

**Two Hundred Years of Financial Integration:
Latin America since Independence**

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Abstract

I collect a new database on Latin America's international issuance from 1820 to 1931 in the major financial centers of that time: London, Paris, Berlin, Frankfurt, and New York. This database includes individual sovereign bonds and loans as well as bonds, loans, and equities issued by private corporations. The database is used to examine the boom-bust pattern in access to international capital markets by Latin American countries in the 19th and 20th and the beginning of the 21st centuries. The paper also very briefly examines the role of external shocks on these financial cycles. In particular, I examine shocks to monetary policy in the financial centers, fluctuations in commodity prices, global imbalances, financial innovations and new technologies.

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The past is never dead. It's not even past
William Faulkner (Act I Scene III of *Requiem for a Nun*)

I. Introduction

Latin America is again immersed in the midst of a global financial crisis. Following the boom in international borrowing in the mid 2000s, Latin America's gross primary international issuance has declined by 52 percent in 2008, triggering a liquidity crunch in all the countries in the region. With international issuance expected to decline even further in 2009, new worries are emerging about a long run collapse in the region's growth. These worries are not unfounded. The boom-bust international capital flow cycle of the late 1970s-beginning of the 1980s is not only followed by a prolonged downturn, also known as "the lost decade," but also by wave of currency, banking, and debt crises across Latin America, new barriers to international of capital movements, an increase in domestic debt, and high inflation. While the boom-bust in international issuance of the 1990s does not have such dire consequences in Latin America, still growth slows down, currency and banking crises are common in many countries, although only Argentina, Ecuador, Uruguay and Venezuela default on their debt. Above all, inflation does not creep up and restrictions to capital mobility are mostly not re-imposed.

Still, the adverse economic conditions following the reversal in capital flows in the last 30 years has naturally dampened the optimism about the virtues of financial globalization. This is not all. Most of Latin American economies do not experience high growth even in the midst of the boom in international capital inflows, suggesting that the road to prosperity may not be tied to free international capital markets. Naturally, the support for further deregulation of capital markets has dwindled.

Interestingly, this is not the first time Latin America participates in international capital markets. Many Latin American countries start borrowing in international capital markets immediately after independence and this participation lasts (with various interruptions) until the great depression in the 1930s. In contrast to the experience in the last 30 years, during the previous episode of financial integration, especially around the turn of the century, economic growth in many Latin American countries accelerates, with international capital financing the construction of new cities, the adoption of cutting edge technologies, and the extraction of mineral resources.

Better understanding the effects of financial integration is imperative, especially now in the midst of a new protectionist mood around the world reminiscent of the aftermath of the 1931 crisis. Most of the previous empirical studies on financial integration only examine the experience of the last 30 years because capital flow data is just available for this period. Studies on capital flows for the heydays of financial integration during the gold standard period have to rely on current account data of the capital exporters of those times: Great Britain during the 19th century and early 20th century until the onset of WWI and the United States during the early 20th century up to the great depression. While this data can approximate the extent of total capital flows from the main financial centers of those times to the rest of the world, it does not provide disaggregated information on capital flows to the recipient countries, nor can provide information on the characteristics of the flows. For example, it is impossible to untangle sovereign and private borrowing; equity and bond flows; or to learn the types of companies that have access to international capital markets. While there are some compilations of international capital issuance during the 19th and early 20th centuries, they do not cover all the period since London becomes the financial capital of the world at the end of the Napoleonic wars, nor do they include international issuance in all the financial centers of those times. Again, these compilations do not provide information on individual issues to uncover the characteristics of firms that are able to tap international capital markets.¹

To understand the experience of Latin America then and now, we first need to collect all the information on international issuance during the 19th and early 20th centuries. This is the main contribution of this paper. I create a new database of gross primary issuance of bonds, equities, and loans that Latin American countries floated in London, Paris, Berlin and Frankfurt, and New York. The data collected includes the time of the floating of each security, the name of the issuer, and the amount of capital called. For bonds and loans, the database also includes the price, the interest rate, the currency of denomination, and the maturity of every issue.² I use this

¹ An important source of country data on international issuance is that of Stone (1999) which collects information on bond and equity issuance in London from 1865 to 1914 for twenty one countries but it lacks information on the individual issues. An important source of Latin America's sovereign and public issuance is Marichal (1989), which has disaggregated information for the periods 1850-1873, 1880-1890, and 1920-1930.

² This database on Latin America international issuance is part of a larger project on world financial globalization since London becomes the financial capital of the world at the end of the Napoleonic Wars and it will provide for the first time ever continuous data on international capital flows starting in 1822 until 1931 at the onset of the great depression.

database to characterize financial integration of the region and the boom-bust cycles in international lending, have a preliminary reading on the effects of external shocks on issuance, and examine the liquidity of the markets.

The rest of the paper is organized as follows. Section II provides a chronology of the participation of Latin America in international capital markets since independence. Section III presents the data, examines the international capital flow cycles, and evaluates the degree of financial integration of the region. Section IV examines the effect of world-wide shocks on the ability of Latin American countries to tap international capital markets then and now. The emphasis is on monetary policy in the main financial centers, shocks to commodity prices, technical and financial innovations, and global imbalances. This section also examines in more detail the experience country by country. Section V concludes.

II. A Chronology of International Capital Flows to Latin America³

The history of the independent states of Latin American starts with Napoleon's invasion of the Iberian Peninsula in 1808, which brings to an end the three centuries of Spanish and Portuguese rule in Latin America. Spanish Latin America responds almost immediately to the invasion of Spain and the deposition of the King Ferdinand VII with the creation of "criollo" committees (juntas) declaring their loyalty to the deposed king. By 1814, even after Napoleon's defeat and Ferdinand's return to power, the political agitation in Latin America has already turned into wars of independence and by 1825 all Spanish Latin America (except Puerto Rico and Cuba) has gained independence from Spain. In 1808 the links between Brazil and Portugal are also severed as the Portuguese Royal family, escaping Napoleon's invasion of Portugal, moves to its then colony, Brazil. In the following years restrictions on commerce are eliminated and Brazil's ports are open to British trade. In 1821 when the King returns to Portugal and attempts to reinstate economic restrictions for its colony, Brazil resists and declares independence in September 1822. Britain and Portugal recognize Brazilian independence in August 1825.

³ This chronology for the era of financial globalization before the great depression draws in part from Bordo and Murshid (1999), Bordo (2003), Capie (2002), Dawson (1990), Dornbusch and Frenkel (1984), English (1996), Huffman and Lothian (1980), Marichal (1989), and Neal (1998).

The end of the Spanish and Portuguese rule ends with the isolation of Latin America. The new independent countries immediately eliminate restrictions to trade with all nations. Participation in international capital markets soon follows, with all governments floating bonds in London, the new financial capital of the world.⁴ The first Latin American country to float bonds in London is Colombia. The first issue is in 1822 for 2 million pounds. By the end of 1825, the total issuance by Latin American countries has reached 20 million pounds, with participation of both large and small countries. The ability of Latin American countries to tap funding in London is favored by the increase in liquidity fueled, in part, by the sharp decline in military spending following the end of the Napoleonic wars and partly because of the monetary injections of the Bank of England. This liquidity creates an import boom and a growing trade imbalance in Britain, as well as a drain of the Bank of England's gold reserves. To stop the drain of reserves, the Bank raises its discount rate in the summer of 1825. The tightening of liquidity is followed by a stock market crash in October, a banking panic in December, and numerous bankruptcies. The financial debacle in London rapidly spreads to continental Europe, with bankruptcies of major banks in Germany, Italy, Amsterdam, Saint Petersburg, and Vienna.

The crisis extends rapidly to Latin America as overseas loans are cut off. This is not all. The crisis also triggers a major fiscal problem in Latin America. As world trade collapses, so do tariff revenues, the only source of income of the governments of the new countries. Peru defaults in April 1826; Gran Colombia (Colombia, Ecuador, and Venezuela) and Chile default in September 1826; Argentina defaults in July 1827; Mexico defaults in October 1827; and the Federation of Central America defaults in February 1828. Only Brazil does not default. It takes three decades before the debts are renegotiated and capital flows to Latin America resume.

While Latin American countries do not re-enter international capital markets for about three decades, world capital markets recover starting mostly in the mid-1830s. This recovery is again sprinkled with various financial crises. During the 1830s, the United States is the prime destination of British investment, with capital flows financing the construction of canals and

⁴ Napoleon's invasion of Holland also contributes to the end of Amsterdam two-hundred year dominance of financial markets as continental bankers move to London to benefit from Britain's economic and political stability, with the City of London becoming Europe's new financial capital of the world. While London's Stock Exchange opens in 1571, it does not trade in foreign bonds until 1817. In that year, Baring Brothers, in association with the Amsterdam banking house of Hope & Co., arranges a loan to finance French war reparations. This loan was denominated in francs. In 1818, N.M. Rothschild arranges the first foreign loan denominated in sterling for the Kingdom of Prussia.

railways as well as the creation of new banks. Various U.S. states become major borrowers in international capital markets.⁵ The first reversal in this lending boom occurs in 1837,⁶ but capital flows resume only to collapse in 1839, again with a severe monetary contraction in England to stop the drain of reserves. By 1842 eight U.S. states have defaulted.

By 1843 the world economy has recovered and world trade starts to boom again.⁷ With the European economy growing, the need for primary products and raw materials increases, benefiting Latin American economies, in particular, Chile and Peru.⁸ The growing international trade brings a fiscal bonanza to all Latin American countries (as tariff revenues increase accordingly) and with it the possibility of settlement of the foreign debts.⁹ Brazil is the first to re-enter the market in 1852 and is followed by Peru in 1853. Still, the new loan boom to Latin America only flourishes in the 1860s after the end of the panic of 1857¹⁰ and mostly after the end of the British crisis of 1866.¹¹ The capital flow bonanza to Latin America in the 1860s is far larger than that of the early 1820s, with capital flows during in this period financing governments but also the construction of railroads and the creation of commercial banks across Latin America.

This boom in international capital flows ends in 1873. The end of the Franco-Prussian War in 1870 plays a critical part in the unfolding of this crisis. Following the defeat of the Napoleon III, the new French government has to pay a huge indemnity of 5,000 million francs (£200 million) to Germany. These huge indemnity transfers lead to a massive flow of capital into the economics of central Europe, fueling speculation in various financial markets. A spectacular stock market crash in Vienna in May 1873 ends with the stock market boom in

⁵ Between 1820 and 1839, the debts of U.S. states increase by a factor of thirteen (see English, 1996).

⁶ The panic of 1837 erupts following the Bank of England's increase of the bank rate to stop an external gold drain caused by poor corn harvests and capital outflows to the U.S. The crisis spreads to the United States leading to a banking panic that ends with a suspension of specie payments in May 1837.

⁷ Still, the expansion of the 1840s is interrupted by the crisis in 1847. Again this crisis erupts following a sharp hike in the discount rate by the Bank of England in response to a drain in reserves. But this crisis is short lived with no major international repercussions.

