUME AND THE MARKET CAPITALIZATION OF URUGUAY (in thousands of constant 1913 Pesos and thousandths, respectively)



Source: Cámara Nacional de Comercio (1896-1941).

After the armistice, a lengthy period of political calm began, with power alternating between the *Partido Blanco* and *Partido Colorado*. Speculation then returned to the Exchange in Montevideo. The government partially contributed to it with the conversion from domestic to foreign debt, at the price of slightly less than seven million pounds, agreed to by British banking trust *Glyn, Currie, Mills and Co.* and the *Banque du Paris* with the aim of dispersing the effect abroad⁴. In fact, Uruguayan debt began trading in Paris, as well as Liebig's, added proof of the confidence bestowed by foreign investors on Uruguay and the prospects for its progress (graph 14). There was now growth of meat sales abroad, in spite of the progressive reduction in the tiny domestic market, promoted by President Jorge Batlle, and it accompanied the rise in the values on the Stock Exchange (Buzzetti, 1969, Jacob, 2011 and 2015) (graph 5 and 6).

Despite the incorporation of new companies into the stock exchange, the *Banco Hipotecario* set the pace. It was not in vain, since around 85% of the securities traded on the Stock Exchange, both public and private, had been issued by this institution. Quotes were therefore at the mercy of the progress of agricultural product exports (and therefore, the results of salt companies), as well as public debt. In spite of that, the economic scenario, as stated, appeared quite clear after the war. There was no reason for concern. The balance of trade was favorable, which contributed doubly to the cleaning up the public coffers (due to the increase of revenue collection) and attention to the reserves of the debt burden, without major difficulty. Furthermore, loans given by *Banco Hipotecario* multiplied year after year with the arrival of endless new settlers from the south of Europe. To European observers, Uruguay was an example of good economics, despite the degree of involvement by the State in the capital market.

 $^{^4}$ We say that partly because so many of the bonds were subscribed to by Argentine and Uruguayan investors.

That was so much the case in fact that the 1907 financial crisis was barely reflected in stock prices (graphs 1 and 2). Investors limited their actions to withdrawing from the Exchange to wait for better times. Neither they nor William's government knew how to interpret this warning, with the conviction that austerity and monetary orthodoxy would be a refuge from the ups and downs that plagued other markets. In fact, in 1909 the Treasury Department agreed to a new issue in Paris of 1.2 million pounds in order to finance infrastructure undertakings. The data detailed in the table is extraordinarily revealing of the vitality of Uruguay's Stock Exchange, which is even greater than that of Buenos Aires. Uruguay was still the Latin American country with the greatest stock market culture.

| INDICATOR | 1910 | | | 1930 | | |
|--|---------|-----------|--------|---------|-----------|--------|
| | Uruguay | Argentina | Mexico | Uruguay | Argentina | Mexico |
| GDP (US\$ Geary Khamis 1990) | 3390 | 27635 | 25403 | 7368 | 51360 | 27787 |
| GDP per capita | 1910 | 3869 | 1694 | 3750 | 4280 | 1624 |
| Market capitalization (% GDP) | 3.18 | 1.81 | 0.61 | 0.11 | 5.21 | 0.08 |
| Companies quoted per million inhabitants | 8.33 | 4.97 | 0.78 | 10.5 | 11.66 | 2.37 |
| Gross capital amounts financed on the Stock Exchange | 4.4 | 5.79 | 5.78 | 0.21 | 2.01 | 0.08 |

Table. . INDICATORS OF DYNAMISM IN RÍO DE LA PLATA AND MEXICAN STOCK EXCHANGES (1910-1930)

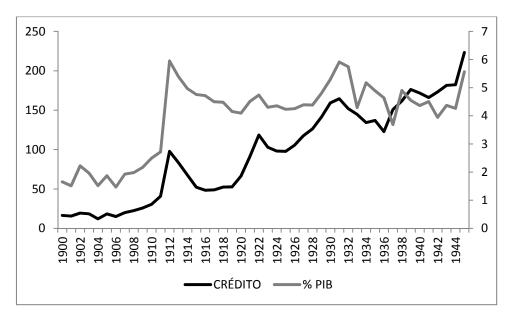
Source: Moreno (2017), Bértola (2016), Román & Willelbad (2015), Nahum (2017).

Much more reckless was *Banco Hipotecario*'s credit policy. In 1910, the company issued shares amounting to 100 million Pesos, the largest in the history of the Stock Exchange, convincing the government that the favorable trade balance was going to continue (graphs 5 and 8). Investors bought these securities at truly exorbitant prices (graphs 1 to 4) with the conviction that they would obtain short term yields with their resale, granted the increase of loans to settlers. In fact, BROU itself entered into the credit loan battle, competing with *Banco Hipotecario*. As was the case at the end of the 1880s, the Stock Exchange was rife with wild speculation that had nothing to do with the actual progress of the Uruguayan economy (graph 7). In short, it was a return to a situation of public and private indebtedness, accompanied by a perpetually oversized financial sector (estimated at the amount of that increase in capital, equivalent to 41.6% of the country's GDP!) that would inevitably lead to a stock market crash.

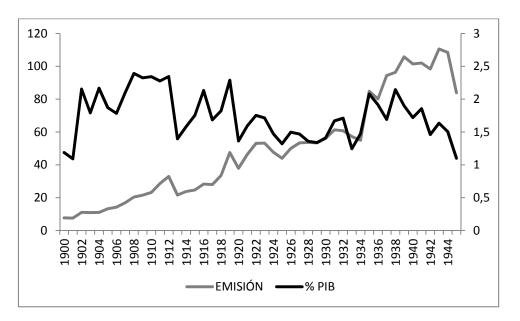
Batlle, back in power since 1911, did not know how to put an end to the speculative spiral. The only measure taken, which was unusual, was to order his Finance Minister, José Serraro, to nationalize *Banco Hipotecario*, which was the equivalent, in practice, to owning the Stock Exchange, subjecting it to the financing needs of the State. Also in its hands was the business insurance monopoly, established as an entity of public ownership that same year.

However, Batlle, rather than containing credit, increased it, particularly that of BROU, which increased the money in circulation (graphs 15 and 16). Meanwhile, reserves fell because of a rise im imports of European products to meet the demands of a population believed to be close to opulence stimulated by this credit generosity, and because of the decline in foreign investment attributable to the sudden nationalist passion of the president of the republic. In order to avoid the collapse of the treasury, it agreed in 1912 to the conversion of floating debt abroad by the value of 2 million pounds with bankers *Glyn, Currie, Mills and Co.* The conversion not only worsened the problem of foreign indebtedness, but it could not even maintain the obligatory 40% reserve due to the issuance and rampant credit. Already at around 20%, many savers withdrew their deposits. What was more serious, it left in creditors' hands the revenues of customs, which guaranteed the loan with 45% of collection proceeds, once the two-thirds covering foreign debt, issued in 1892, were subtracted.

Graph 11. BANK CREDIT TO INDIVIDUALS, 1900-1945 (In millions of constant 1913 Pesos and percentage of GDP)



Sources: Departamento de Estudios Económicos (1983) Bonino, Román and Willelbad (2012).



Graph 10. PRINTING OF MONEY FOR BROU, 1900-1944 (in millions of constant 1900 Pesos and percentage of GDP)

Source: Moreno (2017), Bértola (2016), Román & Willelbad (2015), Nahum (2017).

The alternative, to abandon convertibility, was rejected in July 1913, when the government suspended the granting of loans by the two public banks and demanded the repayment of outstanding loans which farmers - when it was the case – faced with great diffivulty. In such circumstances, the Montevideo population hurried to withdraw their deposits from the two State banks, as well as the *Trastlántico, Italiano, Español del Río de la Plata* and *Crédito Rural Uruguayo* banks. Furthermore, bondholders disposed of *Banco Hipotecario* bonds at paltry prices, to the point that the government had to suspend trading on Stock Exchange. News arrived from France informing of a very similar situation (caused by the conflicts in the Balkans), adding to the unease. Again, it led to ruin for both urban savers and inland farm owners (graphs 1 and 2).

The 1913 stock market crash -though not much known- was much sharper than that of 1890. Now it affected not a sparse population with only sporadic financial contact, but a city -Montevideo- that boasted about its financial capital status and its ability to rival Buenos Aires in progress and splendor.

The crisis impacted Uruguayan investors so hard as to cause many to not only cease investing in stocks, but to also stop using the Exchange itself as an institution on which make money (graphs 1, 2, 3, 5 and 8). In fact, the government, which now viewed the Stock Exchange in a disdainful way, punished it with a tax on security trading in 1914, unprecedented in the Uruguayan financial tradition. In other words, nothing was the same afterwards on the capital market.