⁸ The export of agricultural and mineral products surges dramatically: Guano from Peru, copper and wheat from Chile, wool from Argentina, coffee from Brazil, sugar and tobacco from Cuba, and silver from Mexico. See Marichal (1989).

⁹ Chile is the first to renegotiate its debt in 1842, Peru follows in 1849. Most Latin American countries renegotiate their debts in the 1850s.

¹⁰ The crisis of 1857 begins in the U.S. A railroad stock boom fueled by British capital and the California gold discoveries in 1849 crashes in August 1857 with a banking panic. The crisis spreads to England in the Fall. From England the crisis spread to the continent, with a serious panic in Hamburg in December.

¹¹ The crisis of 1866 is triggered by the collapse of Overend & Gurney.

Austria and spreads rapidly to Germany. Between 1873 and 1878, half the Austrian banks close, and 400 of the 800 Austrian joint-stock companies go bankrupt. Stock markets in Amsterdam and Zurich also crash. The crisis crosses the Atlantic in September, the New York Stock market collapses and is followed with a U.S. banking panic. As during the crisis of 1825, there is a collapse in world trade and in the prices of commodities and loans are called off. Tax revenues in Latin America sharply drop and trigger a new wave of defaults across Latin America. The steep decline in commodity and stock prices as well as the bank and industrial bankruptcies in most countries start the first worldwide 1873 recession. The crisis is also felt in the Middle East. By 1876 the Ottoman Empire, Egypt, Greece, and Tunisia have defaulted. In total, by the year 1876 fifteen non-European nations have suspended payments on almost 300 hundred million of British pounds. Importantly, Argentina, Brazil, and Chile do not default.

While the world depression of the 1873 wreaks havoc in most of the Latin American economies, with several countries defaulting on their foreign debts; by the early 1880s a process of recovery has begun. The upswing in world economic activity fuels foreign trade and new capital flows. This time around, capital flows finance a new variety of private activities and the adoption of the cutting edge technologies of those times, such as railways, tramways, gas works, banks, production of raw materials, mining, and land companies, with Argentina and Uruguay as important recipients of this inflow. The boom of the 1880s ends in 1890 with the crisis set off by the near-failure of Baring Brothers, the underwriter of Argentine Government loans. The Bank of England prevents a panic via a recapitalization of Baring Brothers with the help of other major London financial institutions and loans from the Banque de France and the Russian central bank. Still, the crisis spreads back to Latin America with the cessation of British lending to Argentina, Uruguay, and Brazil. During the next years there is a sharp decline in the flow of British capital.

The next international capital flow cycle starts in mid-1890s and ends with the start of WWI.¹² While Britain continues to be the main creditor, France, German and American investors set up new companies in banking as well as in railways, tramways, mines, sugar

¹² This boom is temporarily interrupted in 1907 with a crisis originating in the United States following the San Francisco earthquake in April 1906. The destruction caused by the earthquake puts pressure on financial resources in the United States and puts strain on the Bank of England's reserves when British insurance companies start to pay out the U.S. claims. To stop the loss of reserves, the Bank of England hikes the discount rate from 3.5 to 6 percent causing a severe liquidity crunch in the United States. The U.S. stock market crashes in early 1907 and economic activity begins to decline. In October, depositor runs on trust companies spread to the commercial banks. Banks suspend cash payments and the economy enters a sharp recession.

refineries, flour mills, gas works, and even some early electric and telephone companies. This episode is considered until now the heyday of financial globalization. The outbreak of World War I contributes to the end of this boom in international capital flows. In July, as war becomes imminent, a liquidity crunch spreads around the world as investors start to liquidate foreign assets, fueling panics in all asset markets. While the panic is promptly stopped by the central banks in the United Kingdom, the United and continental Europe, the outbreak of the war in Europe causes an abrupt suspension of capital flows. Still, most Latin American countries do not default. This time around, the governments of most nations of the region continue to service their debt using export surpluses. In fact, during the war, Latin America becomes a net capital exporter.

Following the end of the war in Europe, most Latin American nations benefit from the continuing rise in international prices of raw materials and primary products. But the post-war boom comes to an end by mid-1920, with the anti-inflationary monetary policies adopted in the United States, United Kingdom, and other countries to roll back the war inflation and the post war commodity boom. Again this policy triggers both banking and currency crises in a number of countries (Denmark, Italy, Finland, Netherlands, and Norway). The crisis of 1920-21 quickly spreads to Latin America via the collapse of commodity prices. It is at this time that New York becomes the leading financial center while lending from London and Paris retrenches following the imposition of capital controls in Great Britain and France.¹³ Latin American issues floated in New York reach their peak in 1927.

By 1927 prices of commodities have started to decline. Financial conditions in Latin America also begin to deteriorate even before the onset of the crisis in October 1929. Following the stock market crash on Wall Street in October of 1929, the crisis spreads to Latin America and Europe and triggers currency, banking, and sovereign crises around the world. In September 1931 Great Britain abandons the Gold Standard.

During the next fifty years international capital flows languish in the midst of restrictions to capital mobility in both developed and developing countries only to recover towards the end of the 1970s. Ironically, the revival of international capital markets can be traced to new

¹³ Foreign lending is formally restricted in Great Britain starting in December 1914. While formal restrictions are removed in various stages and completely eliminated in November 1919, foreign lending continues to be restricted by the Bank of England, with control undertaken through moral suasion. As discussed in Cottrell (2005) all projected foreign flotation has to be discussed with the Bank of England's Governor.

financial restrictions in Great Britain and the United States in the late 1950s and 1960s. In 1957, the British government introduces new financial restrictions in the vain attempt to stop the speculation against the pound. In the end the devaluation is not averted, but the restrictions make London-based banks create a new market to avoid losing their share of financial transactions: Banks' dollar deposits start to be used to provide dollar loans in an unregulated market, which becomes to be known as the Eurodollar market. In 1964, it is the U.S. turn. This time, the currency under attack is the U.S. dollar. To stop the speculation, the U.S. government introduces capital account controls in 1964.¹⁴ U.S. based-banks, like their British counterpart in the 1950s, turn to the Eurodollar market to avoid the restrictions that could imperil their operations, with liquidity in this market sharply increasing.

But perhaps, the straw that broke the camel's back is the collapse of the Bretton Woods system in 1973. With no need to defend the peg, countries can choose their own monetary policy without the need to restrict capital mobility and thus a new era of financial liberalization begins. As early as July 1973, United States eliminates capital account restrictions. Germany and Great Britain follow, partially eliminating capital controls in 1973 while Japan joins in 1979. In the late 1970s, Latin American countries deregulate the domestic banking sector and eliminate restrictions on international capital flows.

The first international market to develop in the 1970s is the syndicated loan market, particularly with lending to emerging markets. The dramatic surge in international loans is triggered by the oil shock in 1973-74, with the high savings of OPEC countries being channeled through the Eurodollar market particularly during the 1979-81 period. The boom in syndicated lending to emerging markets peaks at 57 billion dollars in 1981. But in 1982 international issuance collapses. At the heart of this collapse are the monetary contraction, recession, and financial crisis in the United States. Mexico's default in August 1982 adds to the fragility of the commercial banking sector in the United States. With U.S. banks recalling their loans from all emerging markets, other defaults follow. Most of Latin American countries suspend interest and principal payments and they are also followed by countries in Asia, Eastern Europe, and Africa. The rest of the 1980s witness a collapse of the international syndicated loan market to emerging economies: Gross issuance of syndicated loans remains at half of the issuance reached in the

¹⁴ In September 1964, the United States Congress enacted the Interest Equalization Tax (IET), an excise tax on purchases of new or outstanding foreign stocks and bonds by U.S. residents, which lowered the rate of return to U.S. purchasers of foreign assets by an equivalent of 1 percentage point.

early 1980s. The collapse in Latin America is even more dramatic, with loan issuance at 4 percent of the level reached in 1982.

In 1989, the Brady plan and its initiative to restructure defaulted loans in 1989 end with the isolation of developing markets from international capital markets.¹⁵ This time around, both the government and the private sector start issuing bonds in international capital markets. Latin America benefits especially from the new international bond market. In fact, issuance in the bond market surpasses that of the syndicated loan market, with Latin American countries bond issuance increasing from 1.5 billions of dollars in 1990 to 58 billions of dollars in 1997.

The Brady plan also provides a new impetus to the syndicated loan market. Helped by the easy monetary conditions in industrial countries in the early 1990s, syndicated loans reach a new peak at 190 billion dollars in 1997, almost four times higher than the level reached in the early 1980s. This time around, the largest beneficiaries in emerging markets are the East Asian countries, with gross issuance reaching almost 100 billion dollars in 1997. The nationality of lenders also changes: While in the early 1980s most of the syndicates are composed of U.S. banks, in the 1990s Japanese and European banks play a leading role in lending to emerging markets, especially to East Asian countries. The boom in the 1990s in the syndicated loan market is not confined to emerging markets. By 2004 international syndicated lending has increased to 2.5 trillions of US dollars, with developed countries capturing the lion share of the international syndicated loan market, with gross issuance reaching 1.8 trillion U.S dollars in 2004. Moreover, the expansion of the bond and syndicated loan markets in the 1990s is now accompanied by the development of an international equity market. But the 1990s as the 1980s are plagued by crises. In the aftermath of these crises, net capital flows to emerging markets dwindle to a trickle. However, while in the late 1980s Latin America's gross issuance in international markets collapses to about 4 percent of the levels attained in the early 1980s, in the late 1990s, total issuance declines only to about 60 percent of its peak in 1997.

The last wave of international lending to Latin America starts in 2003, this time around Latin America's international issuance peaks in 2007 at 157 billion U.S. dollars, only to decline by 52 percent in 2008. The rest of this paper compares these waves of the Latin American participation in international capital markets.

¹⁵ The key innovation of the Brady Plan is to allow the commercial banks to exchange their claims on developing countries into tradeable instruments, allowing them to eliminate the debt from their balance sheets and creating almost overnight, a market for sovereign emerging market bonds.

III. International Issuance: Then and Now

The historical data for this project has been collected over several years from financial newspapers of the 19th and early 20th centuries, annual reports of the Stock Markets in London, New York, Paris, Berlin, and Frankfurt, the archives of the London Stock market, and the archives of merchant banks such as the House of Rothschild in London as well as deposit banks, such as the Credit Lyonnais in Paris. I have also used private collections at Baruch College in New York. Part of the material has also been collected from important studies on sovereign debt by scholars in Latin America as well as from Marichal (1989) important work on Latin America's sovereign debt cycles. The data for the modern episodes on international issuance is from Dealogic. It includes bond, equity, and syndicated loan issuance in international capital markets.

To introduce the historical data, I present two prospectuses in Figure 1. The first one is a 1,034,700 sterling-pound bond issued by the Province of Buenos Aires (Argentina) in 1870. This is a 6% loan issued at a discount (88 percent of face value) redeemable in 33 years, with interest paid twice a year in London. This bond, as most sovereign bonds in the early phase of financial integration, was callable, allowing governments to refinance their debt in low-interest rate years. The second one is a 5% mortgage bond issued by the Railway Company Victoria to Minas in Brazil payable in 80 years. Note that this bond as most bonds issued by Railway companies are guaranteed by the government.