WAR AND FINANCIAL TURMOIL, 1914-1926

Despite the increasing foreign isolation of the Uruguayan economy (graph 6), to the point which in 1914 the government increased the tax on imports (in part to address

the debt burden), the outbreak of World War I alarmed the financial authorities, convinced that a real catastrophe was looming because of the fall in exports. Convinced that the reserves problem was going to worsen, in August they suspended conversion of the Peso, accompanied by an additional measure, nothing less than the closing of the Stock Exchange and banks. Hence the fall experienced in share quotes (graphs 1 and 2).

Fortunately, the bad omens were not fulfilled. Beginning in 1915, Uruguay registered an exceptional number of exports (especially meat products for consumption by troops), while the import of European manufactured products was diminishing (graph 5). The stock market, once it resumed its activity, reached the levels observed prior to the 1913 crisis, without the euphoria (graphs 1 and 2). This was due exclusively to the appreciation of domestic debt, taking into account the dismissal of equities. In 1915, only seven companies were listed, four of them from the banking sector. It must, however, be borne in mind that because of the tax levied on Stock Exchange quotations, most of the share exchanges were conducted in "over the counter" transactions, more or less formalized in management institutions (*Liga de Defensa Comercial*, el Centro de Navegación Tansatlántica and Centro de Almaceneros Minoristas).

Following the release of a small amount of foreign debt (a little more than 200 thousand pounds) to purchase the *Panamerican Transcontinental Railway Company*, the Government of Uruguay agreed in 1915 to a moratorium on the payment of debt to creditors while the war continued. The agreement satisfied both sides. Uruguay could take advantage of the increase in reserves, in the medium term, to redeem its debt, while the holders would be compensated by higher interest rates if the revenue from customs exceeded 17 million Pesos. This partly explains the abandonment of the gold standard (Uruguay, without being involved in the conflict, had no need to do so). Under these circumstances, it could spend all gold earnings in BROU for the aforementioned purpose, freed from the bondage of convertibility. In fact, monetary reserves came to equal the monetary base, around 20 million pounds, at the end of 1915.

1916 was a bad year for Uruguay and its capital market, forcing the government to devalue and adopt a so-called "dirty float" system (that is to say, to limit the free flotation of the Peso subject to the intervention of BROU) that convertibility did not allow. Uruguayan businessmen, particularly cattleholders, enjoyed the reduction in the price of money. Basically, the inflation caused by the increase in the money supply reverberated on foreign goods, which -with great price elasticity- fell significantly upon entry into the country. At the same time, the interest rate fell, recording positive actual levels. Again, Uruguayan businessmen borrowed, although more moderately than on previous occasions (graph 11). The *Banco Italiano* now played the role of a generous and accommodating lender.

Encouraged by the abundance of reserves, the government also succumbed to the temptation of borrowing. Once again it turned to *Glyn, Currie, Mills, and Co.* to place debt on the market at 5% guaranteed in gold, amounting to just under two million pounds to continue with the process of the nationalization of railways. Traders did not seem to have learned their lesson after the events in 1913. After only seven years they were in the same situation of excessive public and private debt levels. But the government believed that the flotation would shield the Peso from any new stock market crashes. It wasn't to be so.

The crisis of the *Banco Italiano del Uruguay* in 1920, due to the non-payment of credits because of depreciation and the fall in meat exports, caused a new panic on the Stock Exchange in July (graphs 1, 2, and 3). The quotation of its shares cut by nothing less than three in the first days of the month. The rest of the banks (*Popular* and *Crédito*) immediately abandoned the Exchange. Dozens of people crowded at the doors of these entities, waiting to recover their savings. The crash aborted a project of the Chamber of Commerce management to create a new Stock Exchange that would shelter those who fled from government guardianship, diminished by the absence of the powerful *Banco Hipotecario*.

The situation was to grow worse in 1921, due to the bad performance of exports (graphs 5 and 6). The responsible politicians, however, didn't give it any importance, convinced of the virtues of the "dirty float" system. They interpreted the sale of debt by *Glyn, Currie, Mills and Co.* a few months earlier on the London Stock Exchange at 25% of their nominal value, not as proof of a lack of confidence in the solvency of the country by its main lender, but as just the opposite. With this conviction, the government placed debt at a value of a million and a half pounds, payable in gold dollars on the New York Stock Exchange at 9.85%. Credit and the issuance of notes continued their upward course (graphs 11 and 12). Even new companies were incorporated onto the Stock Exchange, such as the two breweries in the country, *Fábrica de Papel X*, the *Mercado del Puerto* one.

In July 1921, the market punished this policy in the very short term. On the first of the month, due to the increase of debt burden, the government announced the cessation of the use of resources from the depreciation fund (that is to say, the early redemption) that was extended to all instruments, step by step, until January 1922. On the Stock Exchange, it was considered a measure of anticipation of immediate default. The quotation of debt collapsed (graphs 1 and 2). It took the government a little longer to stop the expansive (and inappropriate) monetary and credit policies, which it did in 1923. The adjustment materialized in a sharp drop in GDP a year later (graph 7).

By July 1924, Uruguay had to pay the price for so much recklessness. Cornered by British creditors, the government approved a congressional plan that month for the reorganization of debt that put the whole of the proceeds in the hands of creditors, increased budgetary allocations for the servicing of debt, and opened accounts in London equivalent to a quarter of the debt in circulation. At the same time, BROU pledged to maintain parity with the dollar and pound under penalty of reducing debt repayment deadlines. The Stock Exchange (graphs 1 and 2), since it could not have it any other way, welcomed the agreement with increases in share prices, although the measurement did not affect domestic debt, which caused great controversy. At that time only three variable-yield securities were listed on the Exchange.

In 1926, Uruguay was absolutely hand-tied due to its high foreign debt (Bertino, Bertoni, Tajam and Yaffe, 2005). Having already lost the trust of *Glyn, Currie, Mills and Co.*, the government hired the New York debt house *Hallgarten & Co.* for a loan amounting to \$46 million to convert all outstanding debt. Again, its payment was guaranteed by customs revenues. However, the country assumed a more onerous and humiliating obligation. The government gave up infrastructure investment and the

purchase of new railway companies in order to guarantee repayment on time. A peculiarity should be noted on this issue: It was the first one one which an exemption of all tax payments was contemplated. Deprived for a long time of the attraction that monetary stability represented for foreign investors, Uruguay now seduced them with tax advantages.

PITFALLS OF DEBT, THE 1929 CRISIS AND THE SECOND WORLD WAR

In 1927 the Uruguayan economy was completely stifled, forcing BROU to take control of the foreign exchange rate in accordance with the interests of its creditors and the government to curb public spending. However, a slight improvement in the trade balance (graph 5), thanks to the export subsidies of beef to Cuba, made banks and investors, not subject to foreign imposition, abandon all caution. The country's bankers persisted exclusively in the short-term vision. Competition was great and business possibilities few. In bullish periods it was necessary to drain profit because the business cycle, regardless of the current exchange rate pattern, was erratic and volatile. They had finally noticed it. Moreover, the European capital markets were too tempting for some savers who were very much connected to them (in fact, they had come from the continent) and were well informed about what was happening there. It was necessary to acquire this money that was going out of the country, using the increase in exports as a decoy.

Banco Popuar del Uruguay triggered the credit battle in 1927 and was soon joined by *Banco Hipotecario*, absent from the financial scene for some time. The first launched an increase in capital amounting to 600 thousand Pesos, subscribed in its entirety at double its nominal value! Its objective was to take over the agricultural credit market, something that investors considered feasible. In 1928, *Banco Hipotecario* issued shares of a much more moderate amount, 100 thousand Pesos (publically owned, as Uruguay was under foreign control due to its high foreign debt). New credit grew to levels that seriously compromised the solvency of these institutions (graph 11).

The stock market recovered to share-price levels similar to those recorded on the eve of the 1913 crash, although not trade in shares (graphs 1 and 2). The new regulation approved in 1927 gave even greater legal security to transactions performed there, with no further restrictions on admission to the Exchange than those companies which had over 200,000 Pesos in fully subscribed capital. To be listed on the Exchange -in practice-there was no real excluding requisite. Moreover, in order to attract the *over the counter* transactions, the Stock Exchange and its services were available to anyone who required them at any time of the day. In fact, in 1928 a score of firms were listed on the Stock Exchange, as it had been at its best of times.