Figures 2 and 3 show the evolution of total primary-issuance in international capital markets. Figures 4 and 5 decompose total issuance into sovereign/public and private issuance.¹⁶ Figure 2 shows the better known boom-bust cycles in international issuance from 1980 to 2008 while Figure 3 shows the newly collected data covering the period from 1820 to 1931.¹⁷ The top panel in these figures shows the face value of all bonds, equities, and loans issued over time. Another metric to capture participation in international capital markets and the degree of

¹⁶ I should note that public issuance in the earlier period increases substantially because bonds at that time were callable with frequent refinancing in times of low interest rates. I should also note that sovereign issuance in the earlier period includes conversion of the defaulted sovereign debts. This is not the case in the last 30 years.

¹⁷ The data for this period is still incomplete. All private companies bonds and equities as well as some sovereign bonds floated in Berlin, Frankfurt, and Paris are still not included. The data from France and Germany will be included in the revised version of this paper.

liquidity of these markets is shown in the bottom panel, where I report the number of issues. As shown in Figure 2, there are three cycles in international issuance in the last 30 years. The first one starts in the late 1970s and peaks in 1981 at 38 billion dollars. There are 209 issues, with only 34 percent of those issues arranged by the private sector. A new cycle starts in 1990 following the Brady Plan in 1989-1990 and peaks in 1997 at 113 billion dollars, a 200 percent increase from the peak in 1981. There are 1988 issues floated during this boom, with 72 percent of those issues being private. The last cycle starts in 2003 and peaks in 2007. Participation in international capital markets continues to expand, with issuance in 2007 increasing to 157 billion dollars, an increase of almost 40 percent from the previous peak. Again, in number of issues, the private sector deals are 78 percent of the 1533 issues floated from 2003 to 2007. Overall, during the 1980-2008 period, banks are the most active participants in international capital markets with 27 percent of all private issues related to the banking and financial sector. Other active participants are the oil/mining industry with 12 percent of all private issues, the energy/electricity sector with 13 percent of all private issues, and the communication/telecommunication industry with 11 percent of all issues.

The pattern of boom-bust in international issuance during the last 30 years is not new. As shown in Figure 3, there are clear boom-bust episodes throughout the 19th and early 20th centuries peaking in 1824, 1872, 1889, 1899¹⁸, 1909, and 1927. I should note that the data presented in Figure 3 is not strictly comparable to that of Figure 2. The earlier data includes refinancing of the sovereign debt in times of low interest rates as well as the conversion loans following a sovereign default, thus magnifying the importance of sovereign issuance. I should also note that while most of the sovereign loans are long term bonds, after the 1929 stock market crash in New York, the data also includes issuance of short-term treasuries. For example, in 1930 Argentina issued 17 million British pounds in 6 month bonds.

The boom of the 1820s is mostly due to public loans to the newly independent countries. There are thirteen issues¹⁹ for a total of 21 million pounds (at face value). The nominal interest rate of these bonds oscillates between 5% and 6%. Bonds are sold at an average discount of 22 percent. This episode also witnessed the creation of new companies in the mining sector. In

¹⁸ The peak in 1899 is mostly due to the conversion loans in Argentina.

¹⁹ There are two Brazilian bonds, one Central American bond, two Colombian bonds, one Chilean bond, three Mexican bonds, three Peruvian bonds, and one bond is issued by the Province of Buenos Aires

total, twenty eight companies are formed with a proposed capitalization of 24 million pounds. However, by the time of the collapse in the summer of 1825, the shares issued amounted only to 3.5 million pounds.

There are 200 issues during the boom of the late 1860s until 1872, of which 128 were private issues. It is during this period that a large number of British banks are created following the laws in 1858 and 1862 allowing the formation of joint-stock banks with limited liability. This is also the period of the creation of deposit banks such as the Credit Lyonnais (1863) and the investment banks (banques d'affaires) such as Banque de Paris et des Pays-Bas (1873), with both English and French banks founding new banks in continental Europe and Latin America. In Latin America, The London and Brazilian Bank is the first to be incorporated in May 1862 with a capital of 1,000,000 pounds; the London and River Plate Bank follows with a capital of 500,000 pounds. In 1863, the London and South American Bank limited is founded and merged with the Mexican Bank in 1864 to form the London Bank of Mexico and South America Limited with a proposed capital of 1,000,000 pounds. Many others, such as the London and Venezuelan Bank, the Mercantile Bank of the River Plate in Uruguay, and the Anglo Peruvian Bank are founded in this period. It is also during the 1860s and 1870s that the first joint-stock railway companies are formed. Railway construction is financed through issues of bonds, mortgage bonds, and equity issuance. Some of the earlier issues are those of the Brazilian Street Railway in 1869, the Sao Paulo Railway in 1870, City of Buenos Aires Street Railway in 1870, and Buenos Aires National Tramways Limited also in 1870. While the expansion is slowed down by the Overend Gurney crisis in London in 1866, by the early 1870s Latin American countries are heavily participating in international capital markets. In this episode, Peru becomes the most indebted country in Latin America, with the foreign debt increasing to about 36 million pounds in 1873 from 5 million pounds in 1856. The collateral provided by the exports of guano, monopolized by the Peruvian government, allows Peru's government to access international capital markets in such grand way.

After the crisis in 1873, the next lending cycle peaks in 1889. From 1874 until 1889, there are 514 new issues, 393 of those issues are private. Argentina floats 184 issues, with 57 percent of those issues related to the construction of railways and tramways. Brazil's issues are 121, with 37 percent of the issues financing railways and 10 percent financing sugar factories.

Chile floats 36 issues with 64 percent related to the production of nitrates. Finally, Uruguay's issues during this period are 30 with 43 percent of those issues financing railway construction.

The next cycle peaks in 1909. From 1890 to 1909 there are 780 issues and 82 percent of those issues are private. The most active participants in international capital markets during this boom are Argentina (236 issues), Brazil (138 issues), Chile (91 issues), Cuba (45 issues), Mexico (140 issues), and Uruguay (32 issues). Of the 236 Argentine issues, 39 are public (included conversion bonds after the default of 1890) and 191 are private. Of the 138 Brazilian issues, 79 of those are private. All but three of the 45 Cuban issues are private, 121 of the Mexican issues are private, and 26 Uruguay issues are private. A large part of Argentine issues (78) finance the construction of railways while 24 issues finance the building of a tramway system in various cities. Finally, 12 issues finance gas works. The importance of railway issues is smaller in Brazil, with only 19 issues. A larger number of issues (29) finance mines and coffee, rubber, and sugar plantations. Chile's issuance is highly concentrated, with 52 percent of the issues linked to the production of nitrates. Although more diversified, 25 percent of all Mexican issues are related to mining.

The last capital flow bonanza starts in 1918 and peaks in 1927. There are 303 issues, only 120 of them are issued by the private sector. Interestingly, while Argentina continues to be the most important participant in international capital markets, its importance diminishes. During this episode Argentina floats only 48 issues for a total of 142 million pounds. Cuba takes a major role, floating 65 issues for a total of 91 million pounds. Brazil as Argentina also plays a diminished role in capital markets, floating 41 issues for a total of 109 million pounds.

A summary of the stylized characteristics of these cycles is reported in Tables 1-4. Table 1 shows the amplitude of the boom-bust cycles. The average duration of the booms is 9 years in the earlier episode and 8 years during the last 30 years. The duration of the busts is shorter, around 5 years for both periods. Downturns are more dramatic during the earlier period, with basically no issuance at the bottom of the cycle. Crashes during the last 30 years are less pronounced. Only the crash in the 1980s is as pronounced as those of the 19th and early 20th centuries. To have a metric of the increase in participation in international capital markets, I estimate the increase in issuance from the first peak to the last one in each period. In the earlier period, issuance increases 1062 percent (at an annual rate of 10.3 percent) while in the latter period, issuance increases 308 percent (at an annual rate of 11.8 percent).

Table 2 tries to capture another feature of these cycles, that of the length of the episodes of stagnation in issuance. I define two metrics of stagnation (being in the doldrums). Episodes of extreme stagnation are those years when issuance is 80 percent below issuance at the previous peak and episodes of medium stagnation are those years when issuance is 50 percent below issuance at the previous peak. Interestingly, even if we exclude the three decades of lack of participation in international capital markets following the crisis in 1825, the episodes of stagnation are more protracted during the 19th and early 20th centuries. Finally, Table 3 and 4 examine the characteristics of the private and sovereign capital flow cycles. Interestingly, private and sovereign cycles are similar suggesting an important country effect or a common world factor.

Information on total issuance is insufficient to compare the extent of financial integration then and now. I need to compare total issuance with an indicator of the size of the economy. The most common indicator used to capture the extent of integration across countries is the ratio of total issuance (or capital flows) to GDP. Official estimates of GDP for the 19th century and even the early 20th century are not available. Instead, I use exports as the scale variable. Table 5 reports the ratio of issuance to exports for the two periods. Interestingly, these ratios are similar over the two episodes of financial globalization. However, we should remember that many of the countries in Latin America are more open to trade in the 19th century than in the last decades of the 20th century. For example, Argentina's exports are about 25-30 percent of GDP in the second half of the 19th century while since the 1970s exports are about 10 percent of GDP. These numbers suggest that the extent of financial integration of Argentina in the earlier period to be three times larger than that of the last thirty years. While there are not good estimates of economic activity for the large economies of Latin American during the 19th and early 20th centuries, some point estimates of GDP again suggest that these economies are more open to international trade and thus more financially integrated in the 19th and early 20th century than they are on average in the last three decades.

The previous analysis focused on measures of financial integration for the region. Figures 6 – 7 report the total value of issuance per country and Figure 8 compares each country's share in international issuance then and now. We can divide all the issuing countries into two groups, the more financially integrated and that of countries that tap international capital markets sporadically. For the earlier period, the first group includes Argentina, Brazil, Chile, Colombia,

Cuba, Mexico, and Uruguay with total issuance ranging from 800 million pounds (632 issues) for Argentina to 110 million pounds (101 issues) for Uruguay.²⁰ The third group comprises Bolivia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Jamaica, and Panama, Peru, and Venezuela with at most 100 million pound issuance and at most 60 issues. During the last thirty years, we can also classify the countries into groups. The first group includes Argentina, Brazil, Chile, Colombia, Mexico, and Venezuela with total issuance ranging from 430 billion dollars to 70 billion dollars. The number of bonds, shares and syndicated-loan issues for this group ranges from about 2000 to 500.²¹ The second group comprises Bolivia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Jamaica, Panama, Peru and Uruguay with total issuance below 200 billion dollars and less than 200 issues each. I should note that the number of issues in the modern times is not strictly comparable to that in the 19th and early 20th century. In modern times, with floating rates in the financial centers, corporations and governments in the periphery issue simultaneously bonds in yens, pound, euros, and dollars. These are counted as different issues. Instead, during the gold standard there is no need to diversify currency risk. Bonds are issued in pounds with a clause that payment in another currency is set at a predetermined parity.²² The data suggests that overall small countries do not participate actively in international capital markets unless they have exportable natural resources, such as Cuba and Uruguay in the earlier period and Venezuela now.