The New York Stock Exchange crash had an immediate effect on Montevideo because of the dollarization and the dirty floating that the North American creditors had imposed. But in contrast to other countries it was not on shares but on fixed income securities. That is to say, initially there were no Uruguayan corporate bankruptcies or banking panics. It was the State and its credit that ended up in dire straits. Nevertheless, the situation alarmed the government, and it adopted a policy of managing demand. It immediately abandoned the "dirty float" -the sort of "dollar standard"- to liberalize the Peso. Afterwards it suffered a depreciation of up to 69% that was transferred into a momentary increase of exports (graph 5). As a second step the State signed a new debt issuance contract for \$15 million in 1930 with *Hallgarten & Co.* in order to finance public works and alleviate unemployment. On the other hand, banks revived their policy of discretional credit, and BROU that of offering cheap money (graphs 10 and 11). The new bubble, created at the worst moment, was soon to explode.

The free fluctuation of the Peso turned out to be a complete fiasco. The improvement of exports of salt products (quoted at "base price") had no continuity in the medium term. In fact, the trade balance deteriorated significantly (graph 5). Even in November 1930, management corporations requested the return to the dirty float, while prestigious economists preached the need to recover the gold standard. Moreover, the devaluation of the Peso increased the burden of debt, which it could barely support. Meanwhile, the Stock Exchange was still affected by the feverish speculative process influenced by variable income, which ran completely alien to the strong downturn suffered by the country (graphs 1, 2, and 7).

In September 1931, the government finally agreed to return to the foreign exchange control system. At the same time, it set up a fund for debt repayment, which only took weeks to run out. The two measures came too late. In July 1932, Uruguay declared itself in default, causing a fall in stock prices (graphs 1 and 2). The authorities responded to the situation by curbing credit and issuance (graphs 10 and 11). The new Stock Exchange statutes approved that year established much more severe conditions to participate in the listing, mostly for foreign investors, with the naive intention of restraining speculation. The following year, the new military government, which had taken the reins of the country, attempted to pay off the foreign debt in Pesos but the attempt came to nothing due to the furious protests of creditors.

Uruguay overcame the depression comparatively quickly. From the perspective of the Stock Exchange, it did so in 1935 (graphs 1 and 2). In 1937, the year in which the statutes suffered a new reform of little significance, there were already 15 companies listed on the Stock Exchange, and the most powerful of them, *La Cervecera Uruguaya* (The Uruguayan Brewery), had already increased capital to 800 thousand Pesos in 1933, the largest formalized by a non-banking firm since the birth of the institution.

The early recovery was the result of policy adjustments and the good performance of exports. It must also be attributed to monetary stability. In 1935, the government restored the gold standard (with some nuances). That is to say, it returned to convertibility, but it was due more to the "*needs of the country*" than to that of the reserves. In fact, it was moderated significantly in relation to GDP in order to use gold and foreign exchange to repay debt. In effect, the Uruguayan Government put all of its efforts into the recovery of its foreign solvency, which materialized in an agreement with its creditors, whereby all foreign debt was consolidated in bonds of between 4% and 5%, the payment of which was guaranteed by 74% of custom duty collection. The agreement, due to the reduction of debt that it contained, turned out to be very beneficial for the Republic. This time, the holders of domestic debt were compensated as a whole with 5% bonds (Nahum, 1995).

In short, Uruguay put an end to the chaos of its fiscal and monetary policy that had prevailed in the country since 1926. Again it presented itself to the world as an exception in the context of the Latin American financial field, as a reliable country where investments in equities enjoyed full legal security, tax breaks, and guaranteed convertibility. Its Stock Exchange thus derived greater benefit from the trading opportunities provided by the outbreak of World War II (graphs 1, 2, and 5). Among them was the consolidation of a growth model for import substitution, the adoption of which had been in development for some years, as it reveals the evolution of the country's foreign trade (graph 6). During the conflict, thirty manufacturing companies joined official trading in stock exchange shares. These new companies on the Stock Exchange had a direct impact, although still minor, on the productive fabric of the country that had not been seen before.