As shown in Figure 8, there are winners and losers in the most recent period of financial integration. While Argentina's share in international issuance is 32 percent in the earlier period, now its share relative to all Latin America's issuance is just 16 percent. Brazil's share increases from 21 to 32 percent and Mexico's share increases from 15 to 31 percent. In contrast, the smaller countries' shares decline in the most recent period when compared to those of the earlier period.²³

²⁰ The number of bonds and shares issued during the earlier period are: Argentina (632), Brazil (467), Chile (202), Colombia (114), Cuba (172), Mexico (299), Peru, and Uruguay(101)

²¹ The number of bonds and shares issued during the last thirty years are: Argentina (1043), Brazil (1903), Chile (535), Colombia (358), Mexico (1522), and Venezuela (486).

²² In a revised version of this paper, I will examine the proportion of simultaneous issues in different currencies to assess the number of issues based on a same metric.

²³ The changing shares reflect not only the fluctuations in participation but also the changes in the size of the economies during the 200 years. We need to untangle these two effects of the changing participation in international capital markets.

IV. Shocks

The goal of this section is to start to untangle the role of external shocks on the ability of Latin American countries to access international capital markets. Traditionally, capital flows to emerging markets are explained by stressing the demand side (of funds), i.e., by showing how domestic fundamentals are responsible for the direction of these flows. For example, the three generations of models of currency crises explain the reversal in capital flows by pinpointing to fiscal and monetary causes (Krugman, 1979), to unemployment and overall loss of competitiveness (Obstfeld, 1994), and to banking fragility and overall excesses in financial markets (Kaminsky and Reinhart, 1999, and Chang and Velasco, 2000). More recently, the economics profession has started to pay attention to global factors. The focus of this new literature is on financial centers and how shocks in mature economies are transmitted to emerging economies. Examples of this supply (of funds) approach include Caballero and Krishnamurthy (2002), Calvo (1999), Calvo, Izquierdo, and Mejía (2004), and Fostel (2005).

We can incorporate this literature in the following simple model of supply and demand of financial funds to emerging economies.

$$\begin{aligned} S &= f(r, r^*, \theta^*, l^*, crises^*, y, tot, mp, pr, op) \\ D &= g(r, op, \sigma, y, tot) \end{aligned} \tag{1}$$

where the * identifies world fundamentals, r is the country return, r^* is the world interest rate, θ^* is investors' risk aversion, l^* is world liquidity, $crises^*$ indicates crises in other countries, y is domestic output growth, tot is terms of trade, mp is domestic macroeconomic policy, pr is domestic political risk, op is the degree of openness of the economy, and σ is the real exchange rate volatility.

The effect of shocks in world capital markets on the supply of funds to emerging economies is quite intuitive. Low world interest rates lead to higher supply, assuming the emerging-market assets and world (financial centers) assets are substitutes. Also, the supply of risky emerging-market assets will be negatively related to investors' risk aversion and positively related to world liquidity. Finally, the contagion literature (see, for example, Kaminsky and Reinhart, 2000) suggests that crises may spread rapidly, affecting the ability of emerging markets to access international capital markets as investors rebalance their portfolio, not only recalling

loans from crisis countries but also from other countries to which they have exposure. The literature on currency and sovereign debt crises suggests that certain fundamentals can be taken as signals of reduced probability of a speculative attack or a default.²⁴ High output growth or better terms of trade signals better future repayment ability, macroeconomic policy stability reduces the probability of crises, and low political risk indicates a low probability of default. In all cases, the supply of funds will increase. Finally, the more open the economy is, the more integrated the country to international markets will be. The costs of default in these circumstances will increase, triggering a larger supply of world funds.

On the demand side, the literature on currency mismatches (for example, Jeanne, 2003) suggests that the more open the economy is, the higher its ability to generate foreign currency denominated assets. With the likelihood of currency mismatches declining, demand for foreign currency denominated liabilities will increase. In contrast, currency mismatches will increase when the volatility of the real exchange rate increases, making domestic firms less inclined to borrow overseas.²⁵ Finally, the effects of output growth and the terms of trade are ambiguous. While higher output growth or better terms of trade could lead to more domestic savings, crowding out the need of outside funding, it can also lead to a Fisherian motive for borrowing today.

The model above can be solved to obtain a reduced form equation that relates issuance with the rest of the variables.

$$Issuance = h(r^*, \theta^*, l^*, crises^*, y, tot, mp, pr, op, \sigma) \quad (2)$$

The goal of this section is not to estimate the model but to have a preliminary reading on the links between various external shocks and Latin America's participation in international capital markets.

To examine the evolution of global liquidity, I use interest rates in the financial centers. For the earlier period, I use the bank rate in Great Britain and the commercial paper rate in the United States. For the last three decades, I use the Federal Funds interest rate in the United States. These are short term interest rates and are particularly appropriate to capture fluctuations in liquidity due to shifts in monetary policies. In particular, the bank rate reflects the actions of

²⁴ See, for example, Bulow and Rogoff (1989).

²⁵ See also Catão, Fostel, and Kapur (2007).

the Bank of England. For example, the Bank of England hiked interest rates in 1825, 1837, and 1839 to stop the loss of foreign exchange reserves, reducing liquidity, and at least in those years, triggering crises. For the latter period, hikes of the Federal Funds rate in the late 1970s reflect the shift to anti-inflationary monetary policy in the United States during this period. But differences and shifts in countries' saving patterns might go a long way toward explaining the broad swings in world interest rates. Saving rates in the industrial world increased substantially in the early 1800s following the end of the Napoleonic Wars. For example, in Great Britain, government deficits gave place to surpluses and yields on consols declined from 5.5 percent in 1804 to 3.3 percent in 1824. Long-term interest rates can be a better indicator of global patterns of saving (and investment). So, I also examine the evolution of rates on long term bonds. For the earlier period, I use the yield on British consols while for the last 30 years, I will use the yield on the 10-year U.S. bond.²⁶

As discussed briefly in Section II, booms and busts in the prices of commodities have profound effects on fiscal revenues of Latin American countries during the 19th century and early 20th centuries and in general have substantial effects on their ability to pay and thus indirectly affect their access to international capital markets. For the earlier period, I use a variety of databases, the Economist price index of commodities from 1865 to 1996²⁷ as well as the database collected by Blattman, Hwang, and Williamson (2004). For the last three decades, I use the IMF WEO database.

Finally, all Latin American countries are in default during part of the period studied. To capture the effect of default on the exclusion from international capital markets, I construct an indicator that takes a value of one when the country is in default or arrears and zero otherwise. The various episodes of default and arrears are taken from Standard&Poors and Beim and Calomiris (2000). I will just report the extent of defaults in Latin America from 1820 to 2008.

²⁶ Financial innovations can also affect liquidity and risk behavior. For example, until 1825, the only joint stock bank in Britain is the Bank of England. These restrictions are relaxed over time, first allowing joint-stock banks outside London, then eliminating further restrictions and allowing joint-stock banks in London, and finally in the 1850 and 1862 allowing the existence of joint-stock companies with limited liability. The 1860s also witnessed the creation of the deposit and investment banks in France and Germany allowing the financial sector to effectively mobilize the savings of the people. The liquidity so created in the financial centers of continental Europe is largely channeled overseas, financing both public and private projects in the periphery. More recently, the Eurodollar market in the 1970s, securitization in the 1990s and 2000s also have helped to provide liquidity to financial markets. It would be important to have a chronology of the financial innovations in the last 200 years to assess their effect on financial integration.

²⁷ This database was kindly provided by Paul Cashin.

Figure 9 shows total international issuance as well as the yields of long-term government bonds and short-term interest rates during the earlier period of financial integration. In 1800 the yield on the 3% Consols is 4.71 percent, it increases to 5.30 percent in 1804 in the midst of the Napoleonic Wars. The yield sharply drops in the aftermath of the war, reaching 3.30 in 1824 and triggering a sharp speculative boom in London and overseas. Over the whole century, the yield slowly trends down, reaching 2.25 percent, the minimum value of the century, in 1897, suggesting a continuous increase in market liquidity. Yields during the early part of the 20th century slowly increase, especially in the midst of the WWI inflation.²⁸ Overall, some of the episodes of capital flow bonanzas, such as the ones in the early 1820s, early 1870s, and the early 1900s are preceded by sharp declines in the bank rate.

Figure 10 captures the evidence for the second period of financial globalization. As in the 19th century, capital flow bonanzas in the last 30 years are partly linked to the fluctuations in interest rates. For example, the boom in syndicated-loan issuance of the late 1970s is preceded by low nominal and real short and long interest rates, with the boom ending following the hike in interest rates in the United States. Increases in liquidity as captured by short and long term interest rates also precede the lending cycles of the early 1990s and the early 2000s.

Figure 11 shows international issuance and the Economist Commodity Price index (nominal and real). Although the data on prices of commodities does not span all the 19th century,²⁹ it is clear that the new access to international capital markets in the 1860s by Latin American countries is preceded by a commodity price boom. In contrast, the commodity-price boom of the war years is accompanied by higher savings in Latin America, repayment of the debt, and accumulation of foreign exchange reserves. Figure 12 shows the evolution of commodity prices using the WEO database as well as international issuance for the last thirty years, where it can be seen a clear association of booms in commodity prices and international issuance in the late 1970s and the early 2000s.

So far, I have only shown the evolution of international issuance for all Latin American countries jointly. However, capital flow bonanzas are not fully synchronized as the ability of the countries to tap international capital markets is also affected by each country's own fundamentals. While the complete analysis of the evolution of each country's issuance will be

²⁸ Although not reported, ex-post real interest rates decline in the midst of WWI.

²⁹ I am now collecting data on commodity prices from 1800.

included in a revised version of this manuscript, Figure 13 shows a glimpse of this data. This figure shows international issuance of Peru, Chile, Argentina, and Brazil as well as these countries' terms of trade. The first panel shows Peru's issuance and the price of guano. The ability of the Peruvian government to tap international capital markets is clearly linked to its monopoly of guano exports, in high demand in the 1860s and early 1870s in Europe as fertilizers. Peru becomes the most indebted Latin American country in the early 1870s. Peru defaults on its debt in 1876 and remains in default until 1890. It only starts participating in international capital markets in the early 20th century. The next panel shows Chile's international issuance. Chile's participation in international capital market is mostly related to its production of nitrates. Forty percent of all the issues are nitrate related: mines shares, bonds and shares of railway companies that transported nitrates from the mines to the Pacific Ocean, and equity issues of companies that brought water to Chile's northern desert where the mines were located. Chile's production of nitrates increases following the war of the Pacific (1879-1884) when Chile annexes the rich nitrate regions of Tarapacá from Peru and Antofagasta from Bolivia. The London market is tapped to finance the extraction of nitrates. British companies float 20 issues in the 1880s, 20 issues in the 1890s, and 35 issues in the first decade of the 1900s in the midst of the boom in the price of nitrates.

The third and fourth panels show Argentina's and Brazil's international issuance and their terms of trade. Brazil terms of trade are far more volatile, with the boom in the late 1880s and beginning of the 1890s fueled by the boom in coffee prices and the boom in the 10 years prior to WWI reflecting the sharp increase in the price of rubber. Both the collapse of the price of coffee in 1898 and that of the price of rubber in 1914 trigger Brazil's two defaults at the turn of century. The first default lasts 13 years (1898-1910), the second one lasts 6 years (1914-1919).

As it is clear from Figure 13, capital flow bonanzas are not perfectly synchronized across all countries in Latin America. Moreover, the characteristics of capital flows vary across countries, with, for example, capital issuance of countries rich in mineral resources being mostly linked to the extraction of the minerals. The revision of this paper will also focus in examining the heterogeneity in issuance across Latin American countries.

IV. Reflections

The main contribution of this paper is the new database on Latin America's international issuance since independence until the great depression. This database includes not only sovereign borrowing but also private issuance, with information on the amount of each individual issue as well as the terms of the contracts. The database includes all the Latin American countries and includes issuance in London, New York, Paris, Berlin, and Frankfurt, the financial centers of the 19th and early 20th centuries.

The analysis in this paper mostly pays attention to the boom-bust lending cycles and the extent of financial integration then and now, leaving the analysis of the characteristics of the individual issues for the revised version of this paper. The key findings can be summarized as follows. First, the lending cycles of the last 30 years are overall substantially milder than those of the pre-WWII era. Only the retrenchment following the 1978-1982 capital flow bonanza is as deep and protracted as those in the earlier era of financial integration. This raises the question of what is different. Is it better domestic fundamentals? Or is it the world financial market? While during the 1990s, Latin American countries abandon inflationary finance, reduce restrictions to trade, and have overall better institutions, the milder retrenchment of the 1990s, I will like to argue, can in large part be explained by the origin of the reversals. The capital flow reversals of the 1990s are triggered by problems in the periphery, Mexico in 1994, Thailand in 1997, and Russia in 1998 while the financial center is basically unscathed. In contrast, the reversal starting in 1982 originates in the financial center as most of the reversals in the 19th and early 20th. It is during the early 1980s, with real interest rates unseen since the great depression and in the midst of the worst post-WWII recession that U.S. commercial banks crumbled and are kept under life support by financial regulators. The crises of the 19th and early 20th centuries have a remarkably similarity to the crisis of the 1980s. For example, the 1825 crisis that triggers the first Latin American Debt crisis starts in London and spreads very quickly to the financial centers in continental Europe with bankruptcies of many major banks in Germany, Italy, Amsterdam, Saint Petersburg, and Vienna. Similarly, the reversals in 1873 and the 1929 start in the financial sectors of the center countries and spread quite rapidly to the periphery. With the financial center in distress, reversals in capital flows become substantial and prolonged, suggesting that the current reversal of international capital flows will also be protracted and massive.

Second, while the last decades are witness to a dramatic increase in financial integration, Latin American countries have not regained their status in international capital markets. While international issuance to exports ratio in the last 30 years is similar to that observed in the earlier period, international issuance to GDP (the usual measure of financial integration) is far below that of the earlier period as many of the Latin American economies are far more open to international trade in the 19th and early 20th centuries than they are today. This raises the question whether openness to foreign trade is crucial for accessing international capital markets.

Third, capital flow bonanzas then and now do not always share the same characteristics in terms of the share of sovereign/public and private sector issuance. The first waves of international capital flows to Latin America are mostly sovereign lending both then and now. The capital flow bonanzas during the 1880s until WWI and those in the 1990s until today have a larger share of private issuance. Again, lending to Latin America in the 1920s is also mostly sovereign lending. While the amplitude and duration of public and private issuance cycles are similar, the effects on the economies of Latin American countries may be different and should be examined carefully.

Last, another aspect of capital flows that should be examined in closer detail is the type of industries financed by international capital flows. Preliminary evidence from this new database indicates that private capital flows in the 19th and early 20th centuries finance mostly exporting industries. For example, multiple British companies are created to construct the railway system in Argentina to transport cereals, beef, wool, and other products to the port in Buenos Aires. In Chile, most foreign direct investment is in nitrates, railways from the nitrate mines to the ports in the Pacific Ocean, and water companies transporting water to the desert where the mines are located. With Latin American countries less open to trade now than they are in the earlier period, capital flows in the 1990s until now are more concentrated in financing non-traded industries, such as the domestic banking sector.

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Figure 1: Prospectuses

BUENOS AYRES 6% STATE LOAN, 1870,
*Under the authority of the State Laws of the $\frac{17}{15}$ November, 1868, and $\frac{27}{25}$ January, 1870;
 $\frac{15}{19}$ of February, 1869 (as varied by a further Law of $\frac{3}{7}$ September, 1869), and $\frac{27}{25}$ January, 1870.*

FOR £1,034,700 STERLING,
In Bonds to Bearer for £100, £500, and £1,000 each,
The Interest Payable Half-Yearly in London.

The Loan to be redeemed at par by Annual Drawings in about 33 years, by means of an accumulative Sinking Fund, which however the Government reserves to itself the right to increase, so as to redeem the Loan at an earlier period.

PRICE OF ISSUE, 88 PER CENT.

ÉTATS-UNIS DU BRÉSIL
COMPAGNIE
DU
CHEMIN DE FER DE VICTORIA A MINAS
ÉMISSION
DE
50.000 Obligations Hypothécaires 5% Or de 500 Francs
AU PORTEUR
Rapportant 25 francs nets par an
Remboursables au pair en 80 ans à partir de 1920
Jouissant pendant 30 ans d'une
GARANTIE OR DU GOUVERNEMENT FÉDÉRAL BRÉSILIEN
Prix d'émission : 465 francs

Figure 2
International Gross Primary Issuance
(in Billion Dollars)

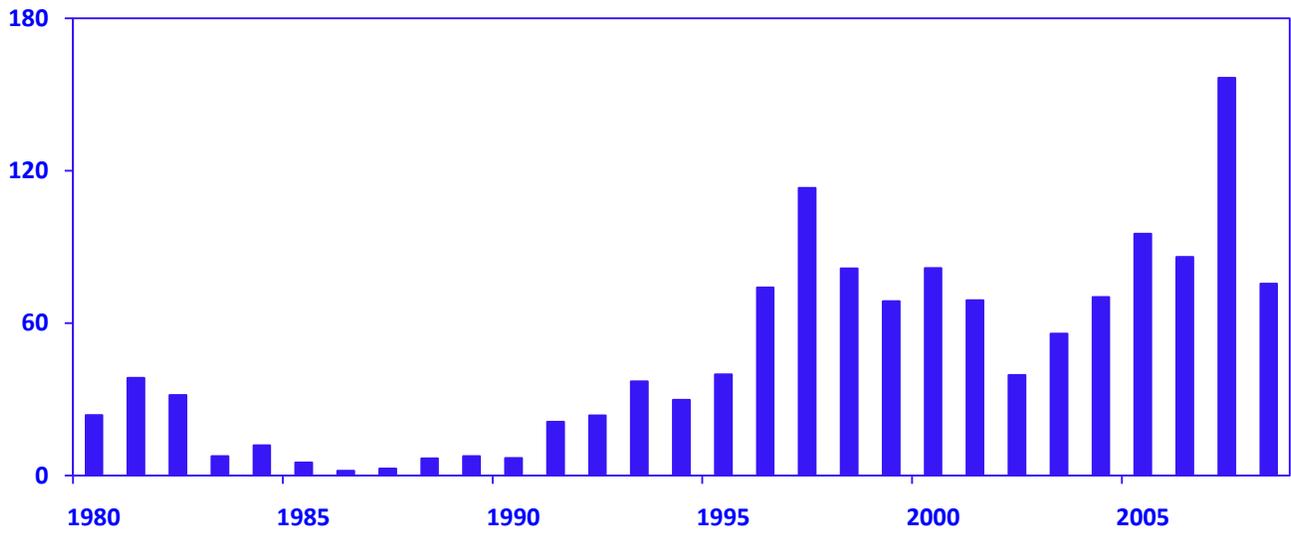


Figure 3
International Gross Primary Issuance
(in Million British Pounds)

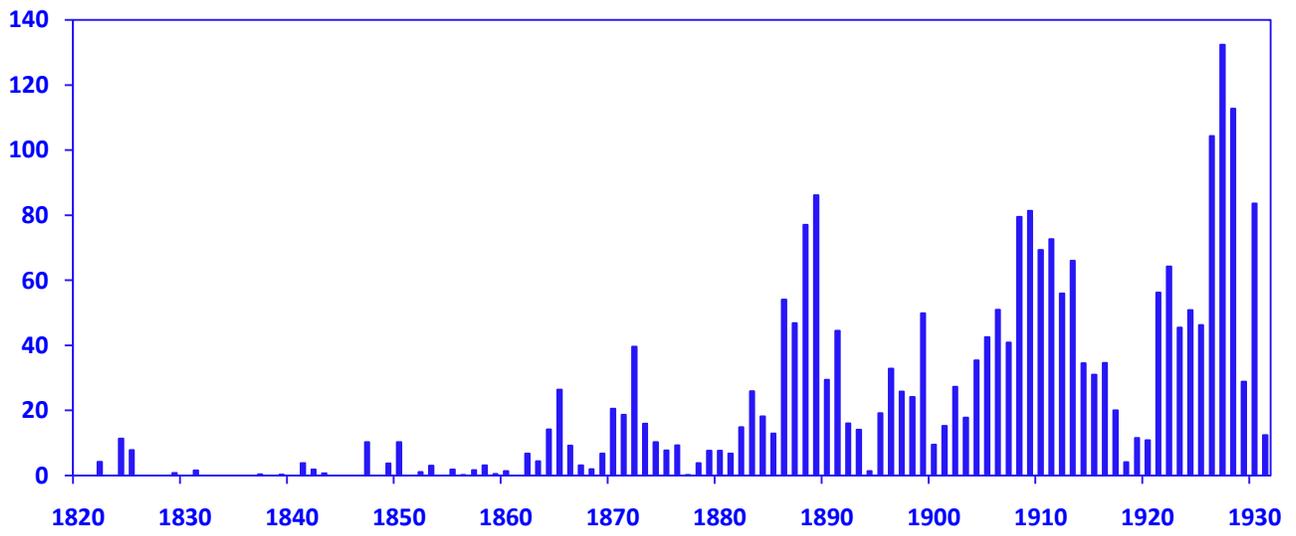
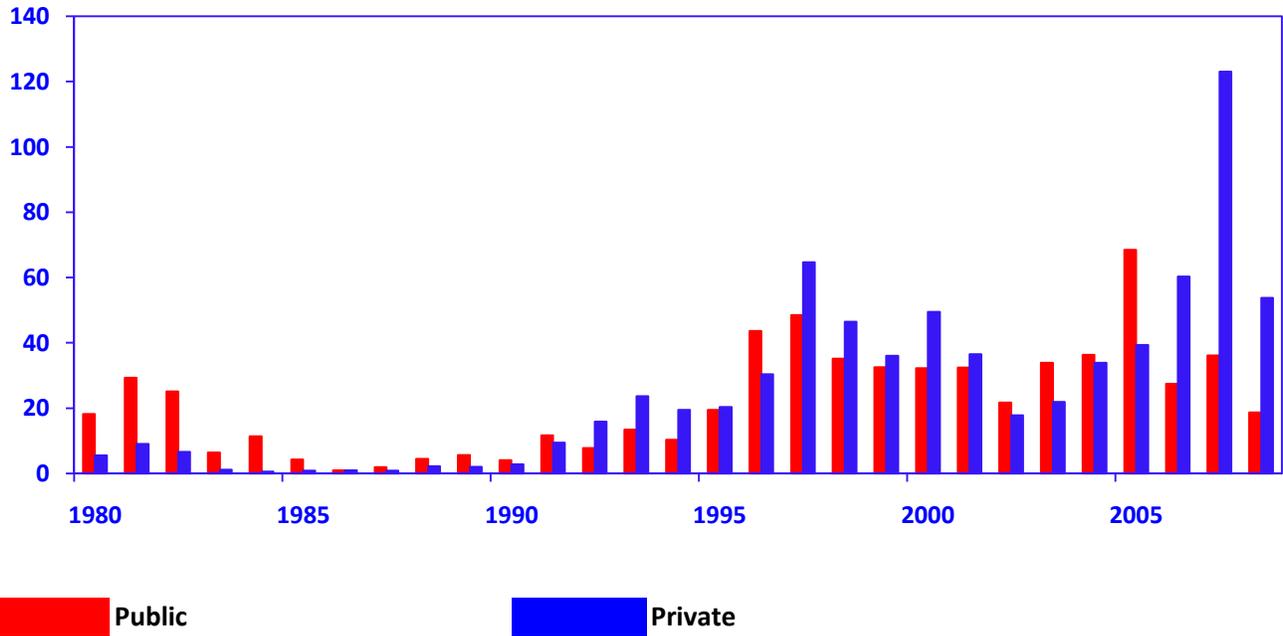