On the other hand, the war did not provide great overseas business opportunities because of the difficulties of shipping. In fact, most manufacturing companies in the country – which, in principle, should have been the biggest beneficiary of the conflict-decreased production, which resulted in a drop in the price of shares. Quotations reached the levels prior to the 1929 Crash (graphs 1 and 2). Moreover, the Stock Exchange, on the basis of trading volume, recovered the dynamism lost in 1913 (graph 8). In fact, since the euphoria of its first years of life, imbued then by the enthusiasm of its founders, the Stock Exchange had not seen such a feverish situation. The State helped in this by moderating credit and issuance in order to avoid the formation of a new and lethal financial bubble (graphs 10 and 11).

Moreover, the wartime situation attracted European capital. After repeated extensions, the bulk of debt holders joined the 1937 conversion, so that Uruguay was finally able to give its terminally-needy public coffers a respite. Obviously, the situation changed completely after the war and the construction of a new world economic order, which even included Uruguay as the host of the celebration of the first round of GATT talks. However, the adaptation of the stock market to the new status quo is another story.

CONCLUSIONS

The Montevideo Stock Exchange stands out among those of Latin America because of its early birth and vitality, particularly up to 1913. Arising in a tiny, sparsely populated country, it was a financial intermediary with dimensions (based on the number of agents involved) superior to exchange firms in densely populated Buenos Aires, which was an outstanding achievement. In effect, under first observation, it suggests that the well-known specialization of Uruguayan financial dealings began early on; it was, as stated in earlier paragraphs, the reward for the effort made by local entrepreneurship which boasted solid economic training, a knowledge of European capital markets, and unhindered liberalism as its ideology. They knew how to do things, and also how not to do them, avoiding the mistakes made in Buenos Aires. There were, in effect, two stock exchanges, that of Montevideo and that of the Argentine capital, but neither was the subordinate of the other. Additionally, this article clarifies a little-known aspect: the relationship between stock exchange finance and agricultural activities. The Stock Exchange was partly used to transfer resources to the "pioneers" who were coming from Spain and Italy, firstly through *Banco Nacional*, and later through *Banco Hipotecario Territorial*, by placing shares on the Exchange. At least up to the outbreak of World War I, the arrival of new immigrants stimulated stock exchange activity to the point where there is a clear relationship between the realities of demographic growth and the country's finances.

Thirdly, the government was able, through the Montevideo Stock Exchange, to capture the interest of European investors and to publicize Uruguayan business opportunities thanks to two instruments: the solvency of the state and monetary stability, both rare virtues in the financial history of Latin America. It had therefore become, from the 1866 financial crisis onwards, the "Switzerland of the Americas." From the outset, its leaders had identified the instruments to be used to attract foreign investments using the institution and the whole of its financial system: Legal security, tax advantages, and subjugation to the strict rules of the gold standard and automatic stabilizers. The success of the institution, one of the most solid and reliable of the young republic, is indisputable, at least until 1913. Thus, Uruguay had organized a formal secondary stock market decades before Mexico, Chile, Colombia, or Venezuela, all with much stronger economies.

This kind of explanatory financial precociousness, in large measure the position held by Uruguay at the beginning of the 20th Century in international capital movement, constitutes the main contribution of this work. However, the study of the Montevideo Stock Exchange raises other considerations to be taken into account in the interpretation of the relative economic backwardness of the country.

The first of these has to do with the ability of attracting foreign capital. Did the State do it? Yes, with debt issuance, but large companies did not. Neither the salt companies nor the rail companies were listed on the Stock Exchange. This is one of the unique characteristics of the Montevidean Stock Exchange: the total inexistence of railway companies on the Exchange, whose shares were those most traded on the rest of the continent. The reason is nothing other than the scarce number of potential investors, apart from the obvious change in ownership. Preferential debt was common to the rest of Latin American economies; private companies were financed through loans from public institutions that received savings through the issuance of bonds and mortgage bonds in the period of growth that was due to import substitution that followed the end of World War II. However, Uruguay, not to its own merit, anticipated the phenomenon and from the 1913 crisis onwards little is known of its international dimensions, equity being completely relegated to public debt and other fixed-income securities. Also, large foreign companies that were operating in the country- even Liebig's, the most emblematic of them all- were not quoted on the Exchange, which accounts for the weakness of the institution. Foreign investors neither trusted it nor expected to raise great revenue through it. Yet it is necessary to add another hypothesis: It is possible that they were not listed, considering the tiny dimensions of the market, in order not to enter into a conflict with the State, thus hindering the purchase of debt, and/or to maintain the status quo with other large companies in national capital. Either way, in Uruguay (as in other Latin American countries, and in contrast to what happened on the European periphery) foreign firms kept their distance from the Stock Exchange, hindering its growth.