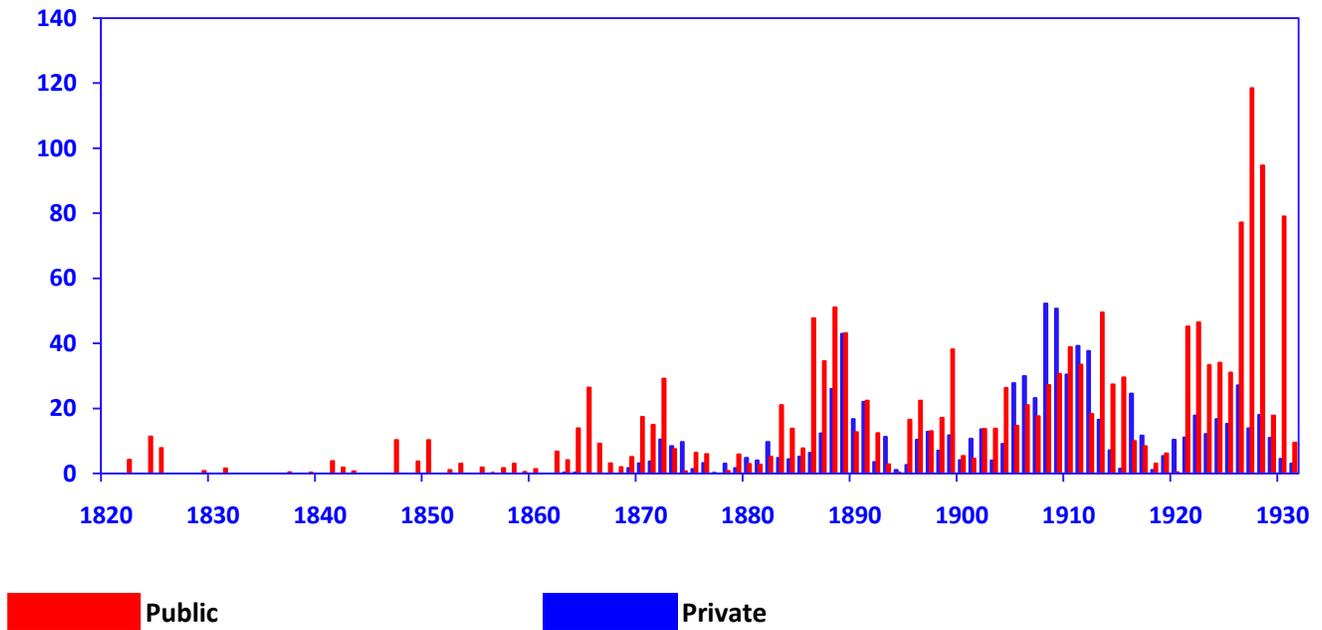
Figure 4
Public and Private International Gross Primary Issuance
(in Billion Dollars)



Public and Private Issuance During the Boom Years

Episodes	Shares (in Percent)			
	Private		Public	
	Value	Issues	Value	Issues
1980-1981	23	34	77	66
1988-1997	53	72	47	28
2003-2007	58	78	42	22

Figure 5
Public and Private International Gross Primary Issuance
(in Million British Pounds)



Public and Private Issuance During the Boom Years

Episodes	Shares (in Percent)			
	Private		Public	
	Value	Issues	Value	Issues
1822-1824	15		85	
1862-1865	5	13	95	87
1869-1872	22	78	78	22
1882-1889	34	73	66	27
1901-1907	57	84	43	16
1919-1927	25	39	75	61

Figure 6
Access to International Capital Markets International Gross Primary Issuance
International Gross Primary Issuance: 1980-2008
(in Billion Dollars)

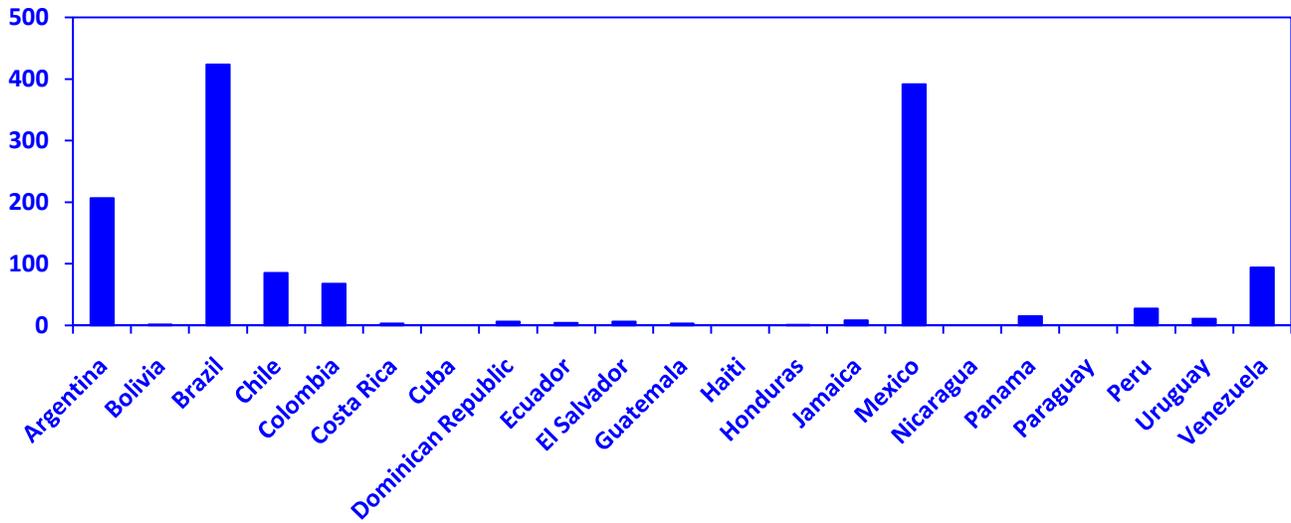


Figure 7
Access to International Capital Markets International Gross Primary Issuance
International Gross Primary Issuance: 1820-1931
(in Million British Pounds)

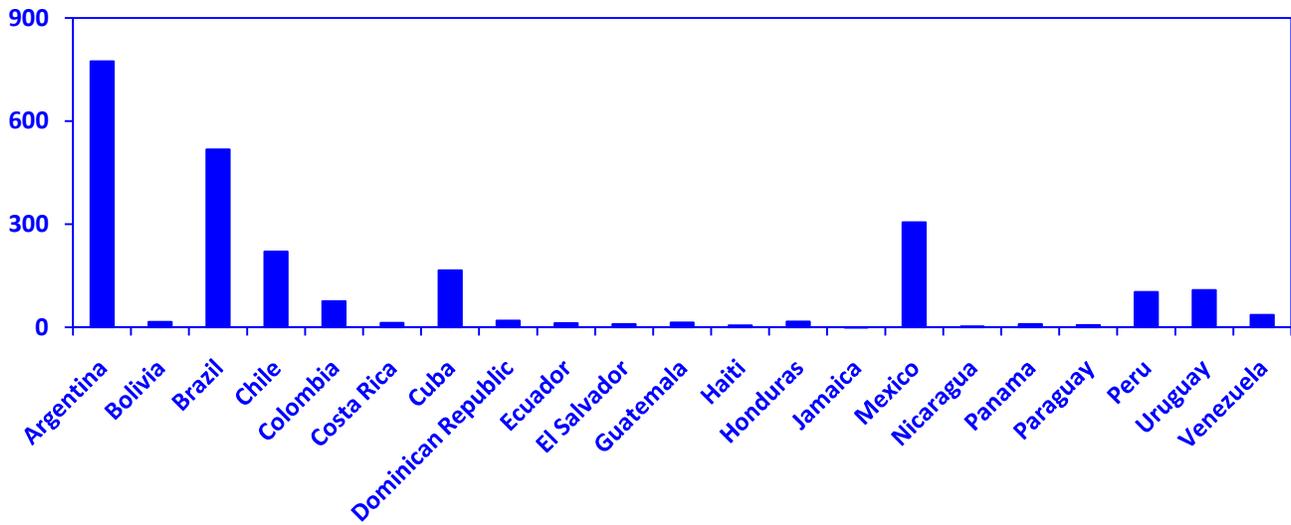


Figure 8
Winners and Losers

Country's Share in Total Issuance
(in Percent)

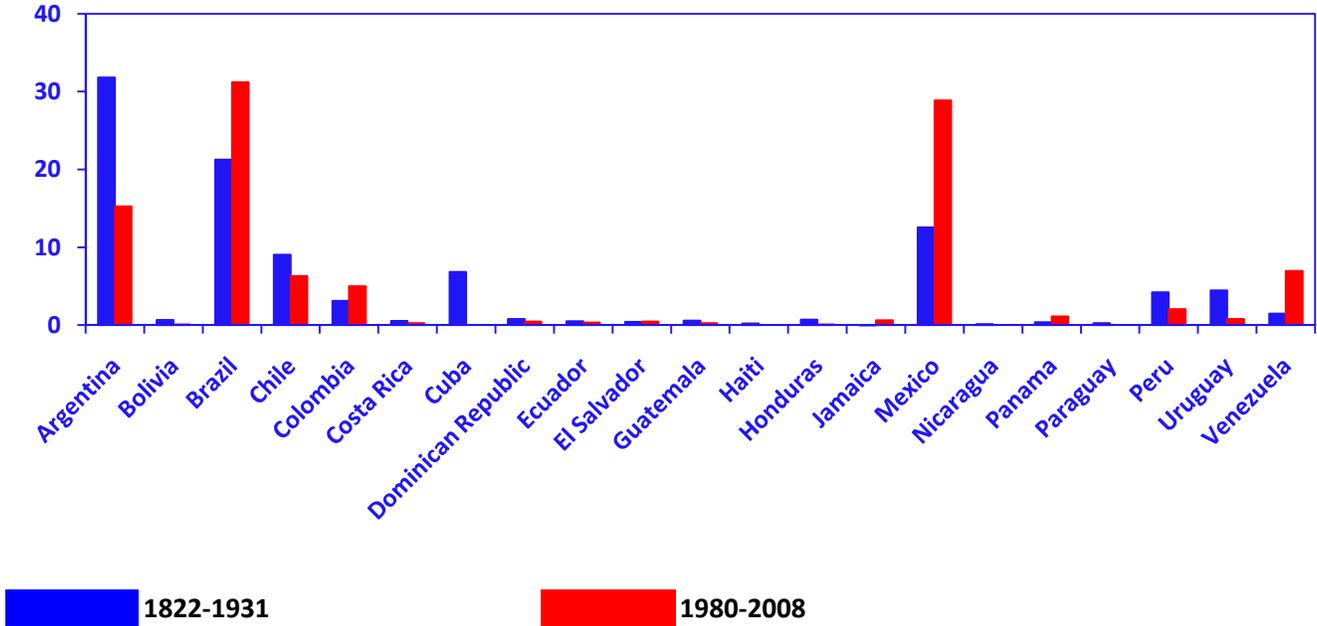


Figure 9
International Gross Primary Issuance and World Interest Rates

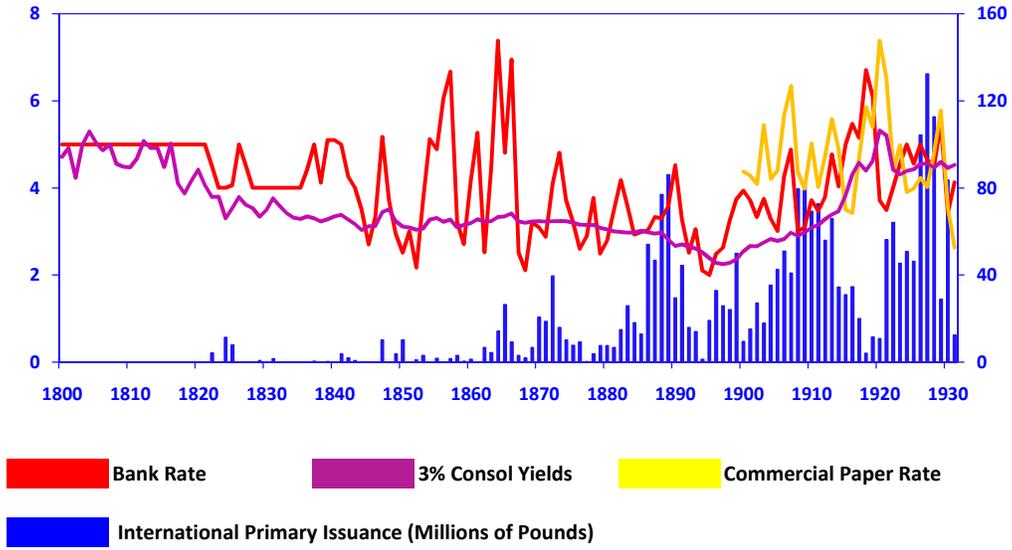


Figure 10
International Gross Primary Issuance and World Interest Rates

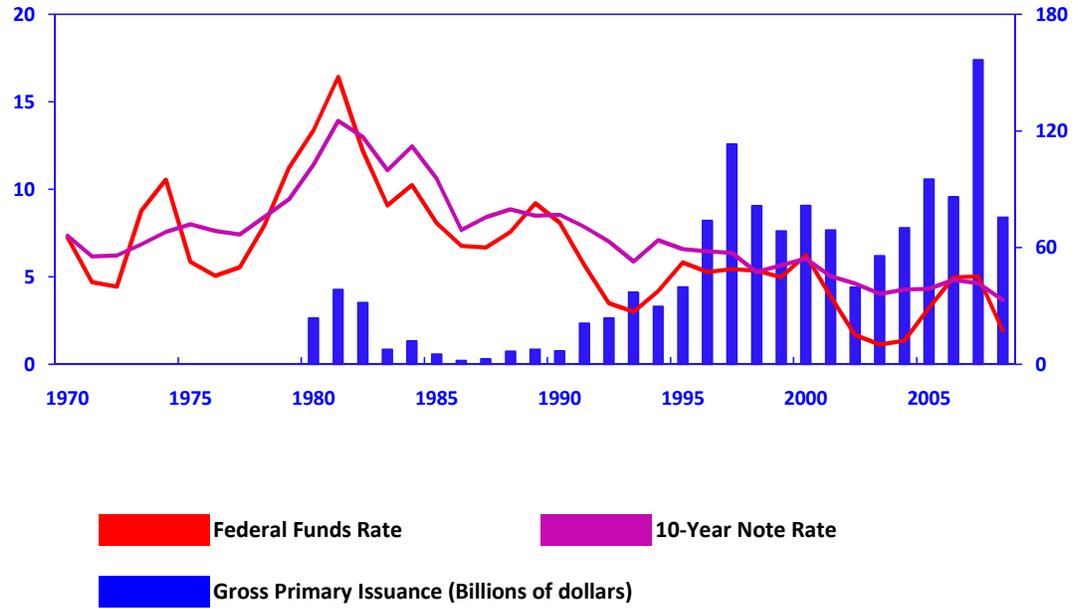


Figure 11
Commodity Prices and Gross Primary Issuance

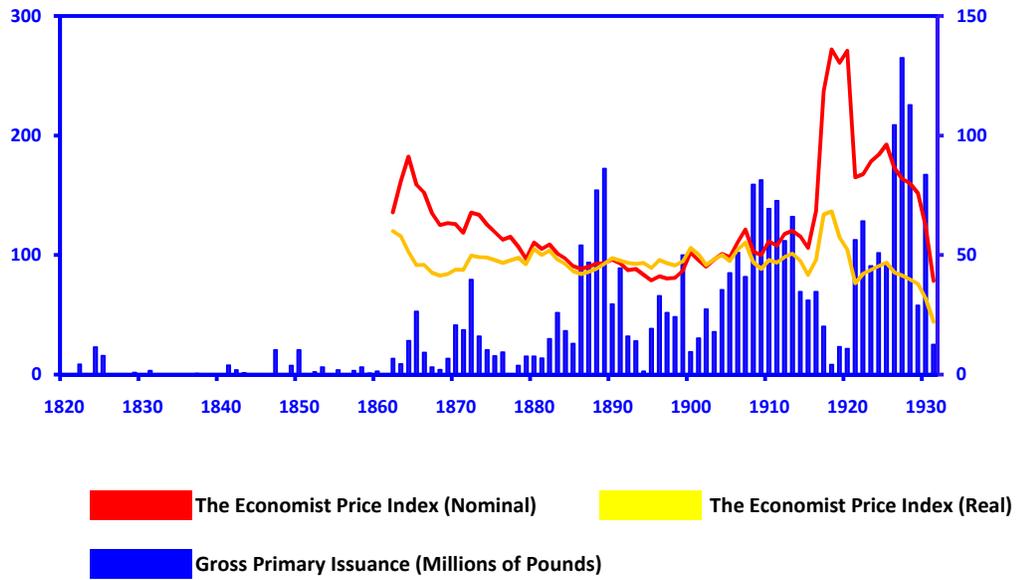


Figure 12
Commodity Prices and Gross Primary Issuance

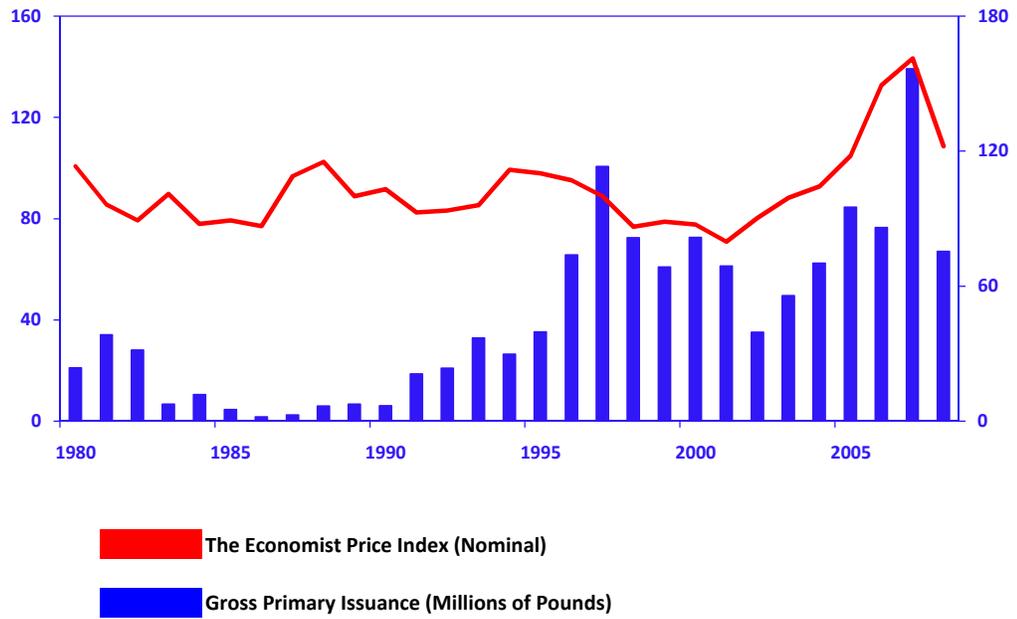
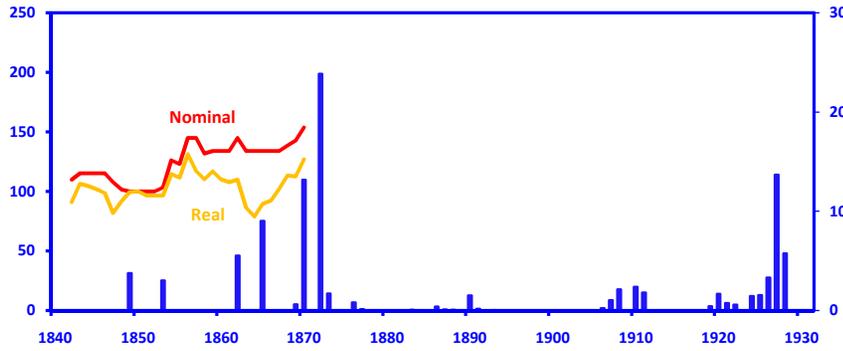
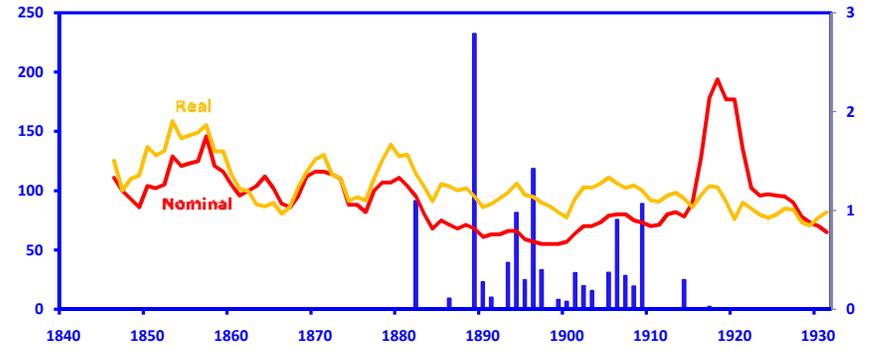