Additionally, in an observation closely related to the above, despite the early development of market values and sophistication, the level of market capitalization of the Uruguayan economy was very low. In 1930, trading volume measured with respect to GDP and the country's population was nothing less than than ten times that of neighbouring Argentina. It was a modern exchange; dynamic, but tiny.

Finally, the Montevideo Stock Exchange and the trajectory of its quotations demonstrate that the combination of a financial system of excessive dimensions - measured in terms of the number of companies (and therefore in the degree of the competition in the acquisition of assets), more than evident in the Uruguayan case in which barriers to entry to the market were so lax, particularly for subsidiaries of foreign banks, including the Argentine ones)- public indebtedness, and generous credit, all inexorably ended in a stock-market crash. In the Uruguayan case, this sequence is evident in an obvious way, independent from the convertibility of the currency or not and the degree of BROU intervention in the determination of exchange rates.

Furthermore, evidence in the case of Uruguay demonstrates that stock market crashes foreran debt crises; case after case. What is more remarkable (or precisely for that reason) is that the Stock Exchange crashes took place on an Exchange which negotiated almost exclusively in public debt since the Great War, the price of which was seemingly more stable. This therefore encourages one to include debt valuation of debt (domestic and foreign) in the study of Latin America financial crises, something which has to date been excluded.

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ANEXUS

MONTEVIDEO STOCK EXCHANGE EQUITIES, 1875-1945 (nominal terms 1913=100)

| | BONDS | SHARES |
|------|-------|--------|
| 1875 | 8,3 | 26,7 |
| 1876 | 8,8 | 13,4 |
| 1877 | 11,0 | 10,5 |
| 1878 | 13,1 | 6,5 |
| 1879 | 13,5 | 5,2 |
| 1880 | 14,8 | 11,1 |
| 1881 | 13,0 | 18,9 |
| 1882 | 15,4 | 6,5 |
| 1883 | 15,7 | 8,6 |
| 1884 | 23,0 | 10,5 |
| 1885 | 19,5 | 21,0 |
| 1886 | 34,3 | 35,2 |
| 1887 | 46,5 | 52,9 |
| 1888 | 36,7 | 51,7 |
| 1889 | 29,0 | 53,7 |
| 1890 | 28,9 | 38,0 |
| 1891 | 22,4 | 25,9 |
| 1892 | 24,6 | 24,0 |
| 1893 | 24,8 | 19,4 |
| 1894 | 31,7 | 20,8 |
| 1895 | 35,2 | 22,7 |
| 1896 | 36,5 | 21,9 |
| 1897 | 29,2 | 21,4 |
| 1898 | 73,0 | 11,6 |
| 1899 | 80,5 | 12,4 |
| 1900 | 87,7 | 11,0 |
| 1901 | 51,8 | 13,3 |
| 1902 | 40,9 | 16,4 |
| 1903 | 75,0 | 22,8 |
| 1904 | 86,2 | 20,8 |
| 1905 | 71,8 | 29,4 |
| 1906 | 79,0 | 39,2 |
| 1907 | 89,5 | 49,7 |
| 1908 | 90,3 | 49,5 |
| 1909 | 94,3 | 56,4 |
| 1910 | 110,8 | 83,7 |
| 1911 | 136,3 | 104,0 |
| 1912 | 132,5 | 121,0 |

| 1913 | 100,0 | 100,1 |
|------|-------|-------|
| 1914 | 77,6 | 76,3 |
| 1915 | 71,1 | 62,3 |
| 1916 | 73,1 | 57,6 |
| 1917 | 61,3 | 48,0 |
| 1918 | 58,6 | 48,1 |
| 1919 | 56,6 | 48,5 |
| 1920 | 48,0 | 52,5 |
| 1921 | 60,8 | 25,5 |
| 1922 | 72,7 | 34,1 |
| 1923 | 71,9 | 48,5 |
| 1924 | 65,4 | 54,0 |
| 1925 | 64,6 | 62,4 |
| 1926 | 72,7 | 73,5 |
| 1927 | 75,9 | 67,0 |
| 1928 | 75,6 | 71,0 |
| 1929 | 78,6 | 78,0 |
| 1930 | 79,5 | 95,0 |
| 1931 | 77,3 | 107,9 |
| 1932 | 68,4 | 99,4 |
| 1933 | 65,3 | 63,3 |
| 1934 | 52,9 | 45,1 |
| 1935 | 66,0 | 62,3 |
| 1936 | 63,9 | 60,6 |
| 1937 | 78,7 | 93,8 |
| 1938 | 72,0 | 95,9 |
| 1939 | 71,0 | 98,3 |
| 1940 | 68,5 | 98,9 |
| 1941 | 77,5 | 103,7 |
| 1942 | 69,3 | 105,2 |
| 1943 | 64,6 | 101,3 |
| 1944 | 72,6 | 111,8 |
| 1945 | 66,3 | 94,4 |