Figure 13
Commodity Prices and International Issuance

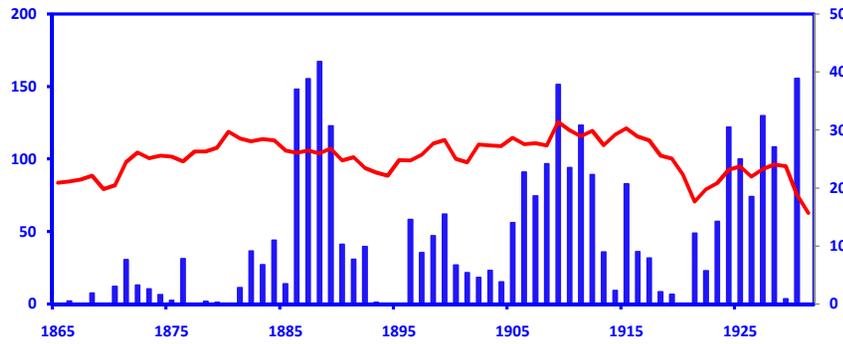
Peru
Issuance and the Price of Guano



Chile
Issuance and the Price of Nitrates



Argentina
Issuance and the Terms of Trade



Brazil
Issuance and the Terms of Trade

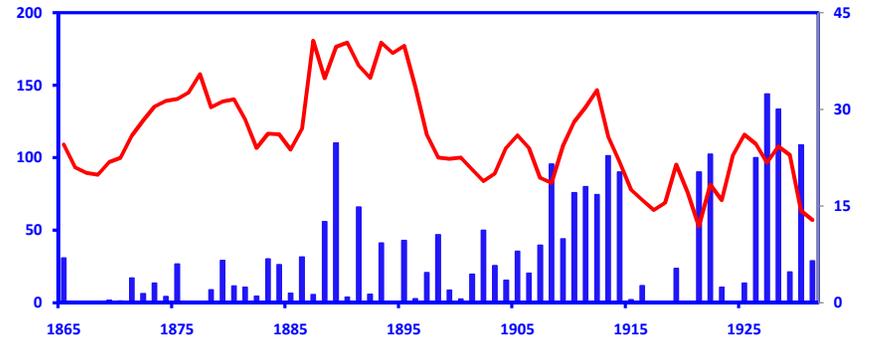


Figure 14
Defaults

Proportion of Latin American Countries in Default/Rescheduling
(in Percent)

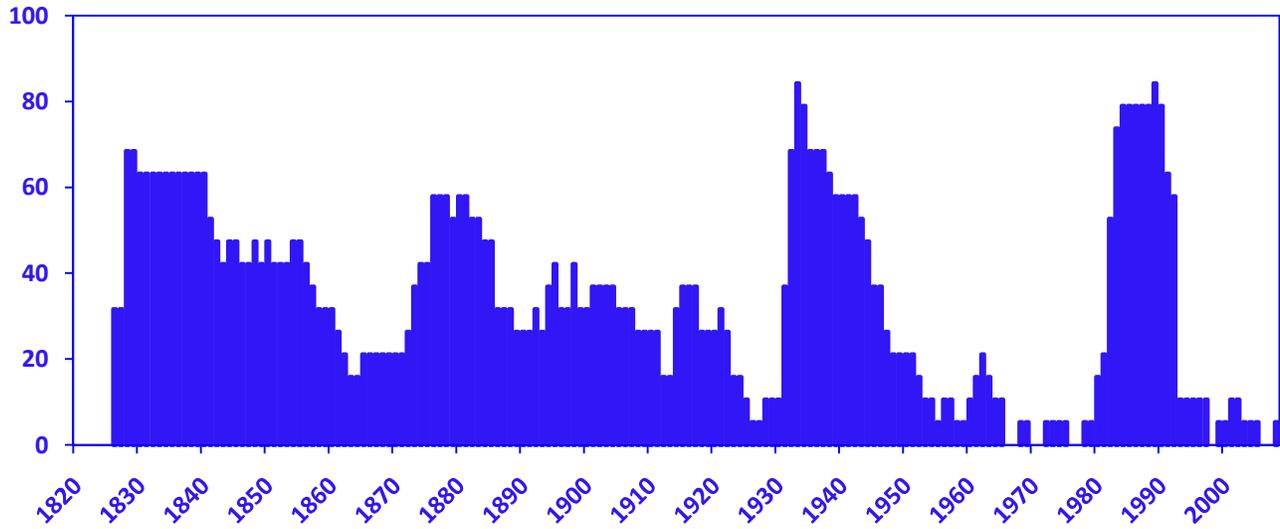


Table 1
Booms and Busts in International Issuance

1820-1931

Peak Year	Total Issuance				
	Booms		Busts		Peak to Peak Increase
	Amplitude	Duration	Amplitude	Duration	
1824	100	3	-100	2	...
1865	100	15	-93	3	132
1872	95	4	-99	5	50
1889	99	12	-98	5	117
1909	88	15	-95	9	-6
1927	97	9	-91	4	63
average	95	10	-97*	5*	71

Increase in Issuance (Peak 1927 versus Peak 1824): 1062

1980-2008

Peak Year	Total Issuance				
	Booms		Busts		Peak to Peak Increase
	Amplitude	Duration	Amplitude	Duration	
1981	-95	5	...
1997	100	11	-65	5	195
2007	75	5	-52	1	38
average	88	8	-80*	5*	117

Increase in Issuance (Peak 2007 versus Peak 1981): 308

Notes: * average excluding last (incomplete) downturn. The amplitude and duration of last crash of both eras is incomplete.

In most cycles, issuance drops to zero (or close to zero) at the through. Thus, the usual measure of the amplitude of the boom:

$((\text{issuance at the peak}/\text{issuance at the previous through})-1)\times 100$

is not informative. In the above tables, the amplitude of the booms is measured relative to the peak. That is, amplitude of the boom is equal to:

$(1-(\text{issuance year at the previous through}/\text{issuance at the peak}))\times 100$

Table 2
The Doldrums

1822-1931

Peak Year	Years of Stagnation in Issuance Following a Peak	
	80% Below the Previous Peak	50% Below the Previous Peak
1824	30	36
1865	2	2
1872	7	10
1889	4	15
1909	3	7
1927	1	2
average 1865-1909	4	9

1980-2008

Peak Year	Years of Stagnation in Issuance Following a Peak	
	80% Below the Previous Peak	50% Below the Previous Peak
1981	7	8
1997	0	2
2007	0	1
average 1981-1997	4	5

Notes: This Table shows the number of years in which Latin America's participation in international capital markets stagnated. I measure stagnation with two metrics: Number of years with issuance 80 (50) percent below the previous peak. For example, after the peak in 1981, there were 7 years in which issuance was 80 percent or more below the peak in 1981. The amplitude and duration of last crash of both eras is incomplete.

Table 3
Booms and Busts in International Issuance:
The Public and Private Sectors

Peak Year	Public Sector's Total Issuance			Private Sector's Total Issuance		
	Amplitude		Peak to Peak Increase	Amplitude		Peak to Peak Increase
	Booms	Busts		Booms	Busts	
1824	100	-100	...	100	-100	...
1865	100	-93	132	100	-100	...
1872	93	-100	11	100	-98	950
1889	100	-99	75	100	-97	311
1909	88	-99	-24	92	-98	22
1927	99	-92	205	87	-89	-48

Peak Year	Public Sector's Total Issuance			Private Sector's Total Issuance		
	Amplitude		Peak to Peak Increase	Amplitude		Peak to Peak Increase
	Booms	Busts		Booms	Busts	
1981	100	-97		100	-94	...
1997	98	-55	65	98	-72	616
2007	42	-73	41	86	-56	90

Notes: The amplitude and duration of last crash of both eras is incomplete. In most cycles, issuance drops to zero (or close to zero) at the through. Thus, the usual measure of the amplitude of the boom: $((\text{issuance at the peak}/\text{issuance at the previous through})-1)\times 100$ is not informative. In the above tables, the amplitude of the booms is measured relative to the peak. That is, amplitude of the boom is equal to: $(1-(\text{issuance year at the previous through}/\text{issuance at the peak}))\times 100$

Table 4
The Doldrums

1822-1931

Peak Year	Years of Stagnation in Issuance Following a Peak			
	80% Below the Previous Peak		50% Below the Previous Peak	
	Public	Private	Public	Private
1824				
1865	3	4	5	4
1872	6	3	12	10
1889	5	4	14	14
1909	3	4	6	13
1927	2	2	2	3
average 1865-1909	4	4	9	10

1980-2008

Peak Year	Years of Stagnation in Issuance Following a Peak			
	80% Below the Previous Peak		50% Below the Previous Peak	
	Public	Private	Public	Private
1981	6	5	12	8
1997	0	0	1	2
2007	0	0	1	3
average 1981-1997	3	3	7	5

Notes: This Table shows the number of years in which Latin America's participation in international capital markets stagnated. I measure stagnation with two metrics: Number of years with issuance 80 (50) percent below the previous peak. For example, after the peak in 1981, there are 6 years in which public issuance was 80 percent or more below the peak in 1981. The amplitude and duration of last crash of both eras is incomplete

Table 5
Measuring Financial Integration: Then and Now

Latin America's Access to International Capital Markets			
Episodes	Issuance/Exports	Episodes	Issuance/Exports
1880s	0.66	1980s	0.18
1890s	0.23	1990s	0.22
1900s	0.15	2000s	0.16
1910s	0.12		
1920s	0.11		
Average 1885-1931	0.20	Average 1980-2008	0.18

A Caveat: Overall economies were more open to trade in the 1800s. For example, Argentina's exports are about 30% of GDP at the turn of the 20th Century but are about 10% of GDP in the 1980s.