MONTEVIDEO STOCK EXCHANGE EQUITIES, 1875-1945 (in 1913 pesos 1913=100)

| | BONDS | SHARES |
|------|-------|--------|
| 1875 | 5,7 | 18,3 |
| 1876 | 6,0 | 9,2 |
| 1877 | 7,8 | 7,5 |
| 1878 | 9,4 | 4,7 |
| 1879 | 10,4 | 4,0 |
| 1880 | 11,4 | 8,5 |
| 1881 | 9,9 | 14,4 |
| 1882 | 11,5 | 4,9 |
| 1883 | 11,5 | 6,3 |
| 1884 | 16,5 | 7,5 |
| 1885 | 13,1 | 14,1 |
| 1886 | 20,9 | 21,5 |
| 1887 | 27,3 | 31,0 |
| 1888 | 21,8 | 30,8 |
| 1889 | 20,3 | 37,5 |
| 1890 | 19,9 | 26,2 |
| 1891 | 14,7 | 17,0 |
| 1892 | 13,8 | 13,5 |
| 1893 | 14,0 | 11,0 |
| 1894 | 17,0 | 11,1 |
| 1895 | 19,9 | 12,9 |
| 1896 | 19,7 | 11,8 |
| 1897 | 16,8 | 12,3 |
| 1898 | 44,2 | 7,0 |
| 1899 | 52,5 | 8,1 |
| 1900 | 57,1 | 7,1 |
| 1901 | 34,5 | 8,9 |
| 1902 | 24,1 | 9,6 |
| 1903 | 48,3 | 14,7 |
| 1904 | 54,9 | 13,2 |
| 1905 | 51,6 | 21,1 |
| 1906 | 61,7 | 30,6 |
| 1907 | 69,4 | 38,6 |
| 1908 | 67,7 | 37,1 |
| 1909 | 73,1 | 43,8 |
| 1910 | 89,4 | 67,5 |
| 1911 | 114,2 | 87,1 |

| 1912 | 113,2 | 103,4 |
|------|-------|-------|
| 1913 | 100,0 | 100,1 |
| 1914 | 85,5 | 84,0 |
| 1915 | 91,1 | 79,8 |
| 1916 | 94,6 | 74,6 |
| 1917 | 93,7 | 73,3 |
| 1918 | 92,1 | 75,6 |
| 1919 | 92,9 | 79,6 |
| 1920 | 82,2 | 89,9 |
| 1921 | 87,3 | 36,6 |
| 1922 | 88,0 | 41,2 |
| 1923 | 93,2 | 63,0 |
| 1924 | 94,0 | 77,7 |
| 1925 | 93,2 | 90,1 |
| 1926 | 97,8 | 98,8 |
| 1927 | 102,9 | 90,8 |
| 1928 | 103,5 | 97,3 |
| 1929 | 106,6 | 105,6 |
| 1930 | 105,1 | 125,5 |
| 1931 | 102,1 | 142,6 |
| 1932 | 91,8 | 133,5 |
| 1933 | 89,1 | 86,3 |
| 1934 | 76,0 | 64,8 |
| 1935 | 96,2 | 90,7 |
| 1936 | 100,9 | 95,7 |
| 1937 | 107,5 | 128,1 |
| 1938 | 98,1 | 130,7 |
| 1939 | 102,1 | 141,3 |
| 1940 | 102,8 | 148,4 |
| 1941 | 115,6 | 154,7 |
| 1942 | 106,3 | 161,3 |
| 1943 | 105,4 | 165,2 |
| 1944 | 122,4 | 188,3 |
| 1945 | 126,1 | 179,5 